

# Future of Work Literature Review: Emerging trends and issues



Report prepared for the  
Australian Tax Office and  
Department of Home Affairs

September 2021



UNSW  
CANBERRA



Public Service  
Research  
Group

# Contents

<b>Executive Summary</b>	<b>2</b>
<b>Introduction</b>	<b>4</b>
<b>1. Preferences for, and experiences of remote working</b>	<b>6</b>
<b>2. Staff experience of remote working</b>	<b>10</b>
Organisational culture	11
Pre-COVID literature	11
Recent trends	11
Pre-COVID literature	12
Virtual Team work	12
Impact on work-life balance	13
Impact on careers	13
Recent trends	14
A gendered experience of working from home during COVID	15
<b>3. Managers' experience of remote working</b>	<b>17</b>
Pre-COVID literature	18
Recent trends	19
<b>4. Productivity</b>	<b>21</b>
Pre-COVID literature	22
Recent trends	24
<b>5. Digital infrastructure</b>	<b>26</b>
Pre-COVID literature	27
Recent trends	28
Digital security	30
<b>6. Activity-based working and remote working hubs</b>	<b>31</b>
Activity-Based Working	32
Recent trends	35
Remote Working Hubs	36
<b>7. Work health and safety</b>	<b>38</b>
Pre-COVID literature	39
Recent trends	39
<b>8. Industrial relations</b>	<b>42</b>
Pre-COVID literature	43
Recent trends	44
<b>9. Workforce planning</b>	<b>47</b>
<b>10. Conclusions: Implications for organisations</b>	<b>51</b>
<b>References</b>	<b>54</b>
<b>Appendix A: Methodology</b>	<b>65</b>
<b>Appendix B: Summary of Key Grey Literature</b>	<b>68</b>

# Executive Summary

This report synthesises the literature of the last decade, with a focus on literature emerging since the onset of the pandemic to identify issues that will affect working in the Australian Public Service (APS). It focuses on teleworking, but also examines activity-based working, and remote working hubs. It examines a range of issues including staff experiences of working remotely, how managers manage in this new environment, productivity, emerging trends in accommodation and digital infrastructure, work health and safety, changes which may be necessary to industrial instruments in an evolving environment, and finally, workforce planning.

Emerging grey literature overwhelmingly argues that the future of work is hybrid, with employers, senior leaders and employees expecting to work part of the week remotely, and part at their employer’s premises. The preferred amount of time to work at home is two to three days a week. Working remotely has traditionally been undertaken by older workers who are managers and knowledge workers but the demographics are changing, to encompass younger people and those in a wider range of occupations.

Teleworking, and newer forms of working, including shared working spaces, have differing impacts on the various diversity groups. Recent research has shown younger workers experienced difficulties working remotely, particularly around networking and career development; teleworking can also disadvantage women due to decreased visibility in the workplace; and regional and rural employees have had less access to these newer workspaces. These differential impacts will need to be considered by APS organisations to ensure that equity and inclusion remains a hallmark of the sector.

The use of shared workspaces will continue to increase, with implications for how technology can be used. While shared workspaces have much to commend them, the research also highlights a range of negativities, as discussed in this report. Additionally, organisations will need to more fully consider which tasks and networking can be undertaken synchronously and what is better suited to being asynchronous. Organisations also need to analyse which jobs are suitable for shared workspaces, now, and for future jobs.

The research is equivocal on whether teleworking increases productivity or not. While teleworkers may be subject to fewer disruptions due to working at home alone, they are still subject to being digitally disrupted. A range of factors influence employees’ performance, motivation and engagement, with extensive literature showing that teleworkers have better performance and higher levels of motivation and engagement than non-teleworkers, however, this is dependent on a range of factors. While performance may be enhanced through increased engagement and motivation, it is difficult to determine whether this leads to increased productivity. The existing research shows that many variables and contextual factors make measuring productivity and remote working difficult. Emerging literature strongly shows that working from home increases productivity – at least, employees and managers believe that productivity has increased, and some of the available academic research supports this perception.

The safety of remote workers is key, and organisations are cognisant of the need to ensure employees have ergonomic workspaces while working remotely. However, attention is increasingly focusing on the psychosocial aspects of remote working, particularly around technostress. Telework has the potential to be both positive and negative for work/family balance – it can lead to work/family conflict and increased stress levels, or enable employees to manage work and caring responsibilities more effectively. Research has also found that telework enables increased autonomy, which can lead to increased employee motivation, commitment and job satisfaction. Yet research also finds that telework can lead to increased feelings of isolation.

Pre-pandemic staff experiences highlight the negativities associated with remote working, with reduced visibility leading to fewer career development and networking opportunities. The role of middle managers continues to be crucial in equitable access to career development opportunities, and ensuring teams are cohesive and productive. The research highlights managerial resistance to remote working, which may stem from a lack of capability managing remote workers. Managers can also experience the negativities associated with remote working, such as lower visibility undermining their authority. The research provides a range of advice for managers on how to effectively manage remote teams.

As well as work, health and safety issues, organisations need to consider the suitability of industrial instruments to regulate the employment of remote workers. Current instruments – including legislation – were developed pre-pandemic, and may no longer be fit for purpose. The issue of industrial relations in this new environment appears to be a slow burning issue, yet appropriate industrial instruments are vital for the effective functioning of workplaces.

The APS faces a range of challenges adopting new ways of working. These encompass organisational culture, human resource and industrial relations issues, managerial capability, and infrastructure and technology. This literature review examines these issues, highlighting emerging trends and insights.

UNSW Canberra acknowledges the sponsorship and support of the Australian Tax Office and Department of Home Affairs for preparation of this report. This report is part of a broader project examining the future of work in the APS, and additional team members include Professor Deborah Blackman, Associate Professor James Connor, and Dr Alison Brown.

# Introduction

Shifts in relation to public service careers and ways of working were already underway prior to the onset of the COVID-19 pandemic. There are at least three drivers of major changes. Firstly, the role of government has evolved over time. Over the last few decades we have seen governments shift from being principally involved in the delivery of services to a more strategic role (Dickinson, 2016). Influenced by ideas associated with New Public Management, governments have increasingly become involved in defining the types of outcomes to be achieved, typically working with a range of third party agents to design and deliver these services. The change in terms of the role and function of governments has brought with it a shift in terms of the skills and capabilities required to achieve these. Middle managers are now responsible for many human resource processes, and this devolution has resulted in a policy/implementation gap, highlighting the need to increase managerial capability (Williamson, Colley and Foley, 2019).

Secondly, changes to the nature of work have occurred. Fueled by longer working lives, a shift away from manual work to service and knowledge-intensive roles, the impacts of an increasingly internationalised workforce and more inclusive working practices, policy makers and others are revisiting what work means to individuals and societies (Dewe and Cooper, 2012). The proliferation of precarious work has increased workplace insecurity, as has the decline in the numbers of employees maintaining careers with one organisation (Frese, 2008). Individuals now expect to have more than one career, taking on different roles over the span of their working life (e.g. Dickinson *et al.*, 2016; Lewis, 2013).

Another important development is the increase in interest in portfolio careers, where individuals bring together a variety of different jobs. This sort of work is already of interest to those in the early or latter parts of their careers, as individuals seek to transition into or out of work, but it appears that this is expanding to individuals at different points in their career. Job design is also changing. Where once individuals were recruited to work in a particular professional area to do a defined role, it is increasingly common for organisations to instead recruit projects to teams on ‘umbrella contracts’ (Bridges, 1995). Thus, individuals find themselves less confined to the traditional boundaries of professional roles and more engaged in project-based activities that involve a range of different activities.

Thirdly, the tools of governments are changing. The use of digital tools are firmly embedded within public organisations (Henman, 2019). Governments are increasingly exploring opportunities for automation through advancements in artificial intelligence via machine learning techniques (Nof, 2009). Technologies such as robotics (Dickinson *et al.*, 2018) and additive manufacturing (Dickinson, 2018) are becoming increasingly accessible in terms of price and are being applied to a range of different services and program areas. The use of these various technologies has implications for the skills and requirements of the public service workforce (Smith *et al.*, 2021).

The APS is evolving to meet these drivers of change, recognising where future skills shortages may occur, the increasing trend of digitisation and how this impacts on where and how people work, and changes to occupations, jobs and skills needed (Australian Government, 2021). The 2020 pandemic highlighted the agility of the APS. Teams worked across portfolios, adopting multidisciplinary approaches to develop solutions to complex problems (APSC, 2020). Many of these working practices are likely to continue.

Against this background, this literature review was commissioned to identify what the existing evidence base tells us about the implications of these shifts. The scope of this review is to explore the literature regarding ways of working – specifically, the mix of home/remote and office-based work also offset with just office-based work and its implications on issues such as accommodation, digital technology, people capability, organisational culture, work health and safety, industrial relations, staff experience and productivity. It also examines newer spatial configurations, including activity-based working and working from hubs. The authors also examine related issues such as workforce planning, and the impact of digitisation on work. The review includes key insights from

national and international research in the past decade, focusing on recent material, current approaches and learnings, highlighting public sector approaches, and uncovering emerging trends. The literature review draws largely on research from the USA and Europe. Due to Australia’s demographic profile and different experience of restrictions/lockdowns, not all emerging insights and lessons may be applicable to an Australian context.

A degree of inconsistency exists with terminology, and the terms used in this report largely reflect those used in the literature being reviewed. The various terms include telework, telecommuting, virtual work, home-based teleworking, mobile telework, and remote work (Nakrosiene *et al.*, 2019). Pre-pandemic, ‘telework’ appeared to be the preferred term. Teleworking is defined as: “...a work practice that involves members of an organisation substituting a portion of their typical work hours (ranging from a few hours per week to nearly full-time) to work away from a central workplace – typically principally from home – using technology to interact with others as needed to conduct work task” (Allen *et al.*, 2015). Telecommuting is defined as: “(w)orking some portion of time away from the conventional workplace, often from home, and communicating by way of computer-based technology (Allen *et al.*, 2015). Hybrid working is defined as: “a blended model where some employees return to the workplace and others continue to work from home” (Microsoft, 2021).

Examination of the research highlights many gaps. Much of the research focuses on employee experiences, with limited research conducted on managers’ experiences of new ways of working. Even less examines the impacts on organisations. The most noticeable gap in the research is on whether new forms of working, and remote working increases or decreases public sector productivity. Other notable gaps in the research include:

- which jobs are suitable to be undertaken remotely or in dispersed workplaces,
- the role and impact of workplace culture in facilitating new ways of working successfully,
- the impact of remote working and dispersed working on teams, employees’ careers and on managerial practice,
- how knowledge sharing can be enhanced in various workspaces,
- how the positive aspects of teamwork developing during the pandemic lockdown can be maintained into the future,
- the impact of remote and dispersed teams on equality and diversity,
- the impact of digitisation on how work is performed,
- whether or not increased use of ICT leads to work intensification and technostress, and
- how regulatory frameworks may need to change as workspaces and ways of working change.

A comprehensive longitudinal research program would yield results to fill in these gaps, providing an evidence base to increase public sector capability.

This literature review commences with an examination of the prevalence of working from home pre-pandemic and more recently, as well as an overview of employees’ and managers’ preferences for working from home and hybridly. The second and third chapters examine staff and managers’ experiences respectively. The next chapter examines productivity; the fifth focuses on the impact of digitisation on work. The sixth chapter examines alternate workspaces, including activity-based working, and remote working hubs. Work, health and safety issues are then examined, followed by a chapter canvassing industrial relations issues. The eighth chapter very briefly discusses workforce planning issues. The final chapter concludes the review by summarising the implications for organisations of remote and dispersed working. Further information accompanies the literature review, including the methodology used, which further defines key terms (see Appendix A), and a summary of key grey literature (see Appendix B).



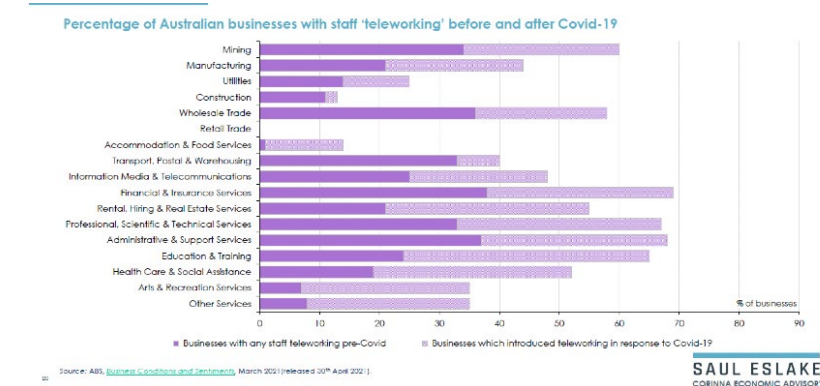
# Preferences for, and experiences of remote working

COVID-19 accelerated changes which were occurring in workplaces pre-pandemic, increasing flexibilities in how and where work was performed. In this section we contextualise the report with an examination of the extent of working from home during the pandemic, and employees' preferences for continuing this form of working. We also consider who can work from home or remotely.

Forty-five per cent percent of Australian workers say that changed attitudes to remote working will transform the way people work in the next 3-5 years, with only 10% favouring a 'traditional' work environment with no remote working (PwC, 2021). This trend is international, with respondents to a large-scale worker survey in the US reporting a significant change in attitudes towards working from home, with it no longer viewed as "shirking from home" (Barrero *et al.*, 2021).

Prior to COVID-19, ABS data shows that 32% of people regularly worked from home (ABS data cited in Fair Work Commission, 2020). This varies across industries, as shown below.

**IN AUSTRALIA, 'TELEWORKING' HAS BECOME MORE COMMON-PLACE IN MOST (BUT NOT ALL) INDUSTRIES SINCE THE ONSET OF COVID-19**

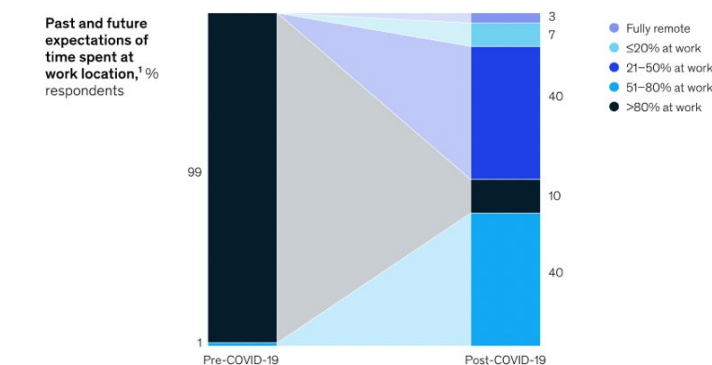


**Key insight: hybrid models of working from home will continue as an established norm**

During the 2020 pandemic lockdown, approximately 40% of all employees worked from home (ABS, 2021). At the height of the national lockdown in 2020, over half of Australian Public Service (APS) employees worked from home (APSC, 2020). The most recent figures show that as at February 2021 over 40% of people continued to work from home at least once a week (ABS, 2021). This reinforces the findings of surveys which show that both employees and senior managers believe a hybrid model of working will continue (Dahik *et al.* 2020; McKinsey, 2021a), including in the APS (Colley and Williamson, 2020).

The figure below shows that up to 40% of executives believe that employees will spend 21 to 50% of their time on their employer's premises; with another 40% believing that employees will spend 51 to 80% of their time on their employer's premise.

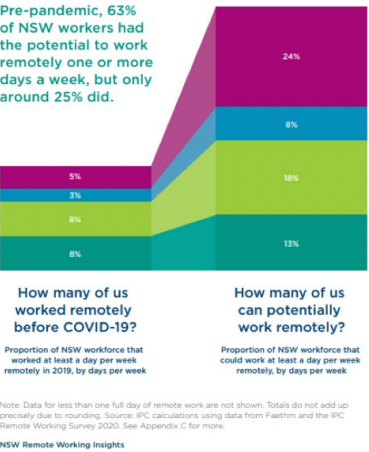
**IN THE POST-COVID-19 FUTURE, C-SUITE EXECUTIVES EXPECT AN INCREASE IN HYBRID WORK**



US survey evidence shows that about 50% of all workers can work from home, and will choose to do so around 2-3 days per week. This would result in 22% of working days located in the home, up from 5% before COVID (Barrero *et al.*, 2021). Yet a leading Australian economist has cited research showing that between 15 to 20% of all jobs in the US can be done remotely (Eslake, 2021). Australian economists have estimated that 30% of the Australian labour force can work from home over time. Currently they estimate that about 15% can work from home (Pennington and Stanford, 2020).

Lovich, writing for Forbes, notes that the Australian evidence is “eye-opening” – despite a significant proportion of offices reopening, many workers chose to stay home (Lovich, 2021). However, fully remote work is not a preferred option for most workers in Australia, nor is it possible for all roles. A recent NSW Innovation and Productivity Council study found that whilst only 5% of workers can perform their entire role remotely, half can work remotely for at least two days a week and 63% of NSW roles had potential for remote or hybrid working styles prior to COVID. It finds that overall, 56% of all work in NSW is not “remoteable” and must be done on site (NSWIPC, 2020).

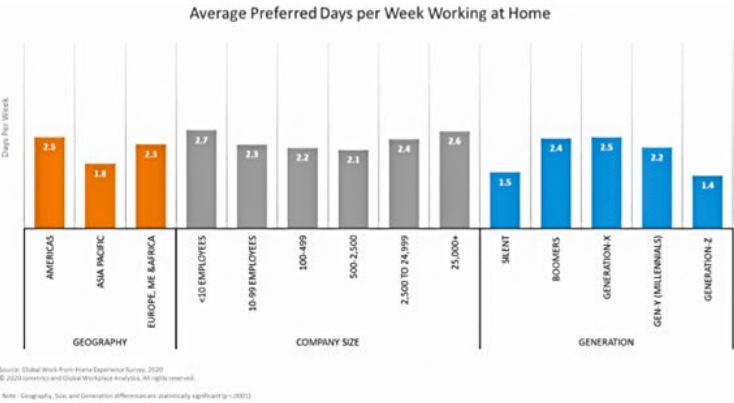
FIGURE 1: BEFORE COVID-19, THE NSW WORKFORCE HAD A MARGE UNTAPPED POTENTIAL FOR REMOTE WORK



Key insight: employees would like to work two to three days a week at home

The NSW study found that remote work levels could remain 69% above pre-pandemic levels in future (NSWIPC, 2020). NSW workers indicated a preference for 2-3 days per week working from home. This is mirrored in findings from a global working at home survey, which found that while participants worked remotely on average half a day a week before the pandemic, recent preferences were typically 2-3 days a week. Younger workers’ preferences to work from home were significantly lower than other age groups, at an average of 1.4 days per week compared to 2.5 days per week on average for Generation X (Iometrics, 2020).

PREFERRED WORK-FROM HOME



Data on the APS shows that employees want to continue working from home for some part of the week (Colley and Williamson, 2020). Recent research shows that the majority of both men and women indicated they would like to continue some proportion of remote work (Davis, 2021), and a survey of senior organisational leaders showed that the majority expect remote work will continue to form part of hybrid work arrangements for most employees (McKinsey, 2021a).

More women than men would like to work from home. A May 2021 survey from FastCompany found a gendered difference – remote work is valued by 68% of currently employed workers, and 43% of women asserted that these options are “very important,” compared with 33% of men (Dishman, 2021). Yet another recent survey based on over 2,000 respondents showed that almost 70% of women wanted to work remotely on a full-time basis compared with 57% of men. More men (41%) preferred to work hybridly compared to women (30%) (Pelta, 2021).

Prior to COVID, the demographic of people working remotely was highly gendered and stratified by industry and occupation, with women, public servants, tertiary educated people and professionals most likely to work remotely (Powell and Craig, 2015). Data from the Household, Income and Labour Dynamics in Australia (HILDA) survey (Wave 18) pre-COVID showed that by far the greatest proportion of workers engaged in at least some remote work were managers (45.5%) and professionals (39.1%), followed by clerical and administrative workers (80% of whom are female) (Hopkins and Bardoe, 2020).

Key insight: internationally, white collar and service industries will have the most structural change post-COVID

Surprisingly little research has examined which jobs are suitable to be undertaken virtually or at home. Pre-pandemic research has shown, however, that both tasks requiring concentration as well as more mundane clerical tasks are suited to being undertaken at home. The literature also concludes that working from home is most suitable for knowledge workers (Ollo-Lopez and Goni-Legaz, 2020; Boell *et al.*, 2016). An extensive European survey covering 28 countries also found that parents were more likely to telework than other employees, and dual earner couples were also more likely to telework (Ollo- Lopez and Goni-Legaz, 2020).

Occupations where staff traditionally work in dense proximity on-site will bear the brunt of change post-COVID. While there will be differential impacts of COVID depending on national economic structures, the four key industries most affected internationally by COVID account for 70% of workers in advanced economies: white collar clerical occupations, production and warehousing, retail and hospitality, and large tourism ventures (McKinsey, 2021). This analysis is supported by the NSW Innovation and Productivity Council report, which found that knowledge intensive industries – which tend to be white collar and professional – had both the largest proportion of people working from home pre-COVID, and the highest untapped potential for remote work (NSWIPC, 2020).

The figure below developed by Australian economists forecasts capacity to work at home. Based on 2020 data, it shows that in Australia, clerical and administrative staff, followed by professionals and managers, have the greatest capacity to work at home (Pennington and Stanford, 2020).

In summary: Emerging grey literature suggests that the future of work is hybrid, with employers, senior leaders and employees expecting to work in a hybrid working arrangement. The preferred amount of time to work at home is two to three days a week. Due to increasing numbers of employees continuing to work from home, the demographics of those working from home or remotely are changing, to encompass younger people and not just older managers, and in a broader range of occupations, not just knowledge workers.

# Staff experience of remote working

Pre-COVID literature on staff experience of working from home identifies some key differences in relationships, team building and career progression between teleworkers and workers located in their usual workplace. A wealth of recent survey data on staff experience shows areas of benefit and highlights particular preconditions to ensure staff experience is positive and productive. However, an important consideration is given the highly gendered nature of remote work prior to COVID, negative career effects, including slower salary growth and fewer opportunities for promotion, may continue to accrue to women. Organisational culture plays a key role in shaping staff experience, and we commence this section by examining the role of culture on remote working.

## Organisational culture

### Pre-COVID literature

While little research has explicitly examined the role of organisational culture on remote working, recent research has examined how cultural barriers contribute to the non-use of telework. Researchers have found that an ideal worker culture based on male, full-time employees being present in the workplace is likely to discourage people working from home (Lott and Abendroth, 2020; van der Lippe and Lippenyi, 2020).

One team of researchers found that based on large scale panel data, almost 70% of employees who did not work from home reported that they did not do so because “their supervisors attached great importance to presence in the workplace” (Lott and Abendroth, 2020, 601). In the APS, half of those surveyed who did not work from home during the pandemic did not do so because of managerial resistance, or their agency culture was not conducive to working from home (Colley and Williamson, 2020). Further, where managerial support was low, non-teleworkers reported significantly lower levels of satisfaction, fairness and intention to stay (Lee and Kim, 2018).

Researchers have also found that “female employees have the lowest levels of job satisfaction when agencies officially adopt telework but employees cannot utilize the program” (Bae and Kim, 2016, 367). Men have the lowest levels of job satisfaction if they are unable to telework because no program exists. Researchers have also suggested that not being able to telework can lead to “disaffection between teleworkers and nonteleworkers” (Mahler, 2012, 416), due to non-teleworkers perceiving they had been treated unfairly. This could ultimately lead to a two tiered workforce and inequality.

An inclusive environment can facilitate remote working. Data from a large scale European country covering 28 countries found that organisations with participative management and employee involvement and consequently strived to empower employees also had higher levels of teleworking (Ollo-Lopez and Goni-Legaz, 2020).

