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Women In Construction Industry Innovation Program

Flex from the Start: Rapid Literature Review

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Executive summary

> Highlights

- The long, inflexible work hours in construction are a barrier to women's participation. The sector's work practices are not compatible with the considerable time women spend on unpaid domestic and caring work.
- For both men and women, flexible work improves job effectiveness, job satisfaction and helps to manage work overload. For companies, it helps attract and retain valued employees who also feel more positively about their workplace.
- Barriers to implementing flexible work in construction include the stigmatisation of seeking alternative work arrangements, and the lack of managerial support and trust in the workplace. There are also factors unique to project-based construction work that make flexible work more challenging than in other work settings.
- The literature points to some success factors for future flexible work interventions. They should be leadership driven, co-designed with workers, steered by a multi-stakeholder group and regularly monitored and evaluated over longer periods.
- Few cases of flexible work initiatives in the construction industry have been evaluated to date. Most have relied on qualitative data, such as surveys, for evaluation. Future studies would benefit from quantitative evaluation and testing over a longer period to build knowledge and confidence around the outcomes of flexible working.

> Introduction

This report sets out a framework for evaluating the Flex from the Start initiative for John Holland. The evaluation forms the second part of a co-design intervention by The University of Melbourne and John Holland. The intervention is funded by the NSW Government Women in Construction Industry Innovation Program (IIP).

The aim of the project was to trial and evaluate flexible work interventions in onsite construction workplaces to extract the lessons so that interventions can be scaled across the John Holland business.

At present, women make up only 12% of the Australian construction workforce[1]. Flexible work is critical to retaining more women in frontline careers in the sector, and for their satisfaction, wellbeing and advancement at work. However, there are issues unique to the construction industry that make shifting work practices particularly difficult. If flexible work is effectively implemented in construction, the economic benefits could be significant. Australia's construction sector accounts for close to 10% of the national active workforce[2]. Not only would it make a construction career possible for more women, but it would be life-changing for the existing workforce, who can spend up to 63 hours of an average week at work[3].

> Recommendations

- **Leaders should build the case and drive the change.** The commitment and participation of leaders is paramount to the success of mainstreaming flexible work. Leaders have an important role to play in building the case for flexibility, and growing awareness in the organisation from the ground up.
- **Listen to workers first and design the initiatives together.** Begin by understanding the needs for flexible work and the existing offerings in the organisation. This will build the foundation for the co-design of strategies that are responsive to employees' needs, as well as the constraints of the organisation and its projects. The process of co-design builds trust and initiates the process of cultural change.
- **Involve a multi-stakeholder reference group.** Negotiations for working hours in the construction sector need to involve different stakeholders, given the lack of government regulatory influence. A multi-stakeholder reference group can play a key role in the trial of flexible work interventions, through the different stages of design, monitoring, and promoting.
- **Monitor and evaluate interventions regularly.** Few studies have included ongoing evaluation throughout the implementation of a flexible work intervention. Regular evaluations would allow the intervention to adjust and continually improve. An approach involving both qualitative and quantitative research would provide deeper insights.
- **Test interventions over longer periods.** Research into the effects of flexible working over a longer period of time will enrich existing data and validate theoretical claims. The collection of quantifiable evidence would build confidence that flexible work can contribute to workplace performance.

This literature review seeks to:

- define flexible work and identify its drivers and enablers.
- explore why flexible work in the construction sector is so challenging.
- describe how workplace practice and design is important to attract and retain women to the sector.
- examine case studies in the construction sector and other industries.

[1]ABS 2018, 4125.0 - Gender Indicators, Australian Bureau of Statistics, Australia, Sep 2018 Available at: https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/4125.0~Sep%202018~Main%20Features~Economic%20Security~4

[2]ABS 2022, Industry Employment Guide, Australian Bureau of Statistics, Australia. Nov 2022.https://www.abs.gov.au/statistics/understanding-statistics/guide-labour-statistics/industry-employment-guide#overview

[3]Lingard H and Francis V (2009) Managing work-life balance in construction. London




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> An industry in need of flex

- Australia's construction industry is characterised by extreme work demands. The average tradesperson works 63 hours per week while site officers and administrators clock up 56 hours per week[4].
- Numerous studies have reported the negative impacts of long hours on construction workers' health and wellbeing, personal lives and satisfaction at work.
- At the organisational level, long working hours negatively affect staff motivation, productivity and safety. They contribute to worker burnout and staff turnover.
- The long and inflexible working hours in construction also undermine efforts to make the industry more inclusive. They act to exclude women workers, who need flexible work to fit around their commitments to unpaid domestic work.
- Making construction working hours more flexible could be a "triple win" – reforming work practice, individual's health and wellbeing, and workplace equality[5].
- Workplace culture can be a barrier to introducing flexible work in construction. In particular, the culture of "presenteeism," or the idea that a committed worker must be present in the workplace. There is a stigma attached to flexible work, associated with measures to facilitate childcare and gender equality.
- Another make or break factor is the support of company leadership. The role of leaders in initiating, driving, and participating in flexible work policies acts as an example to employees and influences success.
- There are factors unique to the construction industry which complicate the introduction of flexible work. There are limits to autonomy and control of workers' time on project-based work, influenced by contractual arrangements, the inter-relationship of different contractors, the type of client, the use of special machinery, the incentivisation of work hours, as well as the location and scale of a project.

[4]Lingard H and Francis V (2009) Managing work-life balance in construction. London

[5]Lingard H, Nette A, Harley J, et al. (2021) Triple wins: Work hour cultures for health, safety and gender equality in construction. RMIT, Melbourne. Available at: https://www.rmit.edu.au/about/schools-colleges/property-construction-and-project-management/research/research-centres-and-groups/construction-work-health-safety-research/projects/work-hour-cultures-construction

1. Introduction

Flexible work is critical to improving women's retention, progression and attraction in frontline careers within the construction sector. A whole of site approach to flexibility that engages all workers and is focused on shifting work practices is necessary to improving women's participation in the construction sector (Galea et al. 2018).

In 2023, John Holland was awarded a NSW Government Women in Construction Industry Innovation Program (IIP) grant to design and study three flexible work interventions on three of its construction sites. The project aims to tackle a major barrier to women's participation in the construction sector - rigid work practices. The three interventions will be co-designed with site teams and will be specific to each site. They will be trialled over twelve months and if they are successful and scalable, will be adopted by other projects in the John Holland business. In addition to boosting women's retention, the trials aim to improve the overall job satisfaction and wellbeing of John Holland employees.

The University of Melbourne has been engaged to co-create and evaluate the three flexible work interventions. This rapid literature review forms the first part of the co-design process.

> 1.1 Construction work practices

Work in the construction industry is largely characterised by long and rigid work hours, often working 'around the clock', with a proven average of 63 hours per week by tradespersons and 56 hours per week by site officers and administrators (Lingard and Francis, 2004). These long work hours are due to the inherent nature of project-based construction work, determined by competitive tender contracts, client expectations with tight (perhaps unrealistic) deadlines, industrial relations and planning constraints and normative practices such as presenteeism and expectations of total availability (Persson et al., 2006; Galea et al. 2018). Most importantly, long work hours in construction are financially incentivised through the construction contract in the case of salaried workers and via overtime rates for wage workers (Galea et al. 2022).

Mounting evidence shows the