## Recent trends

### Key insight: a gap between employee and leader experience exists

Remote work may exacerbating a cultural disconnection between organisational management, and the reality of their employees. In the UK, one survey of 2300 employees and managers found disconnections between the impressions of managers and employees around the impacts of remote work on employee job satisfaction (40% of managers believed employee satisfaction increased, compared to 23% of employees) and employee organisational engagement (45% of managers compared to 27% of employees). At the same time, managers were more likely than their staff to agree that absenteeism has increased. This disconnection between how managers perceived staff felt during the pandemic, and their direct reports’ actual experience, shows the value of formal mechanisms to better understand and respond to staff experience (CMI, 2020).



**Key insight: organisational culture in remote work is increasingly dependent on middle managers**

A November 2020 report from the Chartered Management Institute (UK) found that the location of work – remote, in-office, or hybrid – was less important to productivity and job satisfaction, than the culture and actions of management. Similar to pre-pandemic research findings, organisations that had fostered a sense of belonging, and made efforts to bring people together experienced workplace benefits. Over 80% of respondents felt that organisational culture had improved or remained the same throughout the pandemic, regardless of work location (CMI, 2020). In Australia, a survey of 800 office workers revealed that there was no difference in workplace trust and belonging between remote and office workers in 2020 (Davis, 2020).

FIGURE 11: APPROACHES THAT HELP TO BUILD AND SUSTAIN CULTURE



Figure source: Davis (2020)

The figure above shows the factors which can improve workplace culture once the pandemic is controlled in Australia, highlighting the importance of communications, and fostering an inclusive environment (Davis, 2020).

**Pre-COVID literature**

Little research has examined the longer-term effects of remote working on careers and professional relationships, how teams work together and share knowledge, and the impacts for different groups of employees. We examine the available literature, commencing with team work.

**Virtual Team work**

Limited research has examined knowledge sharing and teleworking. van den Meulen *et al.* (2019) found that knowledge sharing decreased when employees worked from home. This is due to the proximity effect, with employees seeking information from those physically closest to them before seeking guidance or advice from employees working from home, even with the use of digital technology. Yet other research shows that teleworking increased knowledge sharing due to those working from home using a broader range of communication tools, leading to work being completed more quickly. This research also found, however, that a base level of face-to-face communication was still necessary for the work to be completed successfully (Coenen and Kok, 2014).

Available literature shows, however, that employees who have trusting relationships and strong bonds with colleagues have greater knowledge sharing compared with teleworkers who do not have these

relationships (Allen *et al.*, 2015). The quality of relationships is impacted by teleworking, with those who telework more having less positive relationships than those who telework less frequently (Allen *et al.*, 2015). Employees in virtual teams are more likely to engage in pro-social and helping behaviours during a crisis (Kniffin *et al.*, 2020), and research is needed on whether, and how, these behaviours are maintained once the sense of crisis has dissipated for many employees.

**Impact on work-life balance**

A stream of literature has examined working from home/teleworking and whether this form of work ameliorates or compounds work/family conflict. Dockery and Bawa (2014) found that working from home can assist work and family integration, but that it can lead to long hours of work, leading to work/family conflict. Researchers have found that women teleworkers with children viewed teleworking as being extremely important to balance work and family, as it enabled them to renegotiate work and non-work boundaries (Maruyama and Tietze, 2012). Based on longitudinal survey data, working from home has been found to lessen depression in mothers of young children (Shepherd-Banigan *et al.*, 2016). Allen *et al.* (2015) state that there is little evidence showing that telecommuting is an effective way to mitigate work/family conflict, however, and they also argue that any conflict is mediated by the extent of teleworking. The more that employees teleworked, the less the work interfered with family commitments (Allen *et al.*, 2015).

While studies have focused on those who work from home instead of being in the office, other researchers have examined whether or not performing discretionary – or supplementary – work at home leads to work/family conflict. Based on 2014 APS census data, Cortis and Powell (2018) found that 13% of APS EL1 employees performed supplementary work at home, with this being more common amongst women with caring responsibilities, those who had been in their agencies for five years or less, and those working outside of the ACT. The researchers conclude that supplementary work is undertaken because of work overload, and also possibly because newer employees are establishing their careers (Cortis and Powell, 2018). Undertaking discretionary work at home has also been found to result in work/family conflict, with the extent of informal overtime increasing as the number of children within a family increases. Further research has identified that undertaking discretionary overtime at home results in perceptions that issues at home are being neglected due to the demands of work (Ojala, Natti and Anttila, 2013).

Views are contested on whether working from home progresses gender equality. Some speculate that continued working from home could reduce the gender gap in hours and earnings (Arntz *et al.*, 2020). However, other studies identify that it can embed traditional roles and lead to career limitations, ineffective use of human capital and negative effects on economies (Das and Kotikula, 2019; Maruyama and Tietze, 2012).

**Impact on careers**

Pre-pandemic research has examined the impact of teleworking on employees’ careers, finding that telecommuters experience career penalties due to a perception that they are less devoted to their work than those working in a standard workplace. The perception of a lack of devotion leads to biases against telecommuters, which is known as a “flexibility stigma” (Golden and Eddleston, 2020, 3). Researchers have also found that more women than men believe that telework was detrimental to their career, and perceived fewer advantages than did male employees (Lott and Abendroth, 2020; Nakrosiene *et al.*, 2019).

Survey data based on survey of over 400 employees, however, found that telecommuters did not receive fewer promotions compared to those who did not telework, but they did experience lower salary growth. The work context also affects promotions and wage increases for those who teleworked, with extensive telecommuters receiving more promotions if they worked in teams where teleworking was normative, or they provided high levels of discretionary work. Further, teleworkers who had a high face-to-face contact with their manager received a higher rate of increased salary



growth than did those who only occasionally teleworked (Golden and Eddleston, 2020). Yet another study found that women public servants in the UK who teleworked on a full-time basis had forgone promotion opportunities to do so. This study, however, was confined to one case study organisation (Collins, Cartwright and Hislop, 2013).

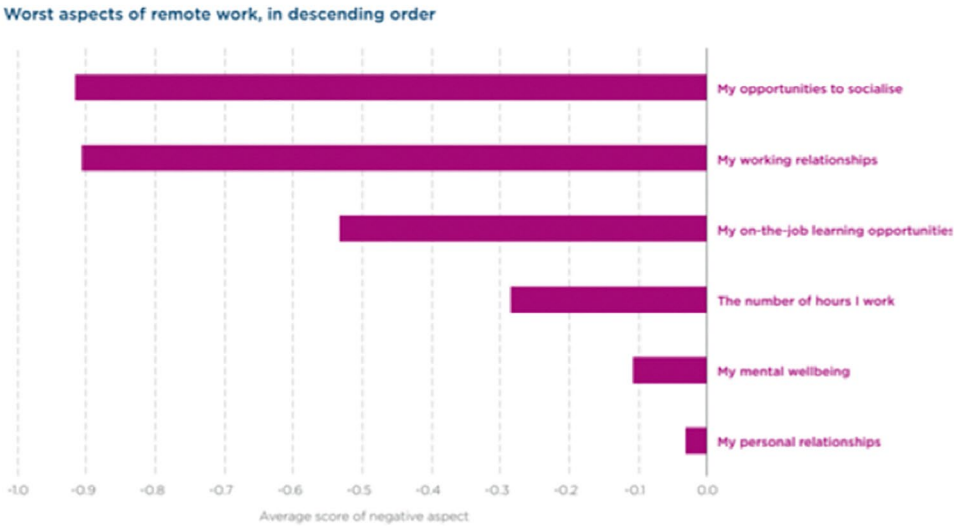
Bloom *et al.* (2014) found that the incidences of promotion halved during a period of working from home in one call centre organisation. This may be linked to decreased visibility of those working from home. These researchers found that half of the teleworkers were most concerned about a loss of career development and reduced visibility. However, this was offset by perceptions of increased productivity and better work-life balance (Maruyama and Tietze, 2012). A lack of networking and professional interactions also hampered career development.

## Recent trends

### Key insight: an increasing proportion of employees value teleworking

A survey of Flemish workers in May 2020 found that respondents mainly attribute positive characteristics to teleworking. Almost two-thirds (65.7%) indicated that overall job satisfaction increases with telework, and 64.6% believed that telework improved their work-life balance. Half of respondents thought telework minimised both work-related stress (48.4%) and the chance of burnout (47.6%) – these findings were particularly pronounced for women and older workers. However, some feared that telework diminishes promotion opportunities and weakens ties with their colleagues and employer (Baert *et al.*, 2020). In a survey from the NSW Innovation and Productivity Council, public sector staff ranked “opportunities to socialise” as the worst aspect of working from home.

FIGURE 11: WORK RELATIONSHIPS AND A LACK OF SOCIAL INTERACTIONS ARE THE WORST PARTS OF REMOTE WORK



Source: IPC Remote Working Survey 2020

Wang *et al.* (2020) found that during remote work in the pandemic period, social support was positively correlated with lower levels of all remote working challenges. Colley and Williamson (2020) found that more men than women APS employees considered that opportunities to network had worsened during the pandemic. Reduced networking for remote workers, however, is not inevitable. Gartner (2021) recommends that organisations create virtual “intentional collision opportunities”, where employees from across the organisation attend. This “intentional matchmaking” can recreate incidental communications in traditional workplaces.

### A gendered experience of working from home during COVID

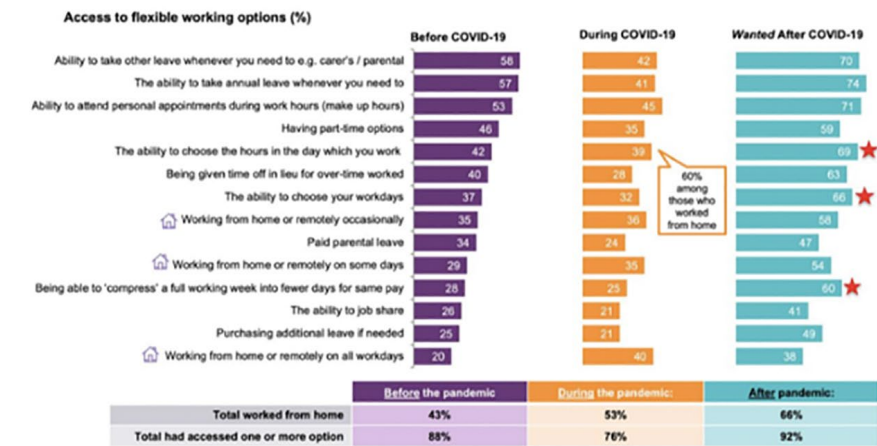
Working from home during COVID has different impacts on men and women with families. Working from home was associated with a higher proportion of unpaid work for women before the pandemic, a dynamic that only increased during the pandemic. While male partner hours of unpaid work increased by 64% during lockdown to an average 3.64 hours per day, mothers reported unpaid work of 5.13 hours per day, and a corresponding increase in dissatisfaction with work-life balance and partner share of unpaid work (Craig and Churchill, 2020). These findings were reflected internationally, with one study finding that care work and economic burden of the pandemic was disproportionately felt by women across the Asia-Pacific region (Seck *et al.*, 2021) and in Iceland (Hjálmsdóttir and Bjarnadóttir, 2020). During the lockdown period, 40% of parents who worked from home reported always or often actively caring for children while they worked, with a further 28% passively caring for children. However, 54% of families indicated that mothers did most of the care, with 38% equally split between spouses and fathers having majority care just 8% of the time (Hand *et al.*, 2020).

### Key insight: employees have a clear preference for flexibilities around hours of work and taking leave

Staff experience surveys have shown that remote and hybrid work is not necessarily flexible work. Increasingly, employees are identifying a preference for flexibilities around hours and leave – both separately to, and in concert with, remote work. Baird and Dinnale (2021) review available literature at the onset of COVID and during the pandemic, to assess how Australian employees’ preferences for different flexibilities have shifted during the period. One important finding is that during COVID-19, while working at home at a greater rate than before, employees reported having less access to innovative flexible working conditions – such as flexibility in taking leave for personal reasons, access to time off in lieu, make-up hours and part-time work.

Data below illustrates the gap between availability of options before, during and ‘after’ COVID-19 (noting that COVID-19 is still prevalent in some parts of Australia: unpublished data from the Workplace Gender Equality Agency cited in Baird and Dinnale, 2020). It shows that ‘post’-COVID, employees report wanting more access to every identified flexibility, with a particular focus on flexibilities around choosing hours worked and the ability to take annual and carer’s leave whenever needed. The same source identified that 54% of employees believed their employers would be more open to flexible working arrangements than they were prior to COVID. The employees most likely to identify as willing employers were those earning above the median wage, employed full time, living in metropolitan areas, and aged under 35.

FIGURE 10: ACCESS TO FLEXIBLE WORKING OPTIONS: BEFORE, DURING AND AFTER COVID-19 PANDEMIC, PER CENT



Note: Question asked: Q9/Q10. Before/during the COVID-19 pandemic, which of the following flexible workplace arrangements had you accessed or used while employed at your most recent or current organisation? Q11. Which of the following flexible workplace arrangements do you want to have access to once COVID-19 restrictions are eased and things generally get back to normal? / Base: All respondents not self-employed (n=820)

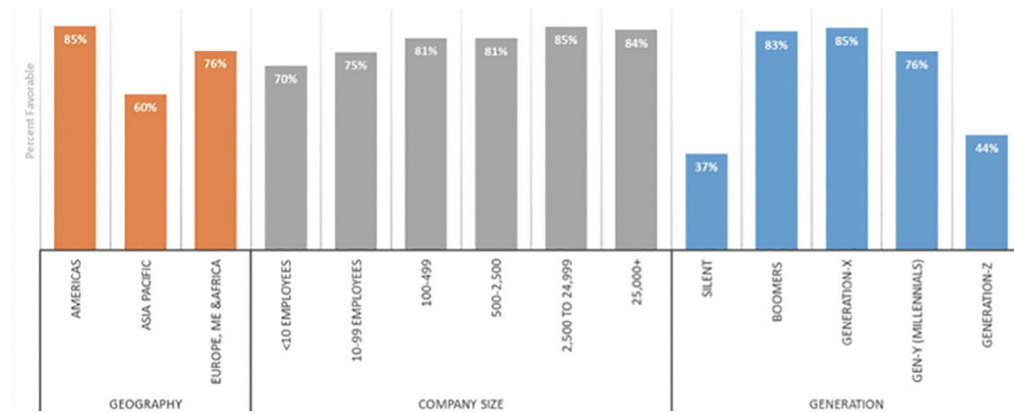
Source: WGEA (2020), conducted by Newgate Research, unpublished.

# Managers' experience of remote working

## Key insight: younger staff have suffered with remote work

A Microsoft survey indicated that Generation Z staff, early in their careers and more likely to be single, have struggled with isolation, and a lack of established networks. This cohort also reported difficulties with engagement during meetings (Microsoft, 2021). This is mirrored in findings from a global work at home survey, which found that Gen Z staff wanted to work fewer days remotely than older workers post-pandemic. Younger staff also felt less productive working from home, with only around half as many Gen Z staff as Gen X staff saying they felt “very productive” working from home, with a positive trend to productivity across all age groups with increasing company size (Iometrics, 2020).

### I AM VERY PRODUCTIVE WORKING FROM HOME



Source: Global Work from Home Experience Survey, 2020

**In summary:** Organisational culture can facilitate remote working, particularly cultures which are not shaped by an ideal worker norm. Staff experiences pre-pandemic highlight the benefits which accrue through remote working, but also negativities, associated with reduced visibility, leading to fewer career development and networking opportunities. Whether remote working eases work/family conflict is equivocal, and more research is needed in this area.

## Pre-COVID literature

Pre-pandemic literature on working from home and teleworking highlights the importance of middle managers in enabling employees to engage in these types of working arrangements (see for example Williamson *et al.*, 2018). As researchers have noted, middle managers are key to enabling employees to work from home successfully (Nakrošienė, Bučiūnienė and Goštautaitė, 2019; Collins *et al.*, 2013). Management and culture also impacts on productivity, with the actions of organisations and managers being most significant for productivity than where work is occurring (CMI, 2020). The importance of middle managers will continue to grow as organisations increasingly adopt newer ways of working.

Researchers have found some resistance from managers to remote working, including in the APS (Williamson *et al.*, 2018). Some of the resistance stems from a lack of capability in managing underperformers. Research on public sector workplaces has found this lack of managerial capability in agencies where remote working is not usual, as well as workplaces where it is more established (Williamson *et al.*, 2018). Managers have also expressed a preference to maintaining standard working arrangements, however, researchers also note that new routines can be developed. The symbolic importance of enabling staff to work from home also sends a strong signal that the organisation values flexibility (Collins *et al.*, 2013).

Lautsch and Kossek (2011) have identified the factors managers consider when deciding who should be able to telework. These are: work related considerations (such as suitability of the job for teleworking), personal and household characteristics, and technological limitations. Work-related factors are the most important. A range of challenges managing teleworkers have been identified. These include the lack of face-to-face communication, interdependencies of work within a team, managing and monitoring employees in different locations, issues for non-teleworkers, such as perceptions of unfairness, concerns about teleworkers being distracted at home, and a lack of resources, including technological resources (Greer and Payne, 2014). Researchers have noted that perceptions of fairness in who can work from home is important, with fairness strengthening the psychological contract between an employer and their organisation (Collins, *et al.*, 2013).

Other researchers have examined how to effectively manage teleworkers. Richardson's (2010, 137) findings include: the need for “maintaining a balance between providing autonomy alongside appropriate levels of cohesion between themselves and employees and between employees”; the increasing importance of trust and the centrality of interpersonal relationships and interactions. Effective technology, a well-equipped and dedicated workspace at home, regular communications with colleagues, and managers having an understanding of the permeability of boundaries (i.e. the extent to which employees will allow work to intrude on family life) are all factors enabling successful working from home (Greer and Payne, 2014; Basile and Beauregard, 2016). Lautsch and Kossek (2011, 15) conclude: “supervisors need to develop new approaches attuned to the needs of workers... (i.e.. increased information sharing and assistance in boundary management)”, but at the same time remain attentive to equity issues within workgroups. Work planning is also important to ensure employees are not working unreasonable amounts of discretionary overtime, leading to lowered productivity and burnout.

Pre-COVID literature identified that the decreased visibility of employees who teleworked resulted in fewer promotion opportunities and reduced career opportunities (Nakrosiene *et al.*, 2017; Bloom *et al.*, 2014). Researchers have also found however, that remote working can also lead to reduced visibility of managers. Decoupling work activity from traditional workplaces can reduce managerial visibility, and authority (Leclercq-Vandelannoitte, 2020). One small scale case study examined how managers supervised employees working in hubs. The researcher found that managers compensated for this lack of visible authority by becoming “enablers” who supported employees and emphasised employee autonomy and wellbeing, as well as becoming “controllers”, through increased monitoring and surveillance (Leclercq-Vandelannoitte, 2020).

## Recent trends

### Key insight: some managers are struggling with hybrid working structures and need guidance on managing remote workers

Throughout 2020, organisations were in flux, building people management strategies to cope with a crisis that had brought turbulence to a whole system, leaving organisations alone to manage internal problems (Ripamonti *et al.*, 2020). While several studies found that a majority of managers believed that remote work was undertaken to a level which surpassed expectations, a large minority of managers struggled with implementation and technological issues (Ozimek, 2020). A July 2020 survey of 1200 people from 24 countries found that 40% of managers were struggling, expressing low confidence in their ability to manage workers remotely, with 41% stating that they were skeptical of employees' ability to remain engaged over time while working remotely. Male managers were more likely than female managers to have negative attitudes to remote working, with 36% of men compared to 15% of women, indicating a lack of trust in their employees' work skills (Parker *et al.*, 2020).

Challenges for managers in remote work include the need to adapt to a lack of face-to-face supervision; to address a perceived or actual lack of information about employees' day to day work; to address challenges like employee social isolation and distractions at home; and to address increasing challenges created by workplace siloing (Gleeson, 2020). Managers also experienced difficulties managing performance of underperforming employees working at home. Researchers have found, however, that poor performers pre-COVID were likely to continue to perform poorly during the pandemic lockdown, which suggests that “poor performance was more about fit and motivation than working from home itself” (Forbes *et al.*, 2020, 20).

Emerging research also recommends that organisations develop new performance measures, which focus on outcomes, rather than presenteeism (Forbes, 2020).Gallup has produced a series of articles using insights from its workplace polling during COVID-19, addressing the emerging shift to hybrid work and team styles (Robison, 2020). Advice is tailored to managers who may be struggling with ways to manage and measure employee performance and productivity in these emerging team structures, and is drawn from data-based insights into employee preferences and performance.

Increasing and solidifying employee engagement is a business strategy with measurable productivity gains. Decades of Gallup poll data indicate that highly engaged workplaces have 21% higher profitability and 41% lower absenteeism (Hickman and Robison, 2020), and research stresses the core role of the middle manager in creating employee engagement to achieve success. In this context, recommended remote work strategies for managers include:

- setting clear performance metrics that adapt to flexible working practices. Hickman and Maese (2021) indicate that three core performance domains describe and consistently predict success
  - setting goals and meeting them; partnering for effectiveness; and translating work into effectiveness. Clear metrics related to each of these domains will provide a framework for remote work output, communication and product quality, and support flexibility in a way that traditional metrics, such as hours of work, may not (Gleeson, 2020).
- prioritising ongoing performance conversations and collaborative goal setting. Gallup data showed 40% of employees begin the day without a clear understanding of the day's goals. In a remote or hybrid work environment, day to day managing requires planned and structured performance conversations with thought given to location and timing rather than spontaneous, proximity-facilitated catchups (Hickman and Maese, 2021).
- individualising management approaches for each employee requires greater 'intentionality' and planning for remote work. Managers can employ a strengths-based approach to explicitly discuss with each employee the conditions under which they perform best, and work with them to design approaches to boost engagement (Robison, 2020a). Tailored individual communication approaches help to maintain personal connections and provide a feeling of autonom and control (CMI, 2020).
- deliberately structuring time into the working day to promote informal communication. This might include building in time for small talk in team meetings, to reproduce or replace casual conversations in the workplace (Hickman and Maese, 2021).

# Productivity

These surveys-based insights align with academic research insight on the primary role of public sector middle management in creating managing organisational practices.

## Key insight: overcoming gendered ‘proximity bias’ is a challenge for managers

Post-pandemic, PwC warn of the impact of “proximity bias”, with a key challenge for managers to make sure that staff who come into the office are not advantaged over those who are “out of sight, out of mind” (PwC, 2021: 4) in a hybrid teams model. Evidence points to remote work preferences being highly gendered both before and after the pandemic (Hopkins and Bardoel, 2020), with women more likely to value working from home than men, and men likely to prefer working in the office more days per week in emerging hybrid models (Dishman, 2021; Pelta, 2021). International media reports state that more men than women want to return to working in a traditional workplace (69% of mothers, compared to 56% of fathers).

As such, proximity bias risks becoming entrenched systematic gender bias and opens the organisation to discrimination risks (PwC, 2021). Avoiding such outcomes requires careful consideration of systems and processes to manage performance remotely at the time of set-up; with a mainstreamed approach to avoiding gender bias through built-in metrics and processes to equitably measure performance and evidence for promotion regardless of location of work (PwC, 2021). Additionally, managers will face the challenge of ensuring that all employees have access to promotion opportunities, to maintain organisational performance (Hickok, 2021).

Significantly, the devolution of gender inclusion policies to public sector middle managers without specific gender equity expertise can result in the decoupling of HR policies from everyday practice. Without attention to scaffolding from HR, including monitoring, auditing and setting clear quantifiable outcomes, research shows that implementation is incoherent and outcomes may not match the intention of the original policies (Williamson *et al.*, 2019).

## Key insight: trust between managers and employees affects manager openness to remote work

A rapid shift to telework across sectors has arguably reduced stigma around working from home (McKinsey, 2021), despite some initial difficulties. Research interviews during the pandemic period showed the beginnings of an increased mutual trust between managers and workers, which HR professionals had identified as a key barrier to implementing remote work prior to the pandemic lockdown. As remote work became a key tool for business continuity, rather than an employee flexibility option, human resource professionals identified that trust levels were the defining difference between managers who were embracing remote work, and those merely tolerating it (Aitken-Fox *et al.*, 2020). Where managers indicated that they trusted their direct reports, a UK study found that 43% of managers thought productivity had increased with remote work compared to 34% of those with low trust – although there was no evidence that this correlation was causative (CMI, 2020).

**In summary:** The role of middle managers continues to be crucial in ensuring teams are cohesive and productive. The research highlights managerial resistance to remote working, which may stem from a lack of capability managing remote workers. Managers can also experience the negativities associated with remote working, such as lower visibility undermining their authority. The research provides a range of advice for managers on how to effectively manage remote teams.



A key preoccupation of research into remote work pre-COVID was its potential to increase or lower productivity. Much of the data on productivity in remote work is in the form of self-reported productivity, gathered through surveys of employees and managers. While useful there is little hard evidence as to whether or not remote working increases or decreases productivity. Generally, however, researchers do believe that it increases productivity and performance.

Pre-COVID literature

There is a significant literature on productivity as a result of remote working and teleworking. However, few studies empirically measure productivity, despite there being a large literature claiming that working from home results in productivity gains (see for example Allen *et al.*, 2015; Bosua *et al.*, 2012; Caillier 2014; Chung and van der Horst 2017; Dahlstrom, 2013; Dockery and Bawa, 2014). The lack of quantitative data arises from productivity being self-reported, with employees over-estimating their productivity, the difficulties of measuring productivity, as well as the difficulties of establishing causality (Dutcher, 2012). It is also difficult to generalise about factors which increase productivity in a remote working context as studies are highly context dependent (Allen *et al.* 2015; De Menezes and Kelliher, 2011).

The pre-pandemic literature has shown mixed results on whether productivity increases or decreases when employees work from home. In one influential study based on an experiment that generated quantitative data, call centre employees worked from home for four days a week, and spent one day in the office. The researchers found that performance increased by 13%, which came from a 9% increase in the number of minutes employees worked per shift, due to taking fewer breaks and less time off (Bloom *et al.*, 2014). The remaining 4% came from taking more calls during their shift. Further, this experiment found that performance increased to 22% once employees could decide where they wanted to work. Employees who had been considered low performers returned to the office, which boosted their performance, and those who performed well at home continued to work from home (Bloom *et al.*, 2014). Other research has also found that employees working from home worked an additional 5 hours a week, and productivity also rose due to increased work motivation, which resulted in greater work effort (Rupietta and Beckmann, 2018).

In terms of organisational wide productivity, one study showed that total factor productivity increased by 20 to 30% during a period of nine months while employees worked from home. This saved the organisation about \$2000 a year per employee. The savings came from reduced office space as well as improved employee performance and reduced turnover (Bloom *et al.*, 2014). A meta analysis of 68 articles found a positive relationship between teleworking and organisational outcomes, namely productivity, retention, organisational commitment and performance (Martin and MacDonnell, 2012). Gajendran *et al.* (2015) conducted a survey of over 300 employees and found that teleworking was positively associated with increased productivity (both directly and indirectly), and contextual performance, which refers to interpersonal relationships between colleagues.

Factors affecting productivity

A few studies have specifically explored the impact of hours of work on productivity and working from home (Bosua *et al.*, 2013; Dockery and Bawa, 2014; Hoornweg *et al.*, 2017; Kazekami, 2020; van der Lippe and Lippényi, 2019). With the exception of van der Lippe and Lippényi (2019), the studies show that working from home increases productivity, or that it increases productivity when working up to a certain number of hours per week, although working too many hours from home (and away from the office) decreases productivity (Kazekami, 2020; Hoornweg *et al.*, 2017). However, van der Lippe and Lippényi’s study (2019) found that productivity declined for an individual employee working from home less than one day per month, which was correlated to a 70% decrease in the likelihood of an employee receiving a positive performance appraisal.

The nature of the work undertaken also affects the productivity of working from home. It includes the complexity of the work, work requiring high or low levels of dependence (autonomy) and work requiring collaboration or innovation. One study based on experiments has found that productivity of those working from home increases when creative tasks are being performed and decreases for more mundane tasks. Men in particular had lower productivity when undertaking the dull tasks, although the researchers do not explain this finding (Dutcher, 2012). Researchers have also argued that higher productivity from those who telework may be attributable to high performing individuals being enabled to telework, rather than the work arrangement itself (Allen *et al.*, 2015).

Other factors that impact the productivity of teleworkers include age: the older the worker, the more productive (Kazekami 2020); whether it is voluntary or forced (Kazekami 2020; Versey 2015) and the reliability of technology (Ansong and Boateng, 2018; Bosua *et al.*, 2013; Hoornweg *et al.*, 2017; Hynes, 2016; Karanikas and Cauchi, 2020; Turetken *et al.*, 2011). The history of the employee in the workplace also has an impact: employees new to an organisation are less likely to ask questions in a telecommuting environment or absorb organisational culture (Turetken *et al.* 2011; Waizenegger *et al.*, 2020; Wojcak *et al.*, 2016). Other challenges to remote workers’ productivity include work-home interference; ineffective communication due to ICT issues; and procrastination and loneliness. Participants recognised that check-ins and monitoring by managers, adjustments of workload to ensure enough busy time but avoid overload, and providing social support were critical to allaying these issues (Wang *et al.*, 2021).

Performance

Productivity is strongly dependent on employee performance. Research has found that teleworking increases motivation, engagement and job satisfaction (Lee and Kim, 2018; Bai and Kim, 2016; Rupietta and Beckmann, 2018). Lee and Kim (2018) also found that the more often employees teleworked, the higher the work effort. Callier *et al.* (2012) examined telework/working from home in the US federal public sector and found that teleworkers reported higher job satisfaction than those based in the office. They attribute this to greater autonomy, which has been found to be an antecedent to job satisfaction. Gajendron *et al.* (2015) also found that telecommuting enhances perceptions of autonomy, which leads to improved performance.

Other research, however, does not support these findings. De Vries *et al.* (2018) examined the extent to which teleworking affected the commitment, engagement and extent of isolation of US public servants. These researchers found that teleworking did not increase commitment or motivation, and suggest that commitment fell on days when employees teleworked. Other research on a US federal government agency shows that frequent teleworkers had lower levels of work motivation than did employees in the office. This may, however, be due to the occupation – in this study security personnel and law enforcement officers were the subject of the study – occupations which are less likely to be undertaken at home than other occupations (Callier, 2012). Further, this research shows that working from home for more than two days a week can be detrimental, leading to decreased job motivation (Callier, 2012).

Researchers have also examined teleworkers’ intention to leave. One researcher has found that employees who telework still reported significantly higher turnover intention than those who voluntarily worked on their employer’s premises (Choi, 2018). Teleworkers may be less satisfied as they are less able to network and interact with key personnel, which leads to career progression. The accompanying social isolation can also decrease employee commitment (Choi, 2018). Managerial support can mediate these negative effects to a degree. Yet other studies find that teleworking lowers employees’ intention to leave, although the correlation is small (Allen *et al.*, 2015).

Recent trends

Key insight: working at home increases self-reported productivity

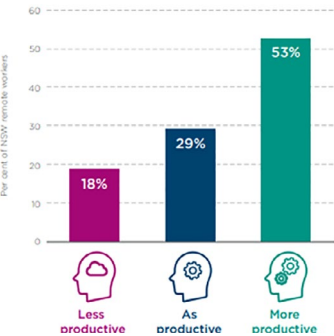
Early in the pandemic, the PwC global CFO Pulse Survey showed that 45% of CFOs anticipated productivity loss due to the shift to working from home. This assessment rapidly changed, with only 26% reporting anticipated productivity loss by June 2020 (PwC, 2020). A mid-2020 survey of 12000 professionals in the US, India and Germany found that 75% of employees felt they had maintained or improved productivity in the first months of the pandemic, while working from home, particularly on individual tasks (Dahik *et al.*, 2020).

By the end of 2020, surveys of employees and managers globally were consistently revealing self-reported increases to productivity and efficiency in remote work. Data from a global survey found that 68% of respondents reported increased productivity, with an estimated productivity boost of 5.7% when employees work 2 days per week at home in future (Iometrics, 2020). Academic survey research in Europe found that 57% of employees did not feel they were less productive at home (Ipsen *et al.* 2020).

In Australia, data shows that workers overall reported an increase in productivity, with some variation in findings of quantum. Colley and Williamson (2020) found that almost 90% of APS managers believed their team was just as productive, if not more productive working from home during the pandemic than pre-pandemic. Data from a Swinburne University survey of Australian workers found that 70.5% of workers reported the same or higher levels of productivity when working from home; but around 30% felt less productive. A recent report from the NSW Innovation and Productivity Council showed that 82% of workers felt they were as productive, or more productive, when they worked from home, although a minority – 18% percent – identified they were less productive. This survey incorporated workers whose work, by its nature, did not lend itself to working from home – such as nurses and builders (NSWIPC 2020).

FIGURE: MOST WORKERS REPORT HIGHER PRODUCTIVITY WHEN WORKING REMOTELY

Productivity reported when working remotely, compared to working at an employer's workplace



Source: IPC Remote Working Survey 2020

Using data from a US survey of 22,500 workers, Barrero *et al.* (2021) estimate that working from home has the potential to raise productivity by as much as 2.7%. However, this finding is based on self-reported productivity, and the authors themselves indicate that this is not reliable. Another study by Ramani and Bloom (2021) predicts a potential 5% productivity boost due to remote work, due in part to a reorganisation of work that allows quieter work to be done at home. However, the majority of the predicted productivity increase is achieved through time saving on commuting (Ramani and Bloom, 20201). This is arguably a reallocation of employees' personal time to work time and an increase in hours worked rather than a true productivity gain. Further, the OECD (2020) has found that teleworking can increase productivity through cost reductions which accrue through reduced office space due to more people working from home, improved retention through employing high quality workers who are not bound by location, and decreased attrition. The OECD's Global Forum on Productivity is examining the link between telework and productivity.

Key insight: facilitating collaborative tasks remotely will add value

Dahik *et al.* (2020) note that while overall employees reported higher productivity during the first months of lockdown, there was differentiation between individual tasks and collaborative tasks. Only 51% stated that they were able to maintain or increase productivity on collaborative tasks during this time, correlating strongly with the same respondents who reported good social connectivity and appropriate tools to connect – such as video conferencing, virtual whiteboards and project management software. They also reported stronger mental and physical health (Dahik *et al.* 2020).

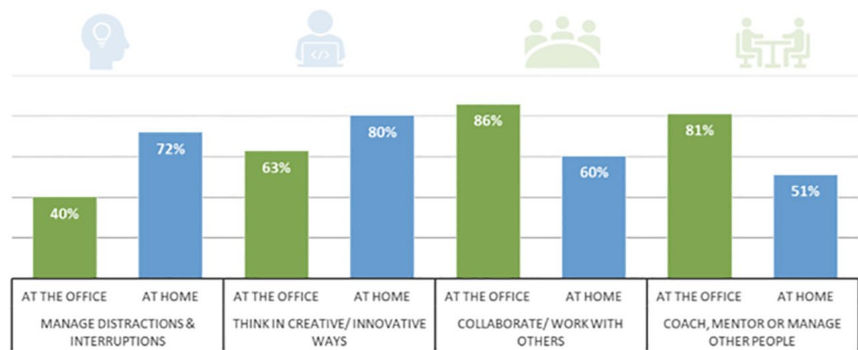
EXHIBIT 2 - EMPLOYEES SATISFIED WITH SOCIAL CONNECTIVITY ARE MORE LIKELY TO MAINTAIN OR IMPROVE PRODUCTIVITY ON COLLABORATIVE TASKS



Source: IBCG Covid-19 Employee Sentiment Survey, May 21 to June 23 2020 (N = 12.662 in the US, Germany, and India). unweighted. representative

Similarly, the Iometrics global work from home survey reported that collaboration and trust from management were key aspects of effectively working from home, where employees felt better able to manage distractions and think creatively. However, fewer employees were satisfied with their ability to collaborate, mentor and manage other people from remote environments than in-office (Iometrics, 2020).

SATISFACTION WITH WORK ACTIVITY PERFORMANCE



Source: Global Work from Home Experience Survey, 2020

**In summary:** A range of factors influence employees' performance, motivation and engagement, with much literature showing that teleworkers have higher levels than non-teleworkers. Performance may be enhanced through increased engagement and motivation, and the research suggests this leads to increased productivity. The existing research shows that many variables and contextual factors make measuring a productivity and remote working difficult, if not impossible. The most recent literature strongly shows that working from home increases productivity – or at least, employees and managers believe that productivity has increased. While some researchers have quantified productivity gains, more research is needed in this area.

# Digital infrastructure

In this section we examine recent trends in digitisation, outlining the major changes occurring in workplaces and the implications for employees. We consider how teams work together virtually, and then also briefly examine data privacy issues.

## Pre-COVID literature

Workplace technologies have become central to organisations. While they started out as ‘instrumental aids’ to support predominantly administrative activities, they have since become the basis for social interactions and community building in organisations. More recently, digital technologies are able to perform managerial roles through the use of artificial intelligence capabilities (Baptista *et al.*, 2020). Yet much of the academic research takes an instrumental view on these technologies, examining their direct impacts on aspects of individual and organisational performance rather than the deeper effects that are associated with them in terms of the impact they have on work and identities.

New technologies have changed the characteristics of employment as they enable the fragmentation of work (Donnelly and Johns, 2021). Digital technologies facilitate increasingly complex employment relationships, support growing use of part-time and shift work, support increased individualisation of employment relationships and facilitate smaller and more isolated work units. Digitisation can support flexibility and enable smarter working.

While digitisation has led to a number of impacts such as optimization of tasks and improving participation, it has also resulted in work intensification and the creation of new forms of work. For example, in growing communities through social media this requires difficult conversations about the nature of community and its culture, as well as governance work to regulate participation and growth in communities. The use of automated algorithms requires more oversight. Hence, digitisation impacts on work design, meaning organisations may have to modify or adapt their core capabilities and structures. In these ways digitisation can lead to deeply structural changes, although it may only become visible when these become a major component of what governments do (Baptista *et al.*, 2020).

Thus, the argument has been made that discussions of digitisation have largely related to the benefits that might be delivered to organisations in terms of efficiencies or improvements in services for consumers, but there has not been the same sort of interrogation of the impact on workers (Valenduc and Vendramin, 2016). This is despite the fact that there is some evidence to suggest that digitisation has led to the boundaries between professional and personal lives becoming eroded and greater home working can cause a potential increase in working hours if not well managed (Kirov, 2017). Others argue that digitisation and the rise in automation that this will drive could lead to significant losses of jobs (Frey and Osborne, 2013). Certainly there is a growing body of evidence to suggest that extensive employer demand for flexibility can lead to greater precarity for employees (Koslowski, 2016). Remote working can also enable individuals to extend their careers in later life (Tomlinson *et al.*, 2018), although as some point out this may be out of necessity and not choice (Bidwell and Briscoe, 2009).

Researchers have argued that the increased use of technology for remote working results in an “autonomy paradox” (Mazmanian *et al.*, 2013). While ICT offers more flexibility for working and living arrangements, it also imposes pressure for knowledge workers regarding constant connectivity and responsiveness (Sewell and Taskin, 2015; Molino *et al.*, 2020). One longitudinal study based on two case study organisations found that the supervision and regulation of teleworkers increased, as employees used virtual communications to signal to co-workers that they were available, and managers increased supervision through additional regular meetings (Sewell and Taskin, 2015). Rather than increasing autonomy, teleworking can paradoxically lead to reduced autonomy through both managerial and employee monitoring. This research also found that relationships between teleworkers and colleagues actually worsened once teleworkers returned to the office, due to teleworkers feeling isolated while working at home, and these negative emotions continued once they returned to their regular workplace (Sewell and Taskin, 2015).



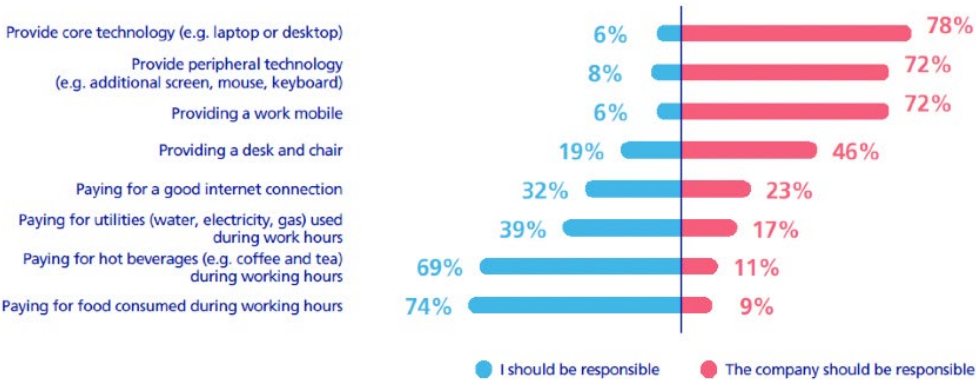
Recent trends

Little research has yet been conducted on digitisation and impacts on spatiality, following the outbreak of the pandemic, although generally, the pandemic has magnified the trends and challenges associated with digitisation and work. One theme that has emerged is that current Wi-Fi are not adequate for a number of people working from home. Many of the potential benefits of remote working are therefore not being realised due to this technological restriction. The widespread adoption of cellular-enabled mobile computing devices may be one way to address this issue. More research is needed in this area.

**Key insight: organisations are considering about what work can be synchronous, and asynchronous**  
Time has been one issue that some have focused on in the pandemic as family demands meant that people might work at different times. In this case there are debates over whether chronological time around specific (e.g. 9-5) schedules are helpful or instead it is useful to think about what needs to happen in synchronous ways and what can take place asynchronously (Gratton, 2020). This in turn has implications for work that requires a team to deliver it. Organisations have had to think about how they create virtual spaces where teams might come together to interact. Several organisations have also realised that communication platforms are useful to do virtual check-ins so that individuals do not feel isolated. Virtual coffee meetings have become places where people can catch up with colleagues and chat with people. Performance management systems have also needed to shift so that they are more focused on outcomes and less on simply being present in an office (Gratton, 2020).

**Key insight: employees increasingly have access and capability to use remote technologies, but it is still patchy**  
According to the global work from home survey, 81% of employees are satisfied with technology access, suitability and their own readiness to use it (Iometrics, 2020). UK research based on a survey of 2000 employees found that 45% did not have access to video conferencing facilities, and only 57% of employees had a reliable Internet connection. These disparities are likely to exacerbate inequalities between workers. Further, almost three quarters of employees believe that their employer should pay for peripheral technology, such as an additional screen or keyboard for remote workers. This can become part of an employee value proposition. Employers are also examining paying for specific costs of connectivity (O2 Business, 2021).

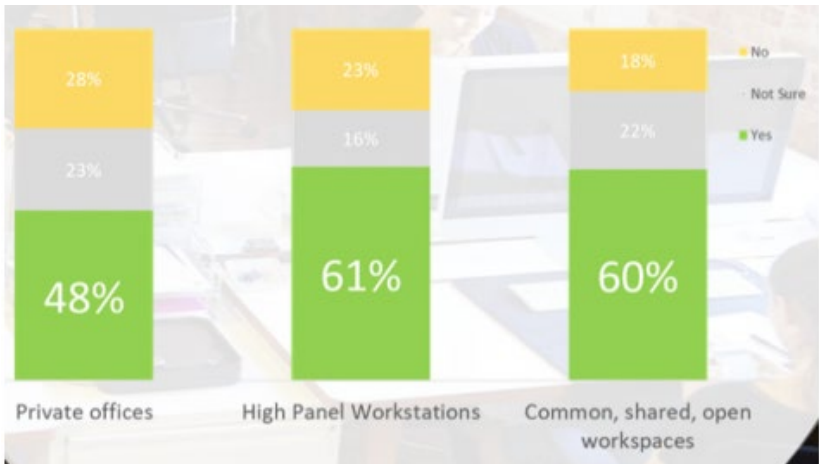
RESPONSIBILITY FOR THE PROVIDING OR PAYING FOR WORK-RELATED OR ADJACENT TIMES



While US data indicates that industry change will result in downturns in traditional city locations (Barrero *et al.*, 2021), in Australia PwC forecasts that the situation may differ. With decreased rents and increased occupancy in CBD locations, the occupancy mix in CBD locations may shift as smaller businesses take the opportunity to move in. PwC sees opportunity for organisations to repurpose space to incubate smaller projects and businesses aligned to their mission while embedding new hybrid working models, allowing decision making around space to reflect medium to long term planning priorities (PwC, 2021).

Internationally, 66% of business decision makers are considering redesigning physical spaces to accommodate hybrid work (Microsoft 2021). In Australia, a survey of 800 office workers found an increased focus on what space can do for work practices in a hybrid model (Davis, 2020). In the US, 74% of CFOs say their company will reduce office space because employees have adapted to working from home (Gartner 2020, cited in Iometrics, 2020). Figures show that around half of staff may be comfortable with exchanging assigned workspaces for unassigned spaces, in return for working from home (Iometrics, 2020).

WOULD YOU GIVE UP YOUR ASSIGNED WORKSPACE IN EXCHANGE FOR AN UNASSIGNED WORKSPACE IN ORDER TO WORK-FROM-HOME IN THE FUTURE?



Source: Global Work from Home Experience Survey, 2020

**Key insight: digital intensity is increasing, leading to reduced wellbeing**  
Using data gained from over 3,000,000 employees, de Filippis *et al.* (2020) found that employees spent an additional 13% of time in meetings during the pandemic, but that the number of meetings decreased. The length of the average working day also increased, however, by 48 minutes. This suggests a blurring of work and family, and an increase in digital intensity through additional meetings. Data from PwC found that only 37% of workers indicated they were able to disconnect from work outside working hours and make full use of accrued leave (PwC, 2021b). Microsoft (2021), using data from its international Office suite platforms, notes that time spent in Teams meetings increased by 2.5 times between February 2020 and 2021, and continues to rise, with the average meeting increasing by ten minutes to 45 minutes. Over 60% of calls were unscheduled, or ad hoc.

**Key insight: organisations as well as stakeholders are innovating with workspaces**  
The mass work from home experiment of COVID allowed organisations to experiment with remote working, at the same time as their clients and customers were also working remotely. Arguably this enabled industries to overcome barriers to innovation, encouraging whole of sector and supply chain investment in strategies and technologies, and removing inertia around flexible work practices engendered by bias (Barrero *et al.* 2021).

**Key insight: different hybrid strategies will be needed for different locations**  
An Australian survey of office workers found that attitudes to working from home were location dependent. Importantly, experiences of working from home during COVID differed remarkably by location, with only 10% of people outside of Melbourne and Sydney working from home in mid-2020. While 74% of people in Sydney and Melbourne were open to working from home, only 61% of people outside of these two cities were amenable to this form of working (Davis, 2020). With an increasing number of people moving to regional and rural areas, prompted by the pandemic, it will be increasingly important that jobs for public servants are available in these areas (Eslake, 2021).



# Activity-based working and remote working hubs

## Digital security

Remote working carries a range of risks to data security and privacy issues. As noted by the Australian Government (2021), a shortage of cyber security professionals may affect the APS, requiring increased investment to ensure this critical capability is met. PwC (2021a) recommend that public sector organisations review current cyber awareness, training and communication strategies to ensure alignment with business and technology strategies that meet the needs of a hybrid workforce; communicate within the organisation about the importance of cyber security; ensure employees are aware of what behaviours are expected of them, and the resources available.

Cyber-security threats rapidly increased during the pandemic. From April to June 2020, at the height of the pandemic in Australia, over 800 cyber security incidents were reported to the Australian cybersecurity centre, compared with just under 500 for the preceding three months (ACSC, 2020). PwC have forecast emergent threats, as shown below. Organisations – including public sector organisations – are being encouraged to engage in workforce planning to attract and retain ICT and cyber professionals, and ensure those with a wide mix of skills are recruited, including those with good people and stakeholder skills (PwC, 2021a).

### THREATS, ACTORS, AND EVENTS: RELATIVE LIKELIHOOD AND IMPACT

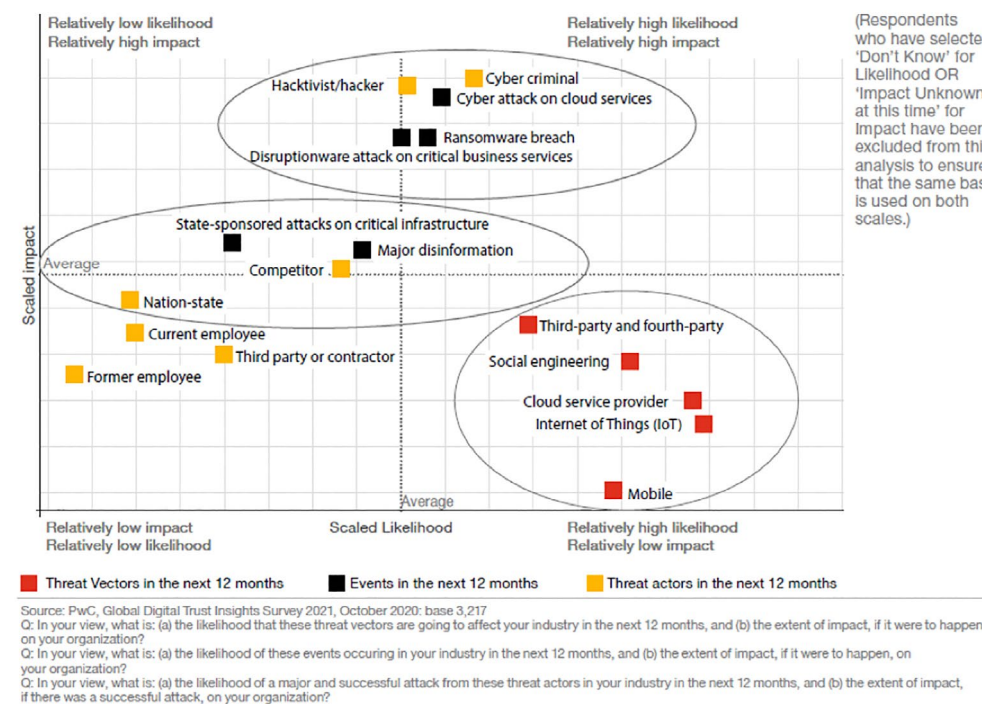


Figure source: PwC (2021a) Digital Trust Insights 2021: The need for cyber resilience.  
<http://www.digitalpulse.pwc.com.au/digital-trust-insights-2021-the-need-for-cyber-resilience/>

**In summary:** Organisations will need to more fully consider which work and networking can be achieved synchronously and which is better suited to being asynchronous. The impact of digitisation on how work is undertaken requires a holistic approach. More research is needed in this area. New ways of working with technology are increasingly subject to cybercrime, and a skills shortage in this area will need to be addressed by agencies, as noted by the Australian Government.

While working from home and hybrid working are undoubtedly the future of work, other working arrangements are also increasing in popularity. Activity-based working and working in remote hubs or shared working spaces can realise a range of benefits for both organisations and employees, as we discuss below.

## Activity-Based Working

Activity-based working (ABW) is underpinned by the idea that work is not defined by a location and time but by the activities (Falkman, 2021). ABW provides employees with options of working in settings that are optimised for specific activities (van den Berg, Appel-Meulenbroek, Kemperman, & Sotthewes, 2020). ABW is defined as “workers do not have assigned workstations, but instead share an office space offering different types of non-assigned work settings, which are intended to be used for different types of activities” (Hoendervanger *et al.*, 2019). Instead, open-plan offices offer a range of shared workspaces designed for different work tasks such as: quiet zones for individual work, collaboration / meeting zones for collaborative work and telephone conversations, learning zones for brainstorming, and social zones and lounge areas for relaxation and social engagement (Arundell *et al* 2018; Candido *et al* 2021; Engelen *et al* 2019; Hoendervanger *et al* 2018; van Meel, 2019).

These workspaces are characterised as non-territorial workspaces using technologies (e.g., wireless internet, mobile working devices such as laptops) and behaviour etiquette (e.g., leaving personal items at the desk prohibited, no eating at the desk) (Candido *et al.*, 2021; Engelen *et al.*, 2019). Employees are expected to adopt a flexible and mobile working style and choose their workspace based on their current work task and transition between spaces. As such, ABW is built on three elements, spatial, technological and people, that need to function as an integrated system (Skogland, 2017; van Meel, 2019).

The concept of ABW emerged in the 1970s but started gaining momentum from 1995 with Veldhoen and Pieper’s book, ‘The Demise of the Office’ (Leesman, 2017) and has been gaining popularity since (Hodzic, Kubicek, Uhlig, & Korunka, 2021; Kim, Candido, Thomas, & de Dear, 2016; Parker, 2016; van Meel, 2019). Veldhoen promoted and installed ABW in over 100 organisations in Europe and then in Australia in the Macquarie Bank in Sydney in 2008 (Parker, 2016). Several other financial institutions and other sectors in Australia followed the lead (Candido *et al.*, 2021; Parker, 2016). The original goals of introducing ABW were to increase flexibility, enhance collaborative working and reduce property associated costs (Kim *et al.*, 2016; Parker, 2016). Over time, the benefits of ABW have expanded.

### Benefits of ABW

ABW has the potential to increase productivity. This is primarily attributed to the choice of workspaces available for different work tasks, leading to more efficient ways of working. Another contributing factor to productivity is the increased opportunity for collaboration. The open-plan office setting encourages employee movement, enhanced communication and sharing of knowledge. The allocated space for socialisation increases the chances of employees meeting colleagues outside of their immediate work teams and across departments, creating opportunity for unplanned collaborations. All these contribute to task efficiency and productivity (Arundell *et al.*, 2018; Candido *et al.*, 2021; Engelen *et al.*, 2019).

In addition to the impacts on productivity, ABW contributes positively towards employees’ health and wellbeing. Providing employees with autonomy to decide how, when and where to work allows them to manage their work and personal life demands better, which impacts their wellbeing. In relation to health, ABW encourages employees to move around the office, resulting in more movement, changes in posture and a less sedentary work-life (Jindo *et al.*, 2019; van Meel, 2019). Further, eating behaviours are improved through prohibiting eating at the desk (therefore, reduced snacking) and thereby positively affecting their health (Arundell *et al.*, 2018).

Further to the benefits that ABW has for employees, there is a clear financial incentive of adopting ABW for organisations (Parker, 2016). This is mainly due to the reduced operational costs (Morgan, 2017). Transitioning to ABW could typically reduce occupancy costs by 20 – 40% (van Meel, 2019) resulting in significant savings for organisations. The lesser occupancy of space also leads to reduced utility costs, cleaning costs, office equipment and stationery costs, paper usage and storage usage (Parker, 2016). In addition to the reduction in operational costs, ABW reduces the environmental footprint as relatively less energy is needed to provide lighting, heating and cooling for office spaces, thereby reducing carbon emissions (van Meel, 2019). In addition, since employees have the option of working from home, their commute frequency to-and-from work can be reduced, thus lowering their carbon footprint on the environment. ABW therefore, is an environment-friendly option of working.

### Disadvantages of ABW

One of the main drawbacks highlighted in the literature is the impact of ABW on employees’ social wellbeing. Some employees feel disconnected in ABW environments as they may not be seated together with their teams, which affects team-morale, informal interactions and perceived productivity (Ansio, Käpykangas, & Houni, 2020; Arundell *et al.*, 2018; Colenberg, Appel-Meulenbroek, Romero Herrera, & Keyson, 2021). In a study undertaken in the Dutch public sector, it was found that after adopting ABW, employees tended to work from home more frequently because they felt that it was pointless going in to the office when they could not be with their co-workers (Colenberg *al* 2021). The findings show that the participants felt like visitors in their own office, demonstrating feelings of a lack of belongingness (Colenberg *et al.*, 2021; van Meel, 2019).

Another downside to ABW is employees often experiencing a lack of acoustic and visual privacy, audio and visual distractions and noise, which impact their work performance, productivity and engagement. The distractions and lack of privacy manifest as work demands for employees and they have to spend extra energy, cognitive resources and time to complete work, which affects their job satisfaction, health and wellbeing (Appel-Meulenbroek, Voordt, Aussems, Arentze, & Le Blanc, 2020; Hodzic *et al.*, 2021; Hoendervanger *et al.*, 2018; van den Berg *et al.*, 2020). This is consistent with research findings that some employees miss their own offices and tables due to the nature of the work they undertake that requires concentration and privacy (Ansio *et al.*, 2020; Engelen *et al.*, 2019). These negative experiences are more pronounced immediately after a transition to ABW with employees feeling more distracted, fatigued and less engaged. These negativities could persist in the long-term (Hodzic *et al.*, 2021). Researchers have therefore recommended that employees be able to personalise workspaces (Morrison and Macky, 2017).

Negative social interactions among employees such as displaying of territorial behaviour (leaving personal belongings on desks, locking drawers, reserving workstations for colleagues by placing an object on the desk or chair) is another drawback of ABW (Lai, Bobillier Chaumon, Vacherand-Revel, & Abitan, 2021). These appear to stem from the scarcity of workstations (Colenberg *et al.*, 2021) and employees’ unwillingness to switch spaces, meaning that they stay in one space even when their job activity is suited for another space (Hoendervanger *et al.*, 2018; van Meel, 2019). Reasons for the lack of internal mobility include: the practical difficulties involved in packing up, plugging out, adjusting furniture and moving to another place; seeking familiarity (e.g., using the same desk); and wanting to be close to their co-workers and teams (Appel-Meulenbroek *al* 2020; Hoendervanger, De Been, Van Yperen, Mobach, & Albers, 2016; Lai *et al.*, 2021; van Meel, 2019). This place attachment behaviour contradicts the goals of ABW – to switch between activity settings (Hoendervanger *et al.*, 2016) and enhance social interactions (van den Berg *et al.*, 2020).

**Key insight: ABW has differential impacts for different groups of employees**

Another challenge of ABW is related to the spatial environment, specifically, the interior design and ergonomics. In a study involving five sectors, many of the complaints from employees revolved around the interior design: insufficient meeting rooms; problems with the location of zones – quiet zones placed next to social zones; inadequate work stations and inability to find co-workers; and inability to adjust desks/chairs (Candido *et al.*, 2021). Further, the scarcity of workstations creates stress in employees as they find it difficult to find a desk if they do not arrive early (Engelen *et al.*, 2019; Kim *et al.*, 2016). This can be particularly difficult for parents, who may arrive later to work than others due to caring responsibilities.

**Key insight: the success of ABW is dependent on job roles, and maintaining team cohesion**

The research shows that the successful transition to ABW depends on several factors. Most organisations tend to focus on the spatial aspects of ABW, creating the right spaces and zones for different activities. Organisations also invest in technologies that are required to facilitate ABW. However, organisations have focused less on employees needs and how they work in ABW environments. One of the factors that needs to be considered in transitioning to ABW is the job role and type of work employees undertake (Hoendervanger *et al.*, 2018; Skogland, 2017).

ABW environments are well suited for consultancy and advisory roles (Skogland, 2017). These job roles require employees to be outside of office more often and hence, they do not feel the need to have their own workstation (Skogland, 2017). Conversely, employees involved in tax, legal and confidential work did not regard collaboration as an important aspect of their work, found moving to other spaces disruptive and therefore, did not perceive ABW as beneficial (Skogland, 2017). This means that job roles that are more autonomous and interactive fit well within ABW environments whilst others may not (Hoendervanger *et al.*, 2018).

Further, research shows that shared workspaces may not facilitate collaboration between team members. A survey of 1000 Australian employees revealed that employees who worked in a shared workspace to complete projects together were not negatively impacted by this working arrangement. However, collaboration between members of a team not directly working on projects together was found to have decreased (Morrison and Macky, 2017).

In addition, organisations need to consider the demographic profile of the workforce when transitioning to ABW. ABW environments are less appropriate to the work preferences of older workers, who may need privacy and quiet work environments (Hoendervanger al 2018; Leesman, 2017; van den Berg *et al.*, 2020). With an increasingly ageing workforce, organisations would need to resolve these problems associated with ABW to ensure its success and satisfaction of older employees. This means that organisations need to consider the job/task-related and person-related needs for the success of ABW (Hoendervanger, Van Yperen, Mobach, & Albers, 2019).

Supportive management is another factor for the success of ABW. Managers have a critical role to play in setting the required rules and norms for ABW. In addition, since ABW does not facilitate the command-and-control style of management, with the transition to an ABW environment, the management style would need to change to one that focuses on employee performance/outcomes, rather than presence (Ansio *et al.*, 2020; Engelen *et al.*, 2019; Parker, 2016). Overall, moving to ABW needs to be considered as a transformational business strategy involving all elements of spatial, technological, and people, rather than a mere workplace strategy (Bäcklander *et al.*, 2019; Leesman, 2017; van Meel, 2019).

**Recent trends**

The purpose of the office changed during the COVID-19 pandemic, with organisations realising that work is not necessarily defined by space and time. Traditional offices with set workstations and times of work may no longer suit the requirements of the changing work styles and environments (Veldhoen, 2020). Technology is an enabler of working in ABW settings that can ensure that people remain safe. For example, apps can be used to book workspaces prior to arriving at the office, which can also limit the number of people in each zone (Arup, 2020; ScottishFuturesTrust, 2021). In an ABW environment, concerns of hygiene may be an issue with the sharing of workstations (van Meel, 2019). Clear and strict rules and guidelines are required ensure that surfaces and equipment are cleaned by everyone prior to them moving to another space, facilitating a safer working environment (Veldhoen, 2020). Within an ABW setting, organisations could assign teams to specific areas or allocate different days and times for teams to enable tracking of employee movement at a given time (Veldhoen, 2020).

The ScottishFuturesTrust (2021) proposes that in a post-COVID environment, organisations first need to reframe their vision for how they expect their employees to work, aligned to their purpose, values and maturity matrix (a combination of elements involving leadership style, behaviours and skills, human resource policies, physical and virtual workplace, and autonomy). In reframing the vision for future work, organisations need to analyse the tasks and how work can be supported through an ABW model (mapping the task to the space). The areas of focus would be: where (home, main office, office near home), how (physical, virtual, working individually or collaboratively) and when (hours of work, outcome-focused) results can be achieved. They refer to this as a Future Work Model (below).

FIGURE: FUTURE WORK MODEL

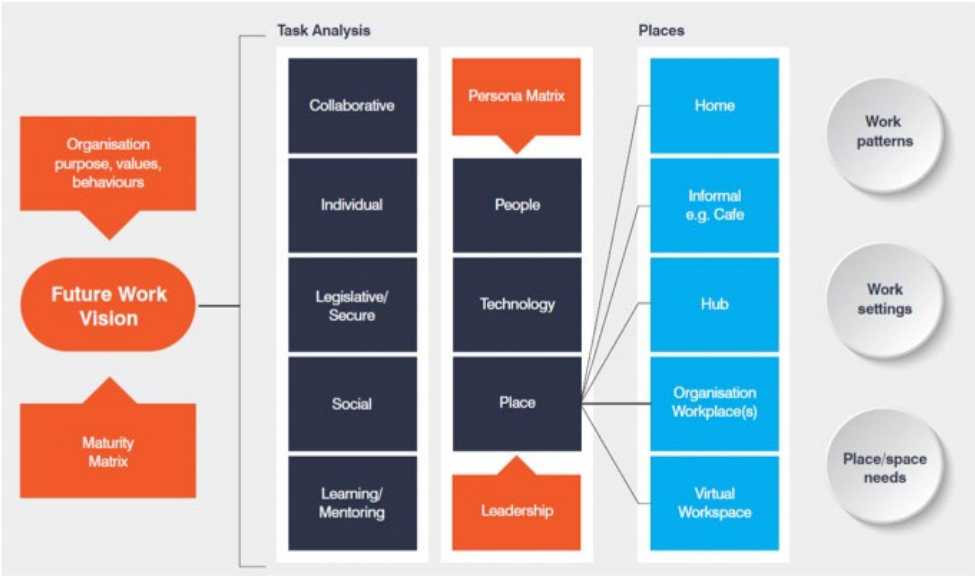


Figure Source: ScottishFuturesTrust (2021)



## Remote Working Hubs

Pre-pandemic, organisations were moving towards providing employees with workspaces in remote working hubs, which are also known as distributed work centres, flexible work centres, digital work hubs, co-working centres or ‘smart work centres’. The model of hubs has also been termed a ‘hub and spoke’ model, with a main office, and ‘spokes’ or satellite offices (IWG, 2021). Hubs can be part of an organisation and located in the outskirts of major cities or regional areas, or they can be provided by private enterprise and with space leased to organisations for their workers.

Hubs have advantages over working from home, as they enable employees to access professional-level infrastructure as well as the opportunity to engage with others working, and to work in a creative environment (Wilmot *et al.*, 2014). Grey literature reports that in the US, companies saved an average of \$11,000 per year for every employee who worked remotely for half of the week (IWG, 2021).

Researchers have stressed that for hubs to be successful, they need to offer advantages over working from home, such as being located close to cafes and amenities and have a collegiate and creative environment (Wilmot *et al.*, 2014). In locating work hubs, organisations have a key opportunity to increase or narrow their diversity, depending on location. In the US, McKinsey has advocated for companies to open hubs in cities where Black workers live and work as a way of ensuring workforce diversity (Hancock and Williams, 2021). Similar to activity-based working, remote working hubs need several different physical spaces to be successful, including individual offices, shared spaces, meeting rooms, and facilities (Wilmot *et al.*, 2014).

**Key insight: networked workspaces are increasing in popularity**

The COVID-19 pandemic disrupted traditional ways of working and accelerated trends in working in different locations, using ICT. During the pandemic, people had the opportunity to recognise their most effective working style – how, when and where, creating a paradigm shift in how organisations thought of work (Falkman, 2021). Future workplaces may benefit from focusing less on employee presence, desks and traditional office settings and more on creating a place in which employees can deliver their work outcomes (Falkman, 2021; ScottishFuturesTrust, 2021). A work model that emerged through this is the creation of a network of spaces and places that people could work from, as shown in the figure below.

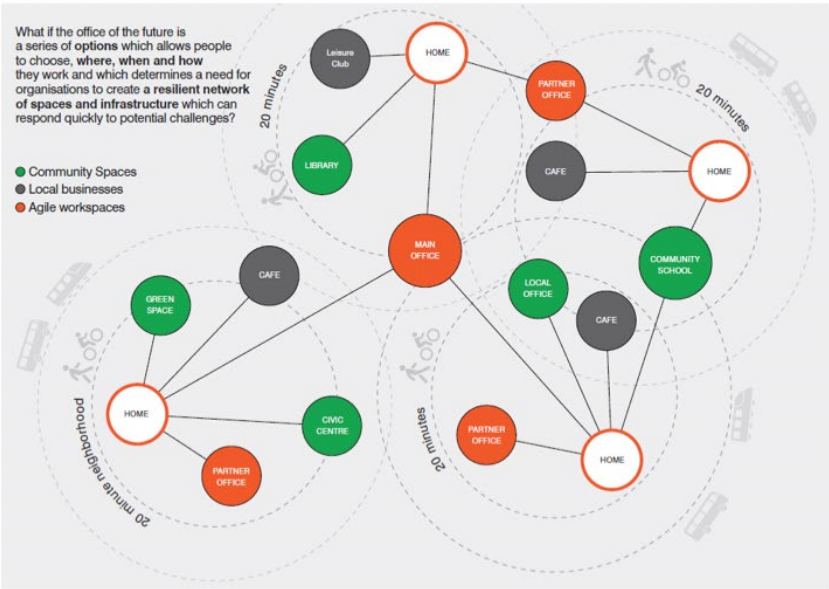


Figure Source: ScottishFuturesTrust (2021)

This work model is based on using the options available in a locality (the 20-minute neighbourhood) for people to work from, while addressing the issues of carbon footprint and inclusive growth providing an economic boost in the local community (Arup, 2020; ScottishFuturesTrust, 2021). The space allocated for individual work in office settings is predicted to reduce by 40%, with the majority of the space allocated for collaborations and group work (ScottishFuturesTrust, 2021) with the office serving as a symbol of corporate identity (Falkman, 2021). Additionally, organisational responsibility towards employee health and wellbeing has heightened as a result of the pandemic and organisations need to invest more in meeting the well-building standards; e.g., provide a range of facilities to enable wellbeing, ergonomically friendly office equipment, fresh air and wellness rooms (Arup, 2020).

**Trials of hubs and remote working**

In 2017, two organisations in the private sector trialed co-working in a remote working hub in Sydney. A small pilot study was conducted, which yielded positive results. Eighty per cent of participants considered remote working had improved their productivity and three quarters stated that it had a positive impact on their communications. Managers also noted the reduced commute time for employees, which enhanced work-family balance. Two-thirds of managers did not identify any negativities of working in a shared workspace, most however, did express concerns about communications (Active City, 2017).

A Queensland government department trialed flexible work centres in 2014, for 12 months. Participants came from 10 government agencies, and a total of 49 employees participated. The trial resulted in significant benefits, including reduced travel time, which saved on average 72 minutes a day per employee. Other benefits included reduced stress, employees feeling less tired, cost savings due to reduced travel, improved work-life balance, increased productivity and increased engagement in community activities (QUT Urban Informatics/Smart Services CRC, 2015). A range of work was undertaken at the hub including policy development (28%), project management (29%) and professional and technical services work (44%). In 2020, the media reported that the Qld government will expand its network of distributed work centres to enable more public servants to work closer to their homes (Kwan, 2020). The NSW government also trialed ‘smart work hubs’ in 2014 ( Urban Informatics/Smart Services CRC, 2015). While the hubs still exist, they appear to cater for the general public rather than specifically for public servants. This is an area requiring further research.

**Key insight: organisations are increasingly providing employees with the opportunity to work in hubs**

The move towards working in hubs is increasing. Large private sector organisations are moving towards adopting a hub and spoke model. For example, Nippon Telegraph and Telephone Corp will provide its 300,000 employees access to 3500 offices globally (IWG, 2021). Organisations including Amazon, Facebook, EY, and Google, have also adopted this model. Reconfiguring workspaces into a hub and spoke model will take some time, as moving towards this is dependent on leases expiring. Consultants have recommended that organisations analyse employees’ addresses to determine where spokes should be located; demographics are also important, as younger employees may desire to work closer to a city (IWG, 2021).

**In summary:** The use of shared workspaces will continue to increase, with implications for how technology can be used. Organisations also need to analyse which jobs are suitable for shared workspaces, and identify the differential impacts on employees. While shared workspaces have much to commend them, the research also highlights a range of negativities.



# Work health and safety

At the beginning of the pandemic, remote work was recast from a flexibility, to a work health and safety (WHS) measure, with Government-mandated shutdowns aimed at preventing transmissible disease within workplaces and as employees commuted. However, with many organisations planning for a 'hybrid future', the grey literature shows an increasing focus on employer regulatory responsibilities for employees' physical and psychosocial wellbeing.

## Pre-COVID literature

Research based on extensive survey data has found that those who telecommuted occasionally had the best health outcomes in terms of stress, alcohol consumption, and risk of obesity. However, as telecommuting increased so did an employee's level of stress, leading researchers to recommend that managers monitor the stress levels of those working from home (Henke *et al.*, 2016).

While some research has identified that isolation is a problem for those working from home, other research shows that it can improve employee wellbeing. One study found that working from home enabled a better work-life balance and enabled employees to work more flexible hours (Bosua *et al.*, 2012). Another study conducted in a US public sector organisation, based on a relatively small survey sample, found that employees who teleworked up to three days a week had increased positive emotions (such as enthusiasm and happiness) and decreased negative emotions (such as stress and anxiety) (Anderson, Kaplan and Vega, 2014). Factors which contributed to this increase in emotions included teleworkers having increased autonomy, increased schedule flexibility, and fewer interruptions. Further, these researchers found that not only did teleworking result in positive emotions but that it actually enhanced these emotions (Anderson *et al.*, 2014). Research has also found that teleworking can be successfully used by both introverts and extraverts, with extraverts open to "explor(ing) new ideas within a non-traditional team environment" (Luse *et al.*, 2013).

Research on ICT has identified a phenomenon known as 'technostress', which can also be experienced by those working from home or telecommuting. Technostress is "a state of mental and physiological arousal resulting from the struggle in dealing with technologies, especially experienced by people who are heavily dependent on technology to perform their work" (Leung and Zhang, 2017, 388). There are two main elements of technostress – information overload and the feeling that an employee needs to be constantly available (Molino *et al.*, 2020). It can induce negative responses such as stress, anxiety and mental fatigue (Leung and Zhang, 2016).

Based on the survey of over 600 information workers, researchers found that telecommuters who had a high level of permeability between work and family domains experienced higher levels of technostress than did employees who had more fixed boundaries between work and family. High levels of work/family conflict also exacerbated technostress, with work technology spilling over into the family domain, particularly during the pandemic (Leung and Zhang, 2016; Molino *et al.*, 2020).

## Recent trends

Recent research considers how telework is implemented as a WHS practice, and which evidence-based interventions are required to ensure best practice regulatory compliance. Grey literature largely focuses on advice for business on how to manage new risks engendered by increased numbers of staff working remotely, with a range of consultant material urging employers to consider how hybrid work plans impact on compliance obligations.

### Key insight: telework is being recast as a work health and safety practice

Overarchingly, telework has been employed by organisations – including the public service – to manage WHS risks related to COVID-19, the first time this has been identified as a factor in adoption (Belzunegui-Eraso and Erro-Garces, 2021). Safety considerations will continue to guide remote

work protocols as the pandemic progresses and relevant workplace policies will require attention to achieve consistency and safety. Researchers note the example of reconciling activities that are traditionally undertaken in person, such as approving and signing sensitive documents or distributing protected resources, where remote workers decide between placing themselves at physical risk by entering the workplace to accomplish these tasks”, or else violate confidentiality and sensitivity policies (Schall and Chen, 2021, 2).

**Key insight: digital intensity is increasing technostress**

The intensity of work increased during the pandemic period, exacerbated by the change in modes of working. Academic literature shows a significant increase in the length of the working day for remote workers. One study, using email and meeting data from more than 3,000,000 knowledge workers, found that while the total time per day in meetings had reduced in the pandemic period, the average working day had increased by 48.5 minutes. At the same time the number of meetings per day was up 12%, and the number of people attending those meetings up 13% (de Filipis *et al.*, 2020).

There is also an identified stress created by a mismatch between digital interactions and organisational culture, which may be exacerbated by remote work. A qualitative study of healthcare managers’ experiences of technostress categorised potential sources in three main areas: negative aspects of digital communication; poor user experience of ICT systems; and the need to improve organisational resources and capability. Actions taken to remedy technostress were a combination of positive company culture and organisational resources, individual strategies and competence (Stadin *et al.*, 2020).

Data drawn from a PwC global survey of 32,500 workers showed that a minority of workers had access to particular strategies that might mitigate the health impacts of digital intensity. Some key response rates are reproduced below.

I am able to organise my work in a way that suits me	38%
I am able to disconnect from work outside working hours (on weekends, in the evenings, on vacation, during study time etc.) and make full use of my vacation allowance	37%
I am encouraged to take short breaks in the working day	26%
My employer helps me to manage stress and focus on creating mental and emotional wellbeing	21%
My employer helps me learn about healthy working and living and allows me to take time to build wellbeing activities into my daily activity	21%

Source: PwC Global (2021b)

**Key insight: there is an increasing need for evidence-based WHS for teleworkers**

Significant work has been undertaken during the pandemic period to develop evidence-based WHS frameworks and determine risk factors for teleworking. Nagata *et al.*, (2021) developed a rapid, five step health impact assessment to evaluate health effects on teleworkers, their families and non-teleworkers. The framework identified a range of risk factors for each group, which were ranked for priority and reported and published on government websites (Nagata *et al.*, 2021).

Schall and Chen (2021) conducted a review of practical, evidence-based strategies to promote teleworker safety, health, and wellbeing during and after the coronavirus pandemic. They identified key risk factors in the literature, including:

- an unergonomic physical setup at home, with a risk for workers who are less likely to receive sufficient ergonomic training while working at home and who use laptops resulting in musculoskeletal stress,
- working longer hours due to blurring of work and personal roles, in unergonomic setups,
- a lack of communication and face to face interaction has become a barrier to relational and participatory ergonomic and work design, which Burgess-Limerick (2019) identifies as a best practice mode of reducing WHS risk, and
- psychosocial stress related to technostress factors.

Interventions aimed at increasing manager capability and worker motivation to engage in safe and healthy behaviors include enhanced safety leadership, managing role boundaries to reduce occupational safety and health risks, and redesigning work to strengthen interpersonal interactions (Schall and Chen, 2021). In the grey literature, PwC advocates investing in upskilling organisational leaders and middle management to promote mental health and wellbeing at the workplace, quoting a Productivity Commission finding that for every dollar spent by businesses on successful mental health programs, organisations can expect a return on investment of between \$1 and \$4, for an average return of \$2.30 (PwC, 2021).

**In summary:** The safety of remote workers is key, and organisations are cognisant of the need to ensure employees have ergonomic workspaces. Attention is increasing, however, on the psychosocial aspects of remote working, particularly around technostress. This is an area requiring further research and consideration from organisations.

# Industrial relations

Industrial relations frameworks will become increasingly important as organisations experiment with new hybrid setups. Remote work has existed within organisational policies and practices for some time – around 60% of organisations had a formal working from home policy prior to COVID (Hopkins and Bardoel, 2020). The APS was an early adopter of teleworking, and in 1994 implemented the Australian Public Service Interim Home-Based Work Award (Dixon, 2003). Uptake in the APS, prior to the pandemic, however, was patchy (Williamson, Colley and Hanna-Osborne, 2020). These policies have often formed a framework for individual flexible work arrangements or practices, rather than providing a framework for whole of workforce conditions that may or may not be flexible for employees. The relatively small body of research literature prior to the pandemic reflects this focus on ways that government regulation can encourage the introduction of teleworking.

## Pre-COVID literature

Limited research has been conducted into industrial relations and teleworking, focusing on the regulation of teleworking. The European Framework Agreement was introduced in 2002, covering EU member states. The agreement has a number of important provisions including: that the provision for the installation and maintenance of equipment for telework is the employer's responsibility; the organisation of work and working time is equivalent to employees working in the employers' premises; measures to prevent teleworkers from being isolated; and that teleworkers have access to the same training and career development opportunities as do those working on their employers' premises (Messenger *et al.*, 2017).

Individual countries have also regulated telework. In the US the Telework Enhancement Act 2010 covers all federal government employees and requires that "every U.S. government employee work from home to the maximum extent possible" (Messenger *et al.*, 2017, 45). This legislative amendment was introduced due to concerns of government shutdown during the avian flu pandemic. Subsequent crises such as terrorism, weather events and other pandemic threats continue to necessitate adherence to this legislation. Other countries (e.g. Hungary, Finland, Italy, Spain, Sweden) also regulate telework through joint agreement with social partners, which can be national or sectoral agreements (Messenger *et al.*, 2017).

A large scale European study based on 28 countries has found that national regulation on teleworking encourages the use of this form of working. Researchers have found that government regulation acts as a lever for organisations to introduce teleworking strategies. They state:

"...it is important that organizational and individual measures be complemented with public policies that work to adjust the cultural dimensions of home-based telework. Concretely, both national regulation and implementation through collective bargaining were considered as significant facilitators in the use of home-based telework" (Ollo-Lopez and Goni-Legaz, 2020, 13).

Further, survey data from 156 local governments in one North American state shows that the support of state legislators is also an important factor prompting local government to introduce teleworking. In particular, legislators who supported environmental policies were found to be especially supportive of teleworking policies being implemented (Kwon and Jeon, 2017).

A team of European researchers conducting a project for Eurofound and the ILO have developed some relevant principles relating to the implementation of teleworking:

- the use of ICT brings benefits to both employees and employers and teleworking should be approached so that positive effects are accentuated and the negative effects diminished,
- working time and non-working time need to be treated differently according to the type of teleworking that employees are doing and regulations need to reflect this, as well as a recognition that supplementary teleworking may be unpaid overtime,
- Policies, government initiatives, and collective bargaining agreements need to be written to enable incorporation of issues relating to future technological developments, and
- Differences in working conditions associated with the different types of remote working need to be considered (Messenger *et al.*, 2017).

Recent trends

Recent literature examining emerging industrial relations issues tends to focus on new categories of workers, such as those working in the gig economy and structural labour market changes, such as increased casualisation and those not covered by welfare legislation. Less research exists on how regulation may need to change to accommodate new ways of working and new flexibilities, however, we have examined that which is available.

Key insight: industrial conditions around remote work are in flux

With the rush to remote working engendered by COVID, grey literature highlights potential mismatches between organisational priorities and legal obligations toward staff. PwC warns that organisations must pay increased attention to how current and proposed remote and hybrid work plans fit into legal and compliance obligations (PwC, 2021). A trend throughout the pandemic has been the formalisation of these policies. A 2020 Swinburne University survey found that the pandemic had been a driver for organisations to adopt formal working from home policies. Almost 80% had a formal working from home policy in place by May 2020, compared with 60% prior to COVID-19 (Hopkins and Bardoel, 2020). Organisations with established remote work policies were required to adapt these policies during the pandemic lockdown period to encompass whole of workforce remote and hybrid working.

A key concern that emerged during the pandemic was the ability of strict award and enterprise bargaining structures to accommodate changes to the spread of hours that remote pandemic work required of both employers and workers. In some cases, negotiation between peak bodies and unions produced temporary amendments to awards to ensure required flexibilities could be accessed by both employers and workers, in diverse industries ranging from retail and restaurants, to educational services and real estate.

A prominent example is the temporary amendment of the Clerks: Private Sector Award 2010 by agreement, whose original sunset clause of March 2021 was extended to June 2021 (FWC, 2020a). The Award was urgently amended to ensure that individual employees who had agreed to work remotely could also agree to work within an extended span of ordinary hours and work split shifts, accommodating increased caring duties without triggering penalty rates. It also allowed employees to take breaks at times that suited their personal circumstances. Previously these provisions had required majority agreement by employees in a workplace, rather than individual agreement.

Often pre-existing working from home policies are tailored to small, demographically distinct groups of workers rather than developed for a whole of workforce; in some cases they are contained in enterprise bargaining agreements, which require agreement to alter. Organisations have in some cases entered disputes with unions where entitlements in enterprise agreements have not been upheld, such as the Australian Tax Office (Towell, 2020).

This is an international issue. The table below summarises the gaps between employee entitlements around remote work contained in collective agreements, and the implementation of remote work during the pandemic period (Belzunegui-Eraso and Erro-Garces, 2021). It shows that typical industrial conditions set in place around remote work were not practicable or upheld during the pandemic period – what the authors called an “impossibility” at scale.

Table 3. Telework requirements before and during the Covid-19 crisis.		
Collective Agreements Considerations	Before the Covid-19 Crisis	During the Covid-19 Crisis
Voluntary character	Yes	No
Individual agreement	Yes	No
Reversibility	Yes	No
Equality of rights between teleworkers and workers at the employers' premises	Yes	Yes
Work equipment facilitation and installation	Yes	Software only
Ergonomic elements	Yes	No
Technical support	Yes	Yes
Costs of telework	If required	If required
Health, social security and job security	Yes	No
Right to union representation	Yes	Yes
In-company training	Yes	Yes
Preservation of economic conditions	Yes	Yes
Modifications in the statute of rights for workers	No	No

Source: authors; own elaboration

Key insight: a campaign to expand the right to legislated request flexible working arrangements may be occurring

The *Fair Work Act 2009* provides eligible employees with the right to request flexible working arrangements. While any employee can informally request to work flexibly, the Act provides that those with caring responsibilities, those with a disability, older employees, those who are experiencing family or domestic violence, or supporting someone experiencing domestic violence with a formal right to request flexible working arrangements. This is quite a narrow list and excludes many employees. Researchers have called for the eligibility criteria to be expanded in the wake of the pandemic, where more employees would like to continue working flexibly (Dayaram and Burgess, 2021). With organisations realising the cost savings associated with employees working from home or hybridly, there may also be a move to amend the right to request provisions to enable employees to request to work on their employers’ premises (Pennington and Stanford, 2020).

Key insight: industrial conditions may need to explicitly accommodate working from home setups

In late 2020, the Australian Unions with the Australian Council of Trade Unions released a Working From Home Charter. The charter addresses issues raised in a survey of 1000 workers on remote working conditions. The survey found that 40% of respondents were working longer hours over an extended period, with 90% not paid overtime or penalty rates. Respondents were incurring an average of \$530 additional expenses to support remote work. Over 30% indicated their workload had increased, and 47% indicated they were more productive working at home, but 49% indicated that they were suffering negative mental impacts (Australian Unions/ACTU, 2020).

The resulting Working from Home Charter effectively forms a log of claims seeking to centralise and regulate conditions that were traditionally dealt with individually under flexibility clauses. Principles contained in the charter include: working from home should be a voluntary flexibility and productivity gains should be shared; employees have a “right to disconnect” to accommodate caring and personal life; all working time, training, equipment and expenses are the employer’s responsibility; WHS remains the employer’s responsibility; clear ethical guidelines and transparency around surveillance and performance management; and remote work pay and conditions are not bifurcated from office-based conditions (Australian Unions/ACTU, 2020).



# Workforce planning

The ACTU finding that the average worker has spent \$530 on equipment to work from home (ACTU, 2020) is mirrored in survey data from 22500 workers in the US, showing that the average US worker invested 14 hours and \$600 in equipment and other infrastructure to support working from home (Barrero *et al.* 2020). Survey data from Microsoft shows that 42% of US office workers say they lack essential supplies and equipment to work from home, even after a year of working at home – and 10% lack an adequate internet connection. More than 46% of respondents indicated their employer did not fund remote work expenses (Microsoft, 2021). The ACTU Working from Home equipment, systems, and technology to support remote working are installed and maintained, and training provided to workers (Australian Unions/ACTU, 2020a).

## **Key insight: a “right to disconnect” from work is gathering momentum in Australia**

With remote work blurring the spatial boundaries between work and home, Australian public sector workplaces are seeing an emerging push from unions to protect employees’ personal time. New enterprise bargaining clauses seek to place limits on employer expectations around digital availability and create innovative employment rights under the Fair Work Act (Ziffer, 2021). This momentum arose following the 2020 enterprise agreement covering Victorian Police workers, which provides certain employees the right to disconnect outside of working hours, where they are not required to read or respond to emails or phone calls from supervisors other than for genuine emergencies. The agreement states that “supervisors and managers must respect employees’ periods of leave and rest days” (FWC, 2020b).

The “right to disconnect” originated in Europe, particularly in France and Germany, several years ago. In France every organisation with 50 employees or more is required to negotiate with employees about the use of ICT, with a view to enabling employees to have time off to rest and recuperate. The right to disconnect is contained in organisational policies and can include a limit to the functioning of email services after normal working hours, or can enable employees to register time spent working outside the employers’ premises as working time, potentially leading to overtime claims. The policies encourage employers and employees to agree on set “times of reachability” to regulate an employees’ working hours (Messenger *et al.*, 2017).

**In summary:** Post-pandemic, organisations will need to give consideration to the suitability of industrial instruments to regulate the employment of remote workers. Current instruments – including legislation – were developed pre-pandemic, and may no longer be fit for purpose. Unions and employees may also increase campaigning to enhance the right to request flexible working arrangements, including a right to request to work on their employers’ premises and a right to disconnect. The issue of industrial relations post-pandemic appears to be a slow burning issue, yet organisations need to consider these issues.

Executives and managers across industries globally are realising that implementing new ways of working requires a wholistic plan to align working practices with organisational culture and workforce goals. An emerging grey literature outlines the challenges that organisations face in reconfiguring to a new workforce reality (Lovich, 2021). As organisations and industries globally work to incorporate the insights and benefits from the whole-of-workforce remote experiment, surveys of employees, managers and CEOs show that organisations are at different stages of implementation. There are clear correlations between organisations that are well-prepared and their level of employee attachment and engagement – an advantage in a workforce environment where the majority (52%) of workers are considering a job change this year, and as many as 44% have actual plans in place to make the leap (Dishman, 2021).

**Key insight: sought after employees will look for flexible remote work when job searching, after enduring the pandemic**

The most recent surveys reveal that the ability to continue flexible remote work is extremely important to employees, many of whom say that they will take or leave a role based on the ability to work remotely. Critically, going back to a fully on-site model may have implications for retention. Almost a third of respondents to a 2021 McKinsey survey indicated they were likely to seek to leave their organisation if required to move back on-site, and 52% of employees preferred a more flexible working model post-pandemic (Alexander *et al.*, 2021). Eighteen per cent of workers seeking to change jobs said that they would prefer to have more flexible hours in a new role (Dishman, 2021). Respondents to another survey indicated that they were willing to accept reduced pay of 7 percent, on average, for the option to work from home two or three days per week after the pandemic (Barrero *et al.*, 2021).

A survey of 2100 workers, conducted in April 2021, found that 60% of women and 52% of men will look for a new job if they are not able to continue working remotely in their current role, and 69% of men and 80% of women said remote-work options were important factors in evaluating any new job (Pelta, 2021). The McKinsey survey also reported strong preferences for remote work from workers with caring responsibilities (Alexander *et al.*, 2021).

**Key insight: the APS may be competing for talent with employers who offer remote work as a ‘perk’**

US survey data shows that higher educated, higher earning workers are more likely to view working from home as a “perk” (Barrero *et al.*, 2021). This is recognised by organisations such as Twitter, which now provide all employees with the choice to work remotely or in-office; other major corporations like JPMorgan, Facebook, Amazon, Microsoft and Zillow have announced that they are extending their working from home policies, giving them access to a global talent pool (Kelly, 2020). Remote job postings on LinkedIn increased by five times during 2020, and 46% of remote workers planned to move to a new location, taking advantage of continued remote working (Microsoft, 2021).

**Key insight: there is a high level of uncertainty globally around workforce planning, with most organisations still at the ‘vision’ stage**

Lovich (2021) points to four stages of organisational development towards future work models, with the key insight that – while some organisations may still be working on the process of moving people back into the workplace – hybrid working models are inevitable solutions to the emerging problems of attracting and retaining talent and increasing organisational agility to address uncertainty. Implementation will be a staged experiment in identifying the enablers required for hybrid work, and using these insights to “re-wire” organisational operating models and workforce planning (Lovich, 2021). Globally, McKinsey survey data shows that approximately 10% of organisations that had reached the stage of driving transformations that created agility at scale, defined as “reimagining the entire organisation as a network of high-performing teams” , with workforce planning coupled to changed organisational priorities (Aghina *et al.*, 2021).

An important insight is that most organisations are not yet at a stage to clearly communicate their vision for operational workplaces and working culture incorporating insights from the remote working experiment. Recent McKinsey surveys data shows that only around one third of organisations had a future vision that employees felt was ‘well communicated’ (see figure below).

**MOST ORGANISATIONS HAVE NOT CLEARLY COMMUNICATED A VISION FORPOSTPANDEMIC WORK**

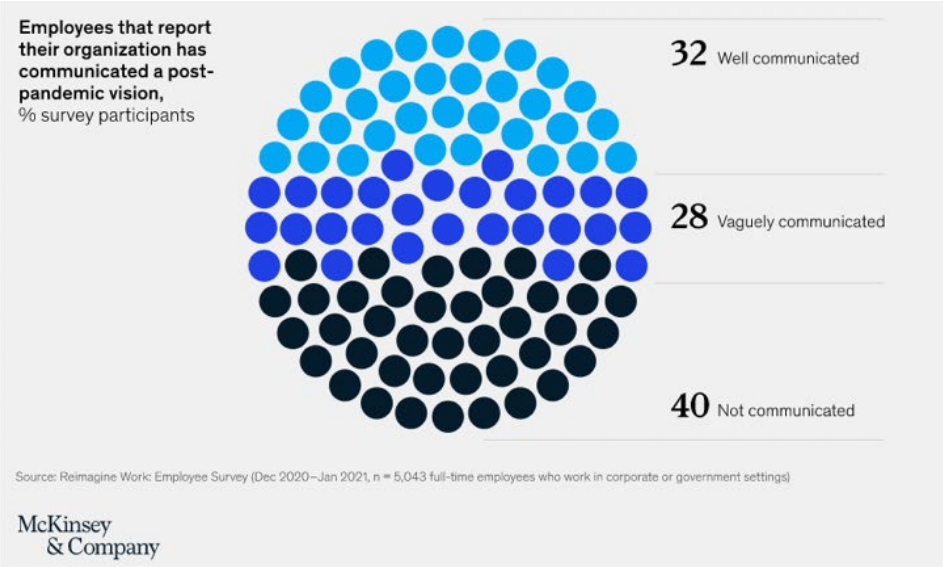


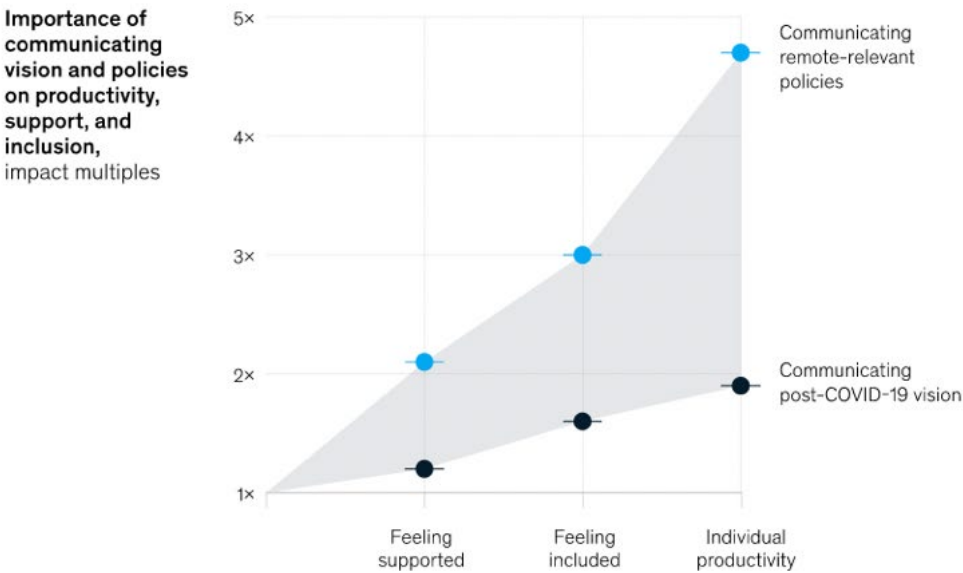
Figure Source: Alexander A *et al.* (2021)

**Key insight: certainty and communication around working models boosts retention**

Data from a 2021 McKinsey survey showed that employees feel that communication is lacking about employer plans for remote work, post-pandemic. While employees have announced a general intent to embrace hybrid work, their employees point to a lack of detailed guidelines, policies and expectations, creating a lack of certainty around the conditions that employees will be working under in the near future, with 47% reporting anxiety caused by lack of a clear vision.

Where organisations have clear communication with their employees, wellbeing and productivity metrics are moving ahead very quickly, although where it is absent, employees are nearly three times more likely to report burnout (Alexander *et al.*, 2021). The below graph, reproduced from McKinsey data, shows that individuals’ self-reported productivity is positively correlated to the level of remote-relevant policy detail provided by their organisations, with stronger productivity results for employees whose organisations had moved beyond communicating broad vision.

ORANISATIONS WITH CLEARER COMMUNICATION ARE SEEING BENEFITS TO EMPLOYEE WELL-BEING AND PRODUCTIVITY



Note: All analyses conducted while controlling for all other predictors, region, industry, company size, job level, age, gender, and parental status (n = 4,854–5,043).  
Source: Reimagine Work: Employee Survey (Dec 2020–Jan 2021, n = 5,043 full-time employees who work in corporate or government settings)

McKinsey  
& Company

Figure Source: Alexander A et al. (2021)

**In summary:** Globally, workforce planning for retention, talent attraction and pipeline succession planning will be impacted by organisational certainty around hybrid and remote modes of working, as employees increasingly seek remote and hybrid arrangements. Succession planning, retention and talent attraction priorities outlined in the APS Workforce Strategy will benefit from scaffolding with clear, detailed and timely policy development.

# Conclusions: Implications for organisations

In this section we examine the implications of new ways of working for organisations, drawing out key lessons and challenges from the literature review.

A key challenge for organisations will be managing employee expectations and a preference to continue working from home in a hybrid working arrangement. While some APS agencies may be encouraging employees to return to their usual workplace, consideration needs to be given to developing an employee value proposition (EVP) which stresses the availability of flexible working arrangements, which may not necessarily include hybrid working. Since the literature shows that hybrid working can enhance employee motivation and engagement, APS organisations should consider how to maintain employee motivation and retain employees. With emerging research showing that high proportions of employees may consider seeking a new job in the next 12 months if not provided with an appropriate level of flexibility and hybrid working, a strong EVP will be increasingly important.

Organisations may face challenges associated with the differing impacts of the new ways of working on different groups of employees. For example, as discussed in this literature review, younger employees maybe less interested in working in a remote working hub than other employees, such as parents who can work closer to home. Regional employees have been less likely to work in newer workspaces, which may become increasingly important if regionalisation accelerates. Organisations are also encouraged to examine occupations and job families holistically to determine who can work flexibly, in different locations and how tasks can be performed in newer workspaces. The research shows that working from home and hybrid working can lead to a work/family spillover, and organisations will need to consider how managers are equipped to ensure staff do not work long hours, whilst ensuring productivity is maintained.

Flexible working, initially a risk-management exercise to address a public health crisis, has yielded clear benefits that align with the APS workforce strategy objective to embrace flexible and responsive workforce models. However, there will be a need to avoid a situation where competing organisational cultures emerge – with in-person workers and managers continuing to benefit from the already flourishing culture of in-person collaboration and collocation, while remote worker careers – preferred options for women – are subject to fewer opportunities. A key challenge will be scaffolding new ways of working with the values and objectives of the APS workforce strategy.

The literature has highlighted the challenges for managers of remote or dispersed teams. Managers have an important role to play in work allocation, supervision, maintaining employee engagement and commitment and team cohesion. Yet, the research shows that managerial resistance to new ways of working exist, and organisations may need to consider developing culture change programs and initiatives to bring managers on board, and embed new ways of working. The research also suggests that managerial capability in managing remote workers could be improved, and the research highlights that managers have requested increased guidance.

Measuring productivity within remote working environments has always been challenging, particularly in the public sector. Developing measures of productivity will also be of increasing importance as employees work in non-traditional workplaces. Performance measures have been used as a proxy for productivity, and the literature recommends that organisations review performance management processes and KPI's and actively move towards an outcomes based performance management system. Such a move would also require a culture change within some organisations that may have systems that focus more on process and output, rather than outcomes.

Using technology effectively may also present challenges to organisations. While managers and employees used ICT throughout the pandemic, and reportedly maintained the same levels of performance and productivity, longer term strategies around the mix of ICT and face-to-face mechanisms to meet and conduct work require further consideration. The interaction of technology, timing and tasks requires a strategic approach, underpinned by research, to augment the reactive

but necessary approach adopted during the pandemic. There is potential to more effectively and proactively use ICT to foster teamwork and team cohesion within a variety of workplace settings. The issues around constant connectivity have led to calls for a right to switch off, which is gaining traction internationally, and which may become increasingly important for the APS.

Digitisation presents new opportunities to improve networking, team cohesion, and individual motivation. Challenges are present in data security and cyber security threats, which may become compounded by a shortage of cyber security professionals. The Australian government has examined this issue, however, the literature shows that organisations need to undertake workforce planning with appropriate actions, to mitigate any future risks and threats.

The research has identified a range of hazards associated with working from home and remote working. These include physical hazards, psychosocial hazards and psychological hazards. Increased focus is being paid to WHS and remote working, and safety considerations will continue to guide remote work protocols. WHS policies need to be maintained for currency and fit for purpose in an ever changing workplace environment. Technostress, poor user experience of ICT systems and a lack of ICT resources, are all issues requiring further consideration by APS agencies. While dispersed workplaces, namely ABW and remote working hubs may ameliorate some WHS risks, other hazards such as technostress are also present in these environments. As detailed earlier in this literature review, researchers have recommended a range of actions be taken to ensure workplaces as safe and healthy.

New ways of working and how they are regulated is a relatively under-researched area, which organisations may need to consider more fully. With potential union campaigns around a right to disconnect and employees being reimbursed while working at home, a proactive stance on these issues may be beneficial to organisations. Further, working from home and remote working policies may need to be reviewed and new policies developed for new ways of working, such as for ABW.

Consideration also needs to be given to the right to request flexible working arrangements, and the current limited categories of employees who have a legislated right to request. As noted in the literature review, industrial instruments should be written to enable incorporation of issues relating to future technological developments. Consideration also needs to be given to whether terms and conditions of employment relating to newer forms of work should be adopted APS-wide, noting that internationally, teleworking legislation has national reach.

Finally, the APS may wish to consider the role of workplaces in CBDs and local communities, as there are advantages and disadvantages to decentralisation and regionalisation. While CBDs are not predicted to decline in importance even with a continued high rate of hybrid working, the APS as a model employer has a role to play in shaping the future of workplaces, communities and broader society.



# References

Active City 2017, *Connect remote work pilot: Evaluation report*, Active City [online], [accessed 2 Jun 2021], available at <[https://static1.squarespace.com/static/5636f061e4b030f21bcfe748/t/5b16286daa4a99890c4edfd3/1528178828834/Connect+Remote+Work+Pilot+Report\\_WEB.pdf](https://static1.squarespace.com/static/5636f061e4b030f21bcfe748/t/5b16286daa4a99890c4edfd3/1528178828834/Connect+Remote+Work+Pilot+Report_WEB.pdf)>.

Aghina, W, Handscomb, C, Salo, O & Thaker, S 2021, *The impact of agility: How to shape your organisation to compete*, McKinsey Global [online], [accessed 9 Jun 2021], available at <<https://www.mckinsey.com/business-functions/organization/our-insights/the-impact-of-agility-how-to-shape-your-organization-to-compete>>.

Aitken-Fox, E, Coffey, J, Dayaram, K, Fitzgerald, S, Gupta, C, McKenna, S & Tian, W 2021, 'COVID-19 has put trust front and centre in human resources management', *London School of Economics* [online], [accessed 2 Jun 2021], available at <<https://blogs.lse.ac.uk/businessreview/2020/08/14/covid-19-has-put-trust-front-and-centre-in-human-resources-management/>>.

Alexander A, de Smet, A, Langstaff, M & Ravid, D 2021, *What employees are saying about the future of remote work*, McKinsey and Company [online], [accessed 2 Jun 2021], available at <<https://www.mckinsey.com/business-functions/organization/our-insights/what-employees-are-saying-about-the-future-of-remote-work>>.

Allen, TD, Golden, TD & Shockley, KM 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.

Anderson, AJ, Kaplan, SA & Vega, RP 2015, 'The impact of telework on emotional experience: When, and for whom, does telework improve daily affective well-being?', *European Journal of Work and Organizational Psychology*, vol. 24, no. 6, pp. 882–97.

Ansio, H, Käpykangas, S & Houni, P 2020, 'Community and collaboration in a shared multi-space office', *Nordic Journal of Working Life Studies*, vol. 10, no. 3, pp. 63–83. doi:10.18291/njwls.v10i3.121841.

Ansong, E & Boateng, R 2018, 'Organisational adoption of telecommuting: Evidence from a developing country', *Electronic Journal of Information Systems in Developing Countries*, vol. 84, no. 1, pp. 1–15.

Appel-Meulenbroek, R, van der Voordt, T, Aussems, R, Arentze, T & Le Blanc, P 2020, 'Impact of activity-based workplaces on burnout and engagement dimensions', *Journal of Corporate Real Estate*, vol. 22, no. 4, pp. 279–96. doi:10.1108/JCRE-09-2019-0041.

Arntz, M, Berlingieri F & Yahmed SB 2020 'Working from home and Covid-19: The chances and risks for gender gaps', Mannheim: Centre for European Economic Research.

Arundell, L, Sudholz, B, Teychenne, M, Salmon, J, Hayward, B, Healy, G & Timperio, A 2018, 'The impact of activity based working (ABW) on workplace activity, eating behaviours, productivity, and satisfaction', *International Journal of Environmental Research and Public Health*, vol. 15, no. 5, pp. 1–16.

ARUP 2020, *Future of offices: In a post-pandemic world*, ARUP [online], [accessed 24 Jun 2021], available at <<https://www.arup.com/perspectives/publications/research/section/future-of-offices-in-a-post-pandemic-world>>.

Australian Bureau of Statistics 2020, *Household impacts of COVID-19 survey*, ABS, Canberra, [accessed 24 Jun 2021], available at <<https://www.abs.gov.au/statistics/people/people-and-communities/household-impacts-covid-19-survey/detailed-release-june-2020>>.

Australian Bureau of Statistics 2021, *A year of COVID-19 and Australians work from home more*, media release, ABS, Canberra, 17 March, [accessed 24 Jun 2021], available at <<https://www.abs.gov.au/media-centre/media-releases/year-covid-19-and-australians-work-home-more>>.

Australian Cyber Security Centre 2020, *Annual cyber threat report*, ACSC, Canberra, [accessed 24 Jun 2021], available at <<https://www.cyber.gov.au/sites/default/files/2020-09/ACSC-Annual-Cyber-Threat-Report-2019-20.pdf>>.

Australian Government, 2021, *Delivering for tomorrow: APS workforce strategy 2025*, Commonwealth of Australia, Canberra, [accessed 24 Jun 2021], available at <[https://www.apsc.gov.au/sites/default/files/2021-03/APS\\_Workforce\\_strategy.pdf](https://www.apsc.gov.au/sites/default/files/2021-03/APS_Workforce_strategy.pdf)>.

Australian Public Service Commission 2020, *State of the service report 2019–20*, Commonwealth of Australia, Canberra, [accessed 24 Jun 2021], available at <<https://www.apsc.gov.au/state-service/state-service-report-2019-20>>.

Australian Unions, 2020, *Working from Home*, Australian Unions, [accessed 2 Jun 2021], available at <[https://www.actu.org.au/media/1449319/au\\_workingfromhome\\_p1.pdf](https://www.actu.org.au/media/1449319/au_workingfromhome_p1.pdf)>.

Australian Unions, 2020a, *Working from Home Charter*, [accessed 2 Jun 2021], available at <<https://www.actu.org.au/media/1449328/d59-working-from-home-charter.pdf>>.

Bäcklander, G, Rosengren, C, Falkman, LL, Stenfors, C, Seddigh, A, Osika, W & Stenström, E 2019, 'Navigating the activity based working environment – Relationships of self-leadership, autonomy and information richness with cognitive stress and performance', *Scandinavian Journal of Work and Organizational Psychology*, vol. 4, no. 1, pp. 1–14.

Bae, KB & Kim, D 2016, 'The impact of decoupling of telework on job satisfaction in U.S. federal agencies: Does gender matter?', *American Review of Public Administration*, vol. 46, no. 3, pp. 356–71.

Baert, S, Lippens, L, Moens, E, Weytjens, J & Sterkens, P 2020, IZA DP No. 13229, 'The COVID-19 crisis and telework: A research survey on experiences, expectations and hopes', *IZA Institute of Labor Economics* [online], [accessed 2 Jun 2021], available at <<https://www.iza.org/publications/dp/13229/the-covid-19-crisis-and-telework-a-research-survey-on-experiences-expectations-and-hopes>>.

Baird, M & Dinnale, D 2020, *Preferences for flexible working arrangements: Before, during and after COVID-19: A report to the Fair Work Commission*, Fair Work Commission, [accessed 2 Jun 2021], available at <<https://www.fwc.gov.au/documents/documents/awardmod/variations/2020/am202098-research-report-bd-301120.pdf>>.

Baptista, J, Stein, M, Klein, S, Watson-Manheim MB & Lee, J 2020, 'Digital work and organisational transformation: Emergent digital/human work configurations in modern organisations', *Journal of Strategic Information Systems* 29:101618.

Barrero, J, Bloom, N & Davis, S 2021, *Why working from home will stick*, Becker Friedman Institute: University of Chicago [online], [accessed 2 June 2021], available at <<https://bfi.uchicago.edu/working-paper/why-working-from-home-will-stick/>>.

Basile, KA & Beauregard, TA 2016, 'Strategies for successful telework: How effective employees manage work/home boundaries', *Strategic HR Review*, vol. 15, no. 3, pp. 106–11.

Belzunegui-Eraso, A & Erro-Garcés, A 2020, 'Teleworking in the Context of the COVID-19 Crisis Sustainability', vol.12, no. 9, 3662.

Bidwell, M & Briscoe, J 2009, 'Who contracts? Determinants of the decision to work as an independent contractor among information technology workers', *Academy of Management Journal*, vol. 52, no. 6, pp. 1148–168.

Bloom, N 2021, 'Our research shows working from home works, in moderation', *theguardian.com* [online], [accessed 3 Jun 2021], available at <<https://www.theguardian.com/commentisfree/2021/mar/21/research-working-from-home>>.

Bloom, N, Liang, J, Roberts, J & Ying, ZJ 2014, 'Does working from home work? Evidence from a Chinese experiment', *Quarterly Journal of Economics*, vol. 130, no. 1, pp. 165–218.

Boell, S, Cecez-Kecmanovic, D & Campbell, J 2016, 'Telework paradoxes and practices: The importance of the nature of work', *New Technology, Work and Employment*, vol. 31, no. 2, pp. 114–31.

Bosua, R, Gloet, M, Kurnia, S, Mendoza, A & Yong, J 2012, *Telework, productivity and wellbeing*, University of Melbourne, Melbourne.

Bridges, W 1995, *Jobshift*, Allen and Unwin, London.

Caillier, J 2012, 'The impact of teleworking on work motivation at a U.S. federal government agency', *American Review of Public Administration*, vol. 42, no. 4, pp. 461–80.

Caillier, JG 2014, 'Do role clarity and job satisfaction mediate the relationship between telework and work effort?', *International Journal of Public Administration*, vol. 37, no. 4, pp. 193–201.

Candido, C, Gocer, O, Marzban, S, Gocer, K, Thomas, L, Zhang, F & Tjondronegoro, D 2021, 'Occupants' satisfaction and perceived productivity in open-plan offices designed to support activity-based working: Findings from different industry sectors', vol. 23, no. 2, pp. 106–29.

Chartered Management Institute 2020, *Management transformed: Managing in a marathon crisis*, CMI [online], [accessed 2 Jun 2021], available at <<https://www.managers.org.uk/knowledge-and-insights/research-thought-leadership/management-transformed/>>.

Choi S 2018 'Managing Flexible Work Arrangements in Government: Testing the effects of institutional and managerial support', *Public Personnel Management*, vol. 47 no. 1, pp. 26-50.

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*, vol. 71, no. 1, pp. 47–72.

Coenen, M & Kok, R 2014, 'Workplace flexibility and new product development performance: The role of telework and flexible work schedules', *European Management Journal*, vol. 32, pp. 564–76.

Colenberg, S, Appel-Meulenbroek, R, Romero Herrera, N & Keyson, D 2021, 'Conceptualizing social well-being in activity-based offices', *Journal of Managerial Psychology*, vol. 36, no. 4, pp. 327–43.

Colley, L & Williamson, S 2020, *Working during the Pandemic: From resistance to revolution?*, UNSW Canberra, Canberra.

Collins, A, Cartwright, S & Hislop, D 2013, 'Homeworking: Negotiating the psychological contract', *Human Resource Management Journal*, vol. 23, no. 2, pp. 211–25.

Collins, AM, Hislop, D & Cartwright, S 2016, 'Social support in the workplace between teleworkers, office-based colleagues and supervisors', *New Technology, Work and Employment*, vol. 31, no. 2, pp. 161–75.

Community and Public Sector Union (n.d.), *Working from home*, [accessed 24 Jun 2021], available at <<https://www.cpsu.org.au/wfh>>.

Cortis, N & Powell, A 2018, 'Playing catch up? An exploration of supplementary work at home among Australian public servants', *Journal of Industrial Relations*, vol. 60, no. 44, pp. 538–59.

Craig, L & Churchill, B 2021, 'Dual-earner parent couples work and care during COVID-19', *Gender, Work and Organization*, vol. 28, no. 1, pp. 66–79.

Dahik A, Lovich D, Kreafl C, Bailey A, Kilmann J, Kennedy D, Roongta P, Schuler F, Tomlin L & Wenstrup, J 2020, *What 12,000 employees have to say about the future of remote work*, BCG [online], [accessed 2 Jun 2021], available at <<https://www.bcg.com/en-au/publications/2020/valuable-productivity-gains-covid-19>>.

Dahlstrom, TR 2013, 'Telecommuting and leadership style', *Public Personnel Management*, vol. 42, no.3, pp. 438–51.

Das, S & Kotikula, A 2019, *Gender-based employment segregation: Understanding causes and policy interventions*, *Jobs Working Paper No. 26*, World Bank, Washington.

Davis, D 2020, *The workplace beyond 2020*, Hassell Studio [online], [accessed 2 Jun 2021], available at <<https://www.hassellstudio.com/conversation/the-workplace-beyond-2020>>.

Dayaram, K & Burgess, J 2021, 'Regulatory challenges facing remote working in Australia', in D Wheatley, I Hardill & S Buglass (eds), *Handbook of research on remote work and worker well-being in the post-Covid era*, IGI Global.

De Filippis, E, Impink, S, Singell, M, Polzer, J & Sadun, R 2020, 'Collaborating during Coronavirus: The impact of COVID-19 on the nature of work', *National Bureau of Economic Research* [online], [accessed 2 Jun 2021], available at <<https://www.nber.org/papers/w27612>>.

De Menezes, LM & Kelliher, C 2011, 'Flexible working and performance: A systematic review of the evidence for a business case', vol. 3, no. 4, pp. 452–74.

De Vries, H, Tummers, L & Bekkers, V 2019, 'The benefits of teleworking in the public sector: Reality or rhetoric?', *Review of Public Personnel Administration*, vol. 39, no. 4, pp. 570–93.



Dewe, P & Cooper, C 2012, *Well-being and work: Towards a balanced agenda*, Palgrave Macmillan, Basingstoke.

Dickinson, H 2016, 'From new public management to new public governance: The implications for a "new public service"', in JR Butcher & DJ Gilchrist (eds), *The three sector solution: Delivering public policy in collaboration with not-for-profits and business*, ANU Press, Canberra, pp. 41–60.

Dickinson, H 2018, 'The next industrial revolution? The role of public administration in supporting government to oversee 3D printing technologies', *Public Administration Review*, vol. 70, no. 6, pp. 922–5.

Dickinson, H, Bismark, MM, Phelps, G & Loh, E 2016, 'Future of Medical Engagement', *Australian Health Review*, vol. 40, pp. 443–6.

Dickinson, H, Smith, C, Carey, N & Carey, G 2018, *Robots and the delivery of care services: What is the role for government in stewarding disruptive innovation?*, ANZSOG, Melbourne.

Dishman, L 2021, *Is now a good time to change careers? More workers are feeling good about it*, Fast Company [online], [accessed 2 Jun 2021], available at <<https://www.fastcompany.com/90607167/is-now-a-good-time-to-change-careers-more-workers-are-feeling-good-about-it>>.

Dixon, N 2003, *Telecommuting: Issues in public and private sector employment*, Queensland Parliamentary Library, Brisbane.

Dockery, AM & Bawa, S 2014, 'Is working from home good work or bad work? Evidence from Australian employees', *Australian Journal of Labour Economics*, vol. 17, no. 2, pp. 163–90.

Donnelly, R & Johns, J 2021, 'Recontextualising remote working and its HRM in the digital economy: An integrated framework for theory and practice', *The International Journal of Human Resource Management*, vol. 32, no. 1, pp. 84–105.

Dutcher, EG 2012, 'The effects of telecommuting on productivity: An experimental examination – the role of dull and creative tasks', *Journal of Economic Behaviour and Organisation*, vol. 84, pp. 355–63.

Engelen, L, Chau, J, Young, S, Mackey, M, Jeyapalan, D & Bauman, A 2019, 'Activity-based working impacting health, work performance and perceptions? A systematic review', *Building Research and Information*, vol. 47, no. 4, pp. 468–79.

Eslake, S 2021, 'The future of office work: Presentation to ISPT Insights Conference', unpublished paper, presented 4 May 2021.

Fair Work Commission 2020a, *Determination: Clerks - Private Sector Award 2010 [2020]*, PR717900, Fair Work Commission, Melbourne.

Fair Work Commission 2020b, *Decision: Victoria Police (Police Officers, Protective Services Officers, Police Reservists and Police Recruits) Enterprise Agreement 2019 (AG2020/615)*, Fair Work Commission [online], [accessed 24 Jun 2021], available at <<https://www.fwc.gov.au/documents/documents/agreements/fwa/ae507544.pdf>>.

Falkman, LL 2021, *COVID-19 and activity based workplaces. Time for a renewed interest?*, Stockholm School of Economics, [accessed 24 Jun 2021], available at <<https://www.hhs.se/en/research/sweden-through-the-crisis/covid-19-and-activity-based-workplaces/>>.

Fitzer, MM 1997 'Managing from Afar: Performance and rewards in a telecommuting environment', *Compensation and Benefits Review*, Vol. 29, no. 1, pp. 65-73.

Forbes, S, Birkett, H, Evans, L, Chung, H & Whiteman, J 2020, *Managing employees during the COVID-19 pandemic: Flexible working and the future of work*. Project report, Equal Parenting Project, University of Birmingham, [accessed 24 Jun 2021], available at <<https://www.birmingham.ac.uk/Documents/college-social-sciences/business/research/responsible-business/managerial-experiences-during-covid19-2020-accessible.pdf>>.

Frese, M 2008, 'The changing nature of work', in N Chmiel (ed), *An introduction to work and organizational psychology: A European perspective*, Blackwell, Oxford, pp. 397–413.

Frey, C & Osborne, M 2013, *The future of employment: How susceptible are jobs to computerisation?*, Oxford Martin School, Oxford.

Gajendran, RS, Harrison, DA & Delaney-Klinger, K 2015, 'Are telecommuters remotely good citizens? Unpacking telecommuting's effects on performance via I-Deals and job resources', *Personnel Psychology*, vol. 68, no. 2, pp. 353–93.

Garret, RK and Danziger, JN (2007), 'Which telework? Defining and testing a taxonomy of technology-mediated work at a distance', *Social Science Computer Review*, Vol. 25, pp. 27-47.

Gartner 2021, *Seven myths standing between you and the hybrid future of work*, available at <<https://www.gartner.com/en/insights/seven-myths-about-hybrid-future-of-work>>.

Gleeson, B 2020, '13 tips for leading and managing remote teams' *Forbes* [online], [accessed 23 Jun 2021], available at <<https://www.forbes.com/sites/brentgleeson/2020/08/26/13-tips-for-leading-and-managing-remote-teams/>>.

Golden, T & Eddleston, K 2020, 'Is there a price telecommuters pay? Examining the relationship between telecommuting and objective career success', *Journal of Vocational Behaviour*, vol. 116, pp. 1–13, available at <<https://www.gartner.com/en/insights/seven-myths-about-hybrid-future-of-work>>.

Gratton, L 2020, 'Four principles to ensure hybrid work is productive work', *MIT Sloan Review* [online], [accessed 24 Jun 2021], available at <<https://sloanreview.mit.edu/article/four-principles-to-ensure-hybrid-work-is-productive-work/>>.

Greer, S & Payne, S 2014, 'Overcoming telework challenges: Outcomes of successful telework strategies', *The Psychologist-Manager Journal*, vol. 17, no. 2, pp. 87–111.

Hancock, B & Williams, M 2021, 'One move companies can take to improve diversity', *McKinsey Quarterly* [online], [accessed 3 Jun 2021], available at <<https://www.mckinsey.com/featured-insights/diversity-and-inclusion/one-move-companies-can-take-to-improve-diversity>>.

Hand, K, Baxter, J, Carroll, M, Budinski, M 2020, *Families in Australia survey: Life during COVID-19 report no. 1: Early findings* Australian Institute of Family Studies [online], [accessed 2 Jun 2021], available at <<https://aifs.gov.au/publications/families-australia-survey-life-during-covid-19>>.

Henke, RM, Benevent, R, Schulte, P, Rinehart, C, Crighton, KA & Corcoran, M 2015, 'The effects of telecommuting intensity on employee health', *American Journal of Health Promotion*, vol. 30, no. 8, pp. 604–12.

Henman, P 2019, 'Of algorithms, apps and advice: Digital social policy and service delivery', *Journal of Asian Public Policy*, vol. 12, no 1, pp. 71–89.

Hickman, A & Maese, E 2021, *Measure performance: Strategies for remote and hybrid teams* [online], [accessed 23 Jun 2021], available at <<https://www.gallup.com/workplace/341894/measure-performance-strategies-remote-hybrid-teams.aspx>>.

Hickman, A & Robison, J 2020, *Is working remotely effective? Gallup research says yes* [online], [accessed 23 June 2021], available at <<https://www.gallup.com/workplace/283985/working-remotely-effective-gallup-research-says-yes.aspx>>.

Hickok, H 2021, *Are men-dominated offices the future of the workplace?*, BBC [online], 7 May [accessed 24 Jun 2021]. available at <<https://www.bbc.com/worklife/article/20210503-are-men-dominated-offices-the-future-of-the-workplace>>.

Hjálmsdóttir, A & Bjarnadóttir, V 2020, '"I have turned into a foreman here at home": Families and work–life balance in times of COVID-19 in a gender equality paradise', *Gender, Work and Organization*, vol. 28, no. 1, pp. 268–83.

Hodžic, S, Kubicek, B, Uhlig, L & Korunka, C 2021, 'Activity-based flexible offices: Effects on work-related outcomes in a longitudinal study', *Ergonomics*, vol. 64, no. 4, pp. 455–73.

Hoendervanger, JG, de Been, I, van Yperen, NW, Mobach, MP & Albers, CJ 2016, 'Flexibility in use: Switching behaviour and satisfaction in activity-based work environments', *Journal of Corporate Real Estate*, vol. 18, no. 1, pp. 48–62.

Hoendervanger, JG, Ernst, AF, Albers, CJ, Mobach, MP & van Yperen, NW 2018, 'Individual differences in satisfaction with activity-based work environments', *PLoS ONE*, vol. 13, no. 3, e0193878. doi:10.1371/journal.pone.0193878.

Hoendervanger, JG, van Yperen, NW, Mobach, MP & Albers, CJ 2019, 'Perceived fit in activity-based work environments and its impact on satisfaction and performance', *Journal of Environmental Psychology*, vol. 65, pp. 1–10.

Hoornweg, N, Peters, P & van der Heijden, B 2017, 'Finding the optimal mix between telework and office hours to enhance employee productivity: A study into the relationship between telework intensity and individual productivity, with mediation of intrinsic motivation and moderation of office hours', *New Ways of Working Practices (Advanced Series in Management)*, vol. 16, Emerald Group Publishing Limited, Bingley, pp. 1–28.

Hopkins, J & Bardoel, A 2020, *Key working from home trends emerging from COVID-19*, Commonwealth of Australia, Melbourne, [accessed 24 Jun 2021], available at <<https://researchbank.swinburne.edu.au/items/be3dfbba-fc85-4834-97aa-7a7399a94b17/1/>>.

Hynes, M 2016, 'Developing (tele)work? A multi-level sociotechnical perspective of telework in Ireland', *Research in Transportation Economics*, vol. 57, pp. 21–31.

International Workplace Group (IWG) 2021, *How does the hub-and-spoke model work in practice?*, IWG [online], [accessed 24 Jun 2021], available at <<https://www.iwgplc.com/MediaCentre/Article/how-does-hub-and-spoke-model-work-in-practice>>.

Iometrics 2020, *Global work-from-home experience survey*, Iometrics [online], [accessed 2 Jun 2021], available at <<https://globalworkplaceanalytics.com/global-work-from-home-experience-survey>>.

Ipsen, C, Kirchner, K & Hansen, JP 2020, *Experiences of working from home in times of Covid-19 international survey conducted the first months of the national lockdowns March-May 2020*, DTU Orbit [online], [accessed 24 Jun 2021], available at <<https://orbit.dtu.dk/en/publications/experiences-of-working-from-home-in-times-of-covid-19-internation>>.

Jindo, T, Kai, Y, Kitano, N, Wakaba, K, Makishima, M, Takeda, K & Arao, T 2019, 'Impact of activity-based working and height-adjustable desks on physical activity, sedentary behavior, and space utilization among office workers: A natural experiment', *International Journal of Environmental Research and Public Health*, vol. 17, no. 1, 236.

Karanikas, N & Cauchi, J 2020, *Literature review on parameters related to work-from-home (WFH) arrangements*, available at <<https://eprints.qut.edu.au/205308/>>.

Kazekami, S 2020, 'Mechanisms to improve labor productivity by performing telework', *Telecommunications Policy*, vol. 44, no. 2, available at

Kim, J, Candido, C, Thomas, L & de Dear, R 2016, 'Desk ownership in the workplace: The effect of non-territorial working on employee workplace satisfaction, perceived productivity and health', *Building and Environment*, vol. 103, pp. 203–14.

Kirov, V 2017, 'Digitalization of public services in Europe: Policy challenges for the European trade union movement', in P Meil and V Kirov (eds), *Policy implications of virtual work*, Springer, Cham, pp. 251–72.

Kniffin, K 2020, 'COVID-19 and the workplace: Implications, issues, and insights for future research and action', *American Psychologist*, vol. 76, no. 1, pp. 63–77.

Koslowski, N 2016, 'My company is invisible: Generating trust in the context of placelessness, precarity and invisibility', in J Flecker (ed), *Space, place and global digital work*, Palgrave, Basingstoke, pp. 171–200.

Kwan, C 2020, 'Queensland to allow more public service workers to avoid CBD offices post-COVID', 10 July, available at <<https://www.zdnet.com/article/queensland-to-allow-more-public-service-workers-to-avoid-cbd-offices-post-covid/>>.

Kwon, M & Jeon, SH 2017, 'Why permit telework? Exploring the determinants of California city governments' decisions to permit telework', *Public Personnel Management*, vol. 46, no. 3, pp. 239–62.

Lai, C, Bobillier Chaumon, ME, Vacherand-Revel, J & Abitan, A 2021, 'Thinking activity-based work environment throughout situated acceptance', *Journal of Workplace Learning*, vol. 33, no. 1, pp. 10–25.

Lautsch, B & Kossek, EE 2011, 'Managing a blended workforce: Telecommuters and non-telecommuters', *Organisational Dynamics*, vol. 40, pp. 10–17.

Leclercq-Vandelannoitte, A 2020, 'Seeing to be seen: The manager's political economy of visibility in new ways of working', *European Management Journal*, available at <<https://hal.archives-ouvertes.fr/hal-03048982>>

Lee, D & Kim, SY 2018, 'A quasi-experimental examination of telework eligibility and participation in the US federal government', *Review of Public Personnel Administration*, vol. 38, no. 4, pp. 451–71.

Leesman 2017, 'The rise and rise of activity based working. Reshaping the physical, virtual and behavioural workspace', *Leesman Index* [online], [accessed 24 Jun 2021], available at <[https://www.leesmanindex.com/media/The\\_Rise\\_and\\_Rise\\_of\\_Activity\\_Based\\_Working\\_Research\\_book.pdf](https://www.leesmanindex.com/media/The_Rise_and_Rise_of_Activity_Based_Working_Research_book.pdf)>.

Leung, L & Zhang, R 2016, 'Mapping ICT use at home and telecommuting practices: A perspective from work family border theory', *Telematics and Informatics*, vol. 34, pp. 385–96.

Lewis, J 2013, *Academic governance: Disciplines and policy*, Routledge, London.

Lott, Y & Abendroth, A 2020, 'The non-use of telework in an ideal worker culture: Why women perceive more cultural barriers', *Community, Work and Family*, vol. 23, no. 5, pp. 593–611.

Lovich, D 2021, 'Coming to terms with the future of work: Where are you in these four stages?', *Forbes* [online], [accessed 2 Jun 2021], available at <<https://www.forbes.com/sites/deborahlovich/2021/05/12/coming-to-terms-with-the-future-of-work-where-are-you-in-these-four-stages/>>.

Luse, A, McElroy, JC, Townsend, AM & Demarie, S 2013, 'Personality and cognitive style as predictors of preference for working in virtual teams', *Computers in Human Behavior*, vol. 29, no. 4, pp. 1825–32.

Mahler, J 2012, 'The telework divide: Managerial and personnel challenges of telework', *Review of Public Personnel Administration*, vol. 32, no. 4, pp. 407–18.

Martin, B & McDonnell, R 2012, 'Is telework effective for organizations? A meta-analysis of empirical research on perceptions of telework and organizational outcomes', *Management Research Review*, vol. 35, no. 7, pp. 602–16.

Maruyama, T & Tietze, S 2012, 'From anxiety to assurance: Concerns and outcomes of telework', *Personnel Review*, vol. 41, no. 4, pp. 450–69.

McKinsey Global Institute 2021, *The future of work after COVID-19*, McKinsey Global Institute [online], [accessed 3 Jun 2021], available at <<https://www.mckinsey.com/featured-insights/future-of-work/the-future-of-work-after-covid-19>>.

McKinsey Global Institute 2021a, *What executives are saying about the future of hybrid work*, McKinsey Global Institute [online], available at <<https://www.mckinsey.com/business-functions/organization/our-insights/what-executives-are-saying-about-the-future-of-hybrid-work>>.

Messenger, J, Llave, OV, Gschwind, L, Boehmer, S, Vermeylen, G & Wilkens, M 2017, *Working anytime, anywhere: The effects on the world of work*, Publications Office of the European Union, Luxembourg, and the International Labour Office, Geneva.

Microsoft 2021, *The next great disruption is hybrid work – Are we ready?* Microsoft [online], [accessed 2 Jun 2021], available at <<https://www.microsoft.com/en-us/worklab/work-trend-index/hybrid-work>>.

Molino, M, Ingusci, E, Signore, F, Manuti, A, Giancaspro, ML, Russo, V, Zito, M & Cortese, CG 2020, 'Wellbeing costs of technology use during COVID-19 remote working: An investigation using the Italian translation of the technostress creators scale', *Sustainability*, vol. 12, no. 15, pp. 1–20.

Morgan, J 2017, 'Activity-based working: Boosting employee satisfaction, productivity, and the bottom line', Targus [online], [accessed 24 Jun 2021], available at <<https://www.targus.com/Themes/TargusCanada/Content/pdf/flex-working-article.pdf>>.

Morrison, R & Macky, K 2017, 'The demands and resources arising from shared office spaces', *Applied Ergonomics*, vol. 60, pp. 103–15.



Nagata, T, Ito, D, Nagata, M, Fujimoto, A, Ito, R, Odagami, K, Kajiki, S, Uehara, M, Oyama, I, Dohi, S, Fujino, Y & Mori, K 2021, 'Anticipated health effects and proposed countermeasures following the immediate introduction of telework in response to the spread of COVID-19: The findings of a rapid health impact assessment in Japan', *Journal of Occupational Health*, vol. 63, no. 1, p.e12198.

Nakrošienė, A, Bučiūnienė, I & Goštautaitė, B 2019, 'Working from home: Characteristics and outcomes of telework', *International Journal of Manpower*, vol. 40, no. 1, pp. 87–101.

Nof, SY 2009, *Springer Handbook of Automation*, Springer, London.

NSW Innovation and Productivity Council 2020, *NSW remote working insights: Our experience during COVID-19 and what it means for the future of work*, NSW Treasury, Sydney [online], [accessed 2 Jun 2021], available at <<https://www.treasury.nsw.gov.au/nsw-economy/nsw-innovation-and-productivity-council/our-publications/nsw-remote-working-insights>>.

O2 Business 2021, *Creating a dynamic workforce: Empowering employees for productivity and growth*, O2 Business, [accessed 2 Jun 2021], available at <<https://www.o2.co.uk/business/why-o2/insights/dynamic-working>>.

Ojala, S, Natti, J & Anttila, T 2013, 'Informal overtime at home instead of telework: Increase in negative work family interface', *International Journal of Sociology and Social Policy*, vol. 34, no. 1/2, pp. 69–87.

Olo-Lopez, A & Goni-Legaz, S 2020, 'Home-based telework: Usefulness and facilitators', *International Journal of Manpower*, vol. 42, no. 4, pp. 644-660.

Organisation for Economic Co-operation and Development 2020, *Productivity gains from teleworking in the post COVID-19 era: How can public policies make it happen?* OECD, [accessed 24 Jun 2021], available at <<https://www.oecd.org/coronavirus/policy-responses/productivity-gains-from-teleworking-in-the-post-covid-19-era-a5d52e99/>>.

Ozimek, A 2020, *The future of remote work*, Upwork.com [online], [accessed 3 Jun 2021], available at <<https://www.upwork.com/press/releases/the-future-of-remote-work>>.

Parker, LD 2016, 'From scientific to activity based office management: A mirage of change', *Journal of Accounting and Organizational Change*, vol. 12, no. 2, pp. 177–202.

Parker, S, Knight C & Keller, A 2020, 'Remote managers are having trust issues', *Harvard Business Review* [online], [accessed 2 Jun 2021], available at <<https://hbr.org/2020/07/remote-managers-are-having-trust-issues>>.

Pelta, R 2021, *Survey: Men and women experience remote work differently*, Flexjobs.com [online], [accessed 7 Jun 2021], available at <<https://www.flexjobs.com/blog/post/men-women-experience-remote-work-survey/>>.

Pennington, A & Stanford, J 2020, *Briefing paper: Working from home: Opportunities and risks*, Centre for Future Work [online], [accessed 3 Jun 2021], available at <<https://www.futurework.org.au/working-from-home-in-a-pandemic-opportunities-and-risks>>.

Powell, A & Craig, L 2015, 'Gender differences in working at home and time use patterns: Evidence from Australia', *Work, Employment and Society*, vol. 29, pp. 571–89.

PwC Australia 2021, *Changing places: How hybrid working is rewriting the rule book The future of work* [online], [accessed 2 Jun 2021], available at <<https://www.pwc.com.au/important-problems/future-of-work-design-for-the-future/changing-places-hybrid-working.html>>.

PwC Australia 2021a, *Digital Trust Insights 2021: The need for cyber resilience*, available at <<https://www.pwc.com.au/important-problems/cyber-security-digital-trust/digital-trust-insights-2021.html>>.

PwC Global 2020, *PwC's COVID-19 CFO Pulse: Insights from global finance leaders on the crisis and response – 15 June 2020* [online], [accessed 2 Jun 2021], available at <<https://www.pwc.com/gx/en/issues/crisis-solutions/covid-19/global-cfo-pulse.html>>.

PwC Global 2021b, *Hopes and fears 2021: The views of 32,500 workers* [online], [accessed 2 Jun 2021], available at <<https://www.pwc.com/gx/en/issues/upskilling/hopes-and-fears.html>>.

Ramani, A & Bloom, N 2021, *The donut effect of COVID-19 on cities* National Bureau of Economic Research Working Paper 28876, NBER, [accessed 2 Jun 2021], available at <<https://www.nber.org/papers/w28876>>.

Richardson, J (2010) 'Managing Flexworkers: Holding on and letting go', *Journal of Management Development*, vol. 29, no. 2, pp. 137-147.

Ripamonti, S, Galuppo, L, Provasoli, G & Benozzo, A 2020, 'Unmasking reflexivity in HR managers during the COVID-19 lockdown in Italy', *Frontier Psychology*, 23 December, available at <<https://doi.org/10.3389/fpsyg.2020.588128>>.

Robison, G 2020, *COVID-19 has my teams working remotely: A guide for leaders*, Gallup, [online], available <<https://www.gallup.com/workplace/288956/covid-teams-working-remotely-guide-leaders.aspx>>.

Robison, J 2020a, *The emotional state of remote workers: It's complicated*, Gallup, December [online], [accessed 24 Jun 2021], available at <<https://www.gallup.com/workplace/327569/emotional-state-remote-workers-complicated.aspx>>.

Rozier, A 2021, *Defining virtual work jobs: Here's what each term means*, Flexjobs [online], [accessed 24 Jun 2021], available at <<https://www.flexjobs.com/blog/post/defining-virtual-work/>>.

Rupietta, K & Beckmann, K 2018, 'Employees working from home: What is the effect on employees' effort?', *Schmalenbach Business Review*, vol. 70, pp. 25–55.

Schall Jr, M & Chen, P 2021, 'Evidence-based strategies for improving occupational safety and health among teleworkers during and after the Coronavirus pandemic', *Human Factors*, 2021-01-08:18720820984583-18720820984583.

Scottish Futures Trust 2021, *New frontiers for smarter working, work and workplace post-COVID*, Scottish Futures Trust, 19 March, [accessed 26 Jun 2021], available at <[https://www.scottishfuturestrust.org.uk/storage/uploads/new\\_frontiers\\_report\\_march2021.pdf](https://www.scottishfuturestrust.org.uk/storage/uploads/new_frontiers_report_march2021.pdf)>.

Seck, P, Encarnacion, J, Tinonin, C & Duerto-Valero, S 2021, 'Gendered impacts of COVID-19 in Asia and the Pacific: Early evidence on deepening socioeconomic inequalities in paid and unpaid work', *Feminist Economics*, vol. 27, no. 1/2, pp. 117–32.

Sewell, G & Taskin, G 2015, 'Out of sight, out of mind in a new world of work? Autonomy, control, and spatiotemporal scaling in telework', *Organisation Studies*, vol. 36, no. 11, pp. 1507–29.

Shepherd-Banigan, M, Bell, JF, Basu, A, Booth-LaForce, C & Harris, JR 2016, 'Workplace stress and working from home influence depressive symptoms among employed women with young children', *International Journal of Behavioural Medicine*, vol. 23, pp. 102–11.

Skogland, MAC 2017, 'The mindset of activity-based working', *Journal of Facilities Management*, vol. 15, no. 1, pp. 62–75.

Smith, C, Dickinson, H, Carey, N & Carey, G (2021). 'The challenges and benefits of stewarding disruptive technology', in H Sullivan, H Dickinson & H Henderson (eds) *The Palgrave handbook of the public servant*, Palgrave Macmillan, Basingstoke.

Snyder, H 2019, 'Literature review as research methodology: An overview and guide', *Journal of Business Research*, vol. 104, pp. 333–39.

Stadin, M, Nordin, M, Fransson, EI & Broström, A 2020, 'Healthcare managers' experiences of technostress and the actions they take to handle it - A critical incident analysis', *BMC Medical Informatics and Decision Making*, vol. 20, 244, available at <[BMC medical informatics and decision making](https://doi.org/10.1186/s12911-020-01208-p56lps)>.

Tomlinson, J, Baird, M, Berg, P & Cooper, R 2018, 'Flexible careers across the lifecycle: Advancing theory, research and practice', *Human Relations*, vol. 71, no. 1, pp. 4–22.

Towell, N 2021, 'Union takes Tax Office bosses to Federal Court in work from home row', *Sydney Morning Herald* [online], [accessed 2 Jun 2021], available at <<https://www.smh.com.au/national/union-takes-tax-office-bosses-to-federal-court-in-work-from-home-row-20201208-p56lps.html>>.

Turetken, O, Jain, A, Quesenberry, B & Ngwenyama, O 2011, 'An empirical investigation of the impact of individual and work characteristics on telecommuting success', *IEEE Transactions on Professional Communication*, vol. 54, no. 1, pp. 56–67.

# Appendix A: Methodology

Valenduc, G & Vendramin, P 2016, *Work in the digital economy: Sorting the old from the new (ETUI Working Paper)*, ETUI, Brussels.

Van den Berg, J, Appel-Meulenbroek, R, Kemperman, A & Sotthewes, M 2020, 'Knowledge workers' stated preferences for important characteristics of activity-based workspaces', *Building Research and Information*, vol. 48, no. 7, pp. 703–18.

Van der Lippe, T & Lippényi, Z 2019, 'Co-workers working from home and individual and team performance', *New Technology, Work and Employment*, vol. 35, no. 1, pp. 60–79.

Van der Lippe, T & Lippényi, Z 2020, 'Beyond formal access: Organisational context, working from home, and work-family conflict of men and women in European workplaces', *Social Indicators Research*, vol. 151, pp. 383–402.

Van den Meulen, N, van Baalen, P, van Heck, E & Mulder, S 2019, 'No teleworker is an island: The impact of temporal and spatial separation along with media use on knowledge sharing networks', *Journal of Information Technology*, vol. 34, no. 3, pp. 243–62.

Van Meel, J 2019, *Activity-based working. The Purenet practice guide*, available at <<https://www.scottishfuturestrust.org.uk/storage/uploads/abwpracticeguidecompressed.pdf>>.

Veldhoen 2020, *What is the impact of COVID-19 on activity-based working?*, Veldhoen Company [online], [accessed 24 Jun 2021], available at <<https://www.veldhoencompany.com/wp-content/uploads/2020/07/impact-of-covid-19-on-activity-based-working--final-article-.pdf>>.

Versey, HS 2015, 'Managing work and family: Do control strategies help?', *Developmental Psychology*, vol. 5, no. 11, pp. 1672–81.

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*, vol. 29, no. 4, pp. 429–42.

Wang, W, Albert, L & Sun, Q 2020, 'Employee isolation and telecommuter organizational commitment', *Employee Relations*, vol. 42, no. 3, pp. 609–25.

Wang, B, Liu, Y, Qian, J & Parker, S 2021, 'Achieving effective remote working during the COVID-19 pandemic: A work design perspective', *Applied Psychology: An International Review*, vol. 70, no. 1, pp. 16–99.

Williamson, S, Colley, L & Foley, M 2019, 'Human resource devolution, decoupling and incoherence: How line managers manage gender equality reforms', *Public Management Review*, vol. 22, no. 10, pp. 1560–78.

Williamson, S, Colley, L, Foley, M & Cooper, R 2018, The role of middle managers in progressing gender equity in the public service, *Public Service Research Group*, UNSW Canberra, Canberra.

Williamson, S, Colley, L & Hanna-Osborne, S 2020, 'Will working from home become the 'new normal' in the public sector?', *Australian Journal of Public Administration*, vol. 79, no. 4, pp. 601–7.

Wilmot, K, Boyle, T, Rickwood, P & Sharpe, S 2014, *The potential for smart work centres in Blacktown, Liverpool and Penrith*, report prepared by the Institute for Sustainable Futures, University of Technology, Sydney, for Regional Development Australia Sydney, the Western Sydney Regional Organisation of Councils (WSROC) and Penrith Business Alliance.

Wojcak, E, Bajzikova, L, Sajgalikova, H & Polakova, M 2016, 'How to achieve sustainable efficiency with teleworkers: Leadership model in telework', *Procedia: Social and Behavioral Sciences*, 229, pp. 33–41.

Workplace Gender Equality Agency 2020, *Gendered impacts of COVID-19*, WGEA [online], [accessed 3 Jun 2021], available at <<https://www.wgea.gov.au/publications/gendered-impact-of-covid-19>>.

Ziffer, D 2021, 'Right to disconnect' fight to expand as unions push claims in enterprise agreements, ABC News [online], [accessed 2 Jun 2021], available at <<https://www.abc.net.au/news/2021-04-07/right-to-disconnect-fight-to-expand-trade-union-eba-push/100050264>>.

Term	Definition
Hybrid working	A blended model where some employees return to the workplace and others continue to work from home (Microsoft, 2020).
Working from home	Work performed from home, with up to 100% of the work being performed at home (Rozier, 2021).
Remote working	A work arrangement in which the employee resides and works at a location beyond the local commuting area of the employing organization's worksite; generally includes full-time telework and may result in a change in duty location to the alternative worksite (Allen <i>et al.</i> , 2015).
Telecommuting	<p>The use of telecommunications technology to partially or completely replace the commute to and from work.</p> <p>Working some portion of time away from the conventional workplace, often from home, and communicating by way of computer-based technology.</p> <p>Work conducted from home that is often supported by telecommunications technology.</p> <p>Work arrangement in which employees perform their regular work at a site other than the ordinary workplace, supported by technological connections.</p> <p>The use of information and communication technologies to replace or substitute for work environments that require individuals to commute to a traditional office.</p> <p>Systems that enable employees to perform regular, officially assigned duties at home or at alternative work sites geographically convenient to their residences (Sources: Fitzer, 1997; Allen <i>et al.</i>, 2015).</p>
Teleworking	<p>A work practice that involves members of an organisation substituting a portion of their typical work hours (ranging from a few hours per week nearly full-time) to work away from a central workplace – typically principally from home – using technology to interact with others as needed to conduct work task.</p> <p>Work performed by (a) those whose remote work is from the home or a satellite office, (b) those whose telework is primarily in the field, and (c) those whose work is “networked” in such a way that they regularly work in a combination of home, work, and field contexts.</p> <p>A form of work organization in which the work is partially or completely done outside the conventional company workplace with the aid of information and telecommunication services.</p> <p>Work that relies on technology-mediated communication and sophisticated information-processing capabilities instead of colocation for the production and delivery of work outputs.</p> <p>A work arrangement in which employees perform their regular work at a site other than the ordinary workplace, supported by technological connections (Sources: Allen <i>et al.</i>, 2015; Garrett and Danzinger, 2007).</p>

Distributed working	Employees work over geographical boundaries and to some extent work with computer-mediated communication in order to achieve a common goal (Allen <i>et al.</i> , 2015).
Activity-based working	Workers do not have assigned workstations, but instead share an office space offering different types of non-assigned work settings, which are intended to be used for different types of activities (Hoendervanger <i>et al.</i> , 2019).

Given the wide range of terminology used, search terms were limited to the following: teleworking, telecommuting, remote working, and working from home. ‘Teleworking’, being the overarching term, is the preferred term used in this literature review, although ‘remote’ working is also used. Each term was searched separately in Google Scholar, and in selected academic databases, namely ProQuest and JStor. Searches in academic databases were confined to peer-reviewed articles written since 2011. Reference lists of key articles were also scanned, which led to further articles being found, read and incorporated into the literature review. These searches yielded articles from a wide range of disciplines, including: human resource management, organisational psychology, organisational behaviour, medicine, industrial relations, gender studies, and sociology.

Searches were also conducted on a range of terms for shared workspaces, including: activity-based working, remote working, shared working, co-working and remote working hubs. Other searches were also conducted as needed, for example, on digitisation and working. Articles which were more academically rigorous, such as those based on extensive data sets, or large-scale comparisons, were given more attention than smaller studies. The authors therefore assessed the methodology employed in the articles to determine suitability, even though the methodology of every study is not detailed in this review.

Simultaneously as these searches for academic articles were being conducted, searches were also conducted on grey literature. The authors focused on market research reports (i.e. such as those from PwC), rather than on blogs or articles in online trade newsletters, although authors used discretion in the selection of articles. While not academically rigorous, the grey literature provides important insights and captures emerging trends more effectively than academic literature.

Articles were downloaded, saved to authors’ computers, and uploaded into Dropbox to enable sharing. Standard academic practice was then employed (see for example, Snyder, 2019). Articles were scanned and assessed as to relevance. Relevant articles were then read and summarised, in accordance with the themes listed in the Work Order issued to the researchers. This process was iterative, with researchers adding analyses to each section and sub-section, rechecking, and synthesising to draw out common findings.

# Appendix B:

## Summary of Key Grey Literature

Source	Summary information
<b>Remote, hybrid and flexible work trends</b>	
<p>Baird M and Dinnale D (2020) <i>Preferences for flexible working arrangements: before, during and after COVID-19: A report to the Fair Work Commission</i></p> <p><a href="https://www.fwc.gov.au/documents/documents/awardmod/ variations/2020/am202098-research-report-bd-301120.pdf">https://www.fwc.gov.au/documents/documents/awardmod/ variations/2020/am202098-research-report-bd-301120.pdf</a></p>	<p>Summarises key academic and grey literature on employee preferences for working flexibilities for three time periods: before, during and after COVID-19 lockdown in Australia.</p> <ul style="list-style-type: none"> <li>– Pre-COVID, only 11% of employers indicated that telework was available for all employees – 58% organisations reported that formal teleworking was not available. Other flexibilities were similarly unavailable.</li> <li>– During COVID, flexible working hours to suit their situation were top of mind for remote workers. Workers reported increased productivity, but for some the office was a reprieve from home life.</li> <li>– Post-COVID, employees wanted more access to flexible work options. Remote work is not necessarily flexible work – it depends on the ability to set hours and take leave as needed.</li> </ul>
<p>Colley, L and Williamson, S (2020) <i>Working During the Pandemic: From resistance to revolution?</i></p> <p><a href="http://unsworks.unsw.edu.au/fapi/datastream/unsworks:72713/bin8d097b65-72fb-4706-b14e-aae5df57967f?view=true&amp;andxy=01">http://unsworks.unsw.edu.au/fapi/datastream/unsworks:72713/bin8d097b65-72fb-4706-b14e-aae5df57967f?view=true&amp;andxy=01</a></p>	<p>Survey of 6,000+ Australian Public Service employees conducted during the pandemic lockdown. Key findings:</p> <ul style="list-style-type: none"> <li>– Over 90% of managers believed that their team's productivity was the same or even higher when working from home.</li> <li>– Nearly two-thirds of employees believed they had more autonomy working at home.</li> <li>– Over 2/3 of employees wanted to continue working from home on a regular basis into the future.</li> </ul>
<p>McKinsey Global Institute (2021a) <i>What Executives are Saying about the Future of Hybrid Work</i></p> <p><a href="https://www.mckinsey.com/business-functions/organization/our-insights/what-executives-are-saying-about-the-future-of-hybrid-work">https://www.mckinsey.com/business-functions/organization/our-insights/what-executives-are-saying-about-the-future-of-hybrid-work</a></p>	<p>May 2021 survey of 100 executives across industries and geographies. Findings reveal:</p> <ul style="list-style-type: none"> <li>– productivity and customer satisfaction have increased during the pandemic due to remote work</li> <li>– Most organisations plan to embrace a hybrid model</li> <li>– However the process of thinking through and articulating the specifics of that model is at different stages.</li> <li>– Many of their employees feel anxious about the lack of information and productivity and workplace attachment are suffering.</li> </ul>
<p>Microsoft (2021) <i>The Next Great Disruption is Hybrid Work – Are We Ready?</i></p> <p><a href="https://www.microsoft.com/en-us/worklab/work-trend-index/hybrid-work">https://www.microsoft.com/en-us/worklab/work-trend-index/hybrid-work</a></p>	<p>Gives insights from Microsoft's workforce of 160,000 and how their hybrid working strategy is evolving. The 2021 Work Key Insight Index outlines findings from a study of more than 30,000 people in 31 countries and an analysis of trillions of productivity and labor signals across Microsoft 365 and LinkedIn. It also includes perspectives from experts who have spent decades studying collaboration, social capital, and space design at work for decades.</p> <ul style="list-style-type: none"> <li>– Flexible work is here to stay and opens up the "talent landscape", creating new job opportunities for some</li> <li>– Teams have become more siloed and digital exhaustion is a threat to workforce retention and productivity.</li> </ul>



Source	Summary information
<b>Remote, hybrid and flexible work trends</b>	
<p>PwC Global (2021b) <i>Hopes and fears 2021: The views of 32,500 workers</i></p> <p><a href="https://www.pwc.com/gx/en/issues/upskilling/hopes-and-fears.html">https://www.pwc.com/gx/en/issues/upskilling/hopes-and-fears.html</a></p>	<p>Provides insights from a February 2021 survey of 32,500 workers globally – the largest survey of workers on the Future of Work.</p> <ul style="list-style-type: none"> <li>– 39% think their job will be obsolete within 5 years.</li> <li>– Only 9% of those who can work remotely want to go back onsite full time.</li> <li>– 44% of workers would agree to let their employer use technology to monitor their performance at work, including sensors and wearable devices, with 31% against it.</li> <li>– 41% of respondents say that they are unwilling to give their employer access to their personal data, including social media profiles, with only 35% willing.</li> <li>– 50% of workers say they've faced discrimination at work, which led to them missing out on career advancement or training.</li> </ul>
<p>Ramani A. and Bloom N. (2021) The Donut Effect of COVID-19 on Cities <i>National Bureau of Economic Research Working Paper 28876</i>.</p> <p><a href="https://www.nber.org/papers/w28876">https://www.nber.org/papers/w28876</a></p>	<p>This paper uses delivery service data to quantify the effect of COVID-19 on migration patterns and real estate markets across US cities. It finds:</p> <ul style="list-style-type: none"> <li>– Service demand has moved out of CBDs and towards suburbs, which the authors label “the Donut effect”</li> <li>– There is less evidence that people and companies are moving between cities or to regional centres, pointing to hybrid rather than remote working patterns.</li> </ul>
<p>ScottishFuturesTrust. (2021). New Frontiers for Smarter Working. Work and Workplace post COVID-19.</p> <p><a href="https://www.scottishfuturestrust.org.uk/storage/uploads/new_frontiers_report_march2021.pdf">https://www.scottishfuturestrust.org.uk/storage/uploads/new_frontiers_report_march2021.pdf</a></p>	<p>May 2021 survey of 100 executives across industries and geographies. Findings reveal:</p> <ul style="list-style-type: none"> <li>– productivity and customer satisfaction have increased during the pandemic due to remote work</li> <li>– Most organisations plan to embrace a hybrid model</li> <li>– However the process of thinking through and articulating the specifics of that model is at different stages.</li> <li>– Many of their employees feel anxious about the lack of information and productivity and workplace attachment are suffering.</li> </ul>

Source	Summary information
<b>Hybrid and remote performance and productivity</b>	
<p>Hickman and Maese, <i>Measure Performance: Strategies for Remote and Hybrid Teams</i> Gallup, March 2021</p> <p><a href="https://www.gallup.com/workplace/341894/measure-performance-strategies-remote-hybrid-teams.aspx">https://www.gallup.com/workplace/341894/measure-performance-strategies-remote-hybrid-teams.aspx</a></p>	<p>Measuring hybrid and remote team productivity</p> <ul style="list-style-type: none"> <li>– 44% of U.S. employees prefer working from home</li> </ul> <p>almost half of U.S. employees don't know what's expected of them at work</p> <ul style="list-style-type: none"> <li>– Three domains can help measure hybrid and remote team productivity:</li> <li>– setting goals and meeting them &gt;&gt; my work</li> <li>– partnering for effectiveness &gt;&gt; my team</li> <li>– translating work into its consequences &gt;&gt; my customer</li> </ul>
<p>Iometrics (2020) <i>Global Work-From-Home Experience Survey</i> Iometrics</p> <p><a href="https://globalworkplaceanalytics.com/global-work-from-home-experience-survey">https://globalworkplaceanalytics.com/global-work-from-home-experience-survey</a></p>	<p>Nearly 3,000 employees responded to the Global Work-from-Home Experience Survey between March 30th and April 24th, 2020. It gives insights on the experience of remote work globally.</p> <ul style="list-style-type: none"> <li>– When working with others, which accounts for 43% of a worker's day, employees say they are equally productive at home versus in the office (61% vs. 60% of the time respectively), but they are more satisfied when collaborating in person (63% satisfied with collaborating at home vs. 90% at the office). (60% vs 87% globally).</li> <li>– 77% are satisfied with the flexibility they have working at home; 69% are satisfied with their wellbeing.</li> <li>– 76% of global employees want to continue working from home. On average the preference is for 2 days per week globally.</li> </ul>
<p>NSW Innovation and Productivity Council (2020) <i>NSW remote working insights: our experience during COVID-19 and what it means for the future of work</i> NSW Treasury</p> <p><a href="https://www.treasury.nsw.gov.au/nsw-economy/nsw-innovation-and-productivity-council/our-publications/nsw-remote-working-insights">https://www.treasury.nsw.gov.au/nsw-economy/nsw-innovation-and-productivity-council/our-publications/nsw-remote-working-insights</a></p>	<p>The NSW Innovation and Productivity Council report combines a survey of 1500 NSW workers with data from a bespoke AI platform.</p> <ul style="list-style-type: none"> <li>– Remote work will drop but will stay above pre-pandemic levels, differentiated across industries and job roles.</li> <li>– 82% of workers report productivity as high or higher when working remotely than on premises.</li> <li>– Working remotely two days a week saves the average worker the equivalent of 3.3 weeks' leave a year, and \$860 a year in travel costs.</li> <li>– The average NSW remote worker has an extra 1 hour and 17 minutes per day saved by remote working, and puts a portion of that time back into their work.</li> </ul>
<p>PwC Australia (2021) <i>Changing Places: How hybrid working is rewriting the rule book</i></p> <p><a href="https://www.pwc.com.au/important-problems/future-of-work-design-for-the-future/changing-places-hybrid-working.html">https://www.pwc.com.au/important-problems/future-of-work-design-for-the-future/changing-places-hybrid-working.html</a></p>	<p>A trend forecasting report that considers various aspects of the Future of Work according to three Horizon timelines and phases:</p> <ul style="list-style-type: none"> <li>– Rebuild: the return to the office</li> <li>– Redefine: work after the vaccine</li> <li>– Reimagine: empowering future growth.</li> <li>– Areas covered include work location and reconfiguration of offices and office locations, wellbeing and productivity, organisation, regulation and logistics of hybrid and remote working, and employee and management experience of work, including leadership development.</li> </ul>
<p>Robison, Jennifer <i>The emotional state of Remote workers: it's complicated</i> Gallup, December 2020</p> <p><a href="https://www.gallup.com/workplace/327569/emotional-state-remote-workers-complicated.aspx">https://www.gallup.com/workplace/327569/emotional-state-remote-workers-complicated.aspx</a></p>	<ul style="list-style-type: none"> <li>– Considers Gallup panel data from March – November 2020.</li> <li>– Employees who work from home have higher wellbeing and engagement across all generations</li> <li>– They also have worse emotional states than on-site workers (keeping in mind the data was collected during the height of the COVID lockdowns)</li> <li>– Gen X and boomers have better wellbeing than millennials, remote or not</li> </ul>

Source	Summary information
<b>Industrial Relations and WHS</b>	
<p>Australian Unions (2020) Working from Home [pdf]</p> <p><a href="https://www.actu.org.au/media/1449319/au_workingfromhome_p1.pdf">https://www.actu.org.au/media/1449319/au_workingfromhome_p1.pdf</a></p> <p>and</p> <p>Australian Unions (2020a) Working from Home Charter</p> <p><a href="https://www.actu.org.au/media/1449328/d59-working-from-home-charter.pdf">https://www.actu.org.au/media/1449328/d59-working-from-home-charter.pdf</a></p>	<p>These documents form an evidence base and statement of claim for a Working from Home charter of employment rights, covering in some detail rights and claims in five main areas:</p> <ul style="list-style-type: none"> <li>– Choice and shared benefits</li> <li>– Health and safety</li> <li>– Work-life balance</li> <li>– Connection to colleagues, the union and support</li> <li>– Maintenance of protections in the workplace</li> </ul>
<p>Community and Public Sector Union (undated) Working from Home</p> <p><a href="https://www.cpsu.org.au/wfh">https://www.cpsu.org.au/wfh</a></p>	<p>Provides material from the CPSU Working during the Pandemic research project (2020), as well as some campaigns material ranking and scorecarding the range of public sector agency responses. Summary highlights from the survey include:</p> <ul style="list-style-type: none"> <li>– only 31% of respondents had accessed the option to work from home prior to the pandemic (but only 15% of lower level APS employees).</li> <li>– 18% of respondents said they kept working from a central workplace. Of those unable to work from home, 14% said it was because they lacked the hardware or technical support</li> <li>– 35% of respondents said their agency does not support flexible working arrangements and 20% said that their supervisor does not support flexible working arrangements</li> <li>– 64% said they could get more work done at home and 35% said they could undertake more complex work at home</li> <li>– 64% of managers said they were more likely to approve working from home after the pandemic</li> <li>– in the future, employees wanted ongoing to working from home: <ul style="list-style-type: none"> <li>– Some of the time (39%);</li> <li>– Most of the time (30%);</li> <li>– All of the time (11%); or</li> <li>– On occasion (14%)</li> </ul> </li> </ul>
<p>Fair Work Commission (2021) <i>Information Note</i>,</p> <p><a href="https://www.fwc.gov.au/documents/documents/resources/covid-19-information/information-note-covid-19-working-from-home-2020-08-31.pdf">https://www.fwc.gov.au/documents/documents/resources/covid-19-information/information-note-covid-19-working-from-home-2020-08-31.pdf</a></p>	<p>Discusses trends in remote work, provisions for remote work in enterprise bargaining agreements nation-wide, and gives a working from home arrangements snapshot of Australian workers in August 2020.</p> <ul style="list-style-type: none"> <li>– Pre-COVID one fifth to one quarter of employees were regularly working from home (ABS</li> <li>– This was heavily stratified by industry, with white collar professionals making up the bulk of these</li> <li>– Only 3.3% of federal EBAs provided conditions for remote work explicitly, but these agreements covered 23% of federal employees.</li> <li>– Only 0.5% of current federal enterprise agreements explicitly entitled employees to access payments or reimbursements for telework.</li> <li>– Fewer than 1 in 20 employees (4.8%) were covered by these federal EBAs.</li> </ul>

Source	Summary information
<b>Industrial Relations and WHS</b>	
<p>Pennington, A and Stanford, J (2020) Briefing Paper: Working from Home: Opportunities and Risks Centre for Future Work</p> <p><a href="https://www.futurework.org.au/working_from_home_in_a_pandemic_opportunities_and_risks">https://www.futurework.org.au/working_from_home_in_a_pandemic_opportunities_and_risks</a></p>	<ul style="list-style-type: none"> <li>– About 30% of Australian jobs (4 million workers) could be performed from home.</li> <li>– Occupations which can work from home were already paid about 25% more than occupations which cannot be shifted to remote locations.</li> <li>– The shift to home work could exacerbate income inequality, reinforcing the need for comprehensive income protections for those who cannot work from home.</li> <li>– The expansion of work-from-home arrangements raises concerns about <ul style="list-style-type: none"> <li>– fair compensation for extra expenses associated with home work;</li> <li>– applying normal rules regarding working hours and pay;</li> <li>– ensuring a safe home work environment (including its social and familial context, with challenges like domestic violence); and</li> <li>– protecting the privacy of home workers from undue monitoring and surveillance by employers.</li> </ul> </li> </ul>
<p>Schall, Jr, M ; Chen, P Evidence-Based Strategies for Improving Occupational Safety and Health Among Teleworkers During and After the Coronavirus Pandemic Human factors, 2021-01-08, p. 18720820984583-18720820984583</p>	<ul style="list-style-type: none"> <li>– This review provides practical guidance for group-level supervisors, occupational safety and health managers, and organizational leaders responsible for promoting health and safety among employees despite challenges associated with an increase in telework.</li> </ul>

Source	Summary information
<b>Diversity and inclusion</b>	
<p>Hancock B and Williams M (2021) <i>One Move companies can take to improve diversity</i> McKinsey Quarterly</p> <p><a href="https://www.mckinsey.com/featured-insights/diversity-and-inclusion/one-move-companies-can-take-to-improve-diversity">https://www.mckinsey.com/featured-insights/diversity-and-inclusion/one-move-companies-can-take-to-improve-diversity</a></p>	<p>Considers the location of workplaces as a barrier to diversity and inclusion and advocates for organisations to plan remote working hub locations to align geographically with diverse populations, supporting workforce strategies to hire more Black workers (US-based).</p>
<p>Hand K, Baxter J, Carroll M, Budinski M (2020) <i>Families in Australia Survey: Life during COVID-19 Report no. 1: Early findings</i> Australian Institute of Family Studies</p> <p><a href="https://aifs.gov.au/publications/families-australia-survey-life-during-covid-19">https://aifs.gov.au/publications/families-australia-survey-life-during-covid-19</a></p>	<p>The Life during COVID-19 survey ran from May 1 to June 9 2020 and had 7,306 participants, aiming to understand how Australian families coped with the COVID-19 pandemic.</p> <ul style="list-style-type: none"> <li>– Families with children under 18 years, where the parents remained employed during COVID-19, reported that 60% of mothers and 41% of fathers always worked from home.</li> <li>– When asked ‘Who typically cares for the children?’ during COVID-19, parents answered: <ul style="list-style-type: none"> <li>– ‘always or usually’ the mother 52%</li> <li>– equally between mother and father 37%</li> <li>– always or usually the father 11%.</li> </ul> </li> <li>– Before COVID-19, 30% of families used parent-only care. That rose to 64% of families during COVID-19.</li> <li>– While parents worked from home, 40% always or often ‘actively’ cared for children during work.</li> </ul>
<p>Hickok, H Are Men-dominated Offices the Future of the Workplace?, BBC,</p> <p><a href="https://www.bbc.com/worklife/article/20210503-are-men-dominated-offices-the-future-of-the-workplace">https://www.bbc.com/worklife/article/20210503-are-men-dominated-offices-the-future-of-the-workplace</a></p> <p>7 May.</p>	<ul style="list-style-type: none"> <li>– Identifies a potential ‘remote work gender gap’ led by employee preference.</li> <li>– A recent UK-based poll of 2,300 leaders, managers and employees showed that 69% of mothers want to work from home at least once a week after the pandemic, versus just 56% of fathers.</li> <li>– If more men opt to go back to work in-person while more women choose to work remotely, offices might become increasingly dominated by men.</li> </ul>
<p>Workplace Gender Equality Agency (2020) Gendered impacts of COVID-19</p> <p><a href="https://www.wgea.gov.au/publications/gendered-impact-of-covid-19">https://www.wgea.gov.au/publications/gendered-impact-of-covid-19</a></p>	<ul style="list-style-type: none"> <li>– The increase in caring responsibilities during the COVID-19 crisis is likely to be shouldered by women.</li> <li>– As more people work from home, are under-employed or unemployed, men may take on more care and domestic work, which would affect the gendered division of labour and social norms.</li> <li>– The need for workplace flexibility during the crisis may have a continuing effect on workplace policies and practices.</li> <li>– While the economic impact of COVID-19 will affect all workers, it may have particular impact on women.</li> <li>– Increased time at home due to social distancing and isolation measures is placing individuals at risk of violence.</li> </ul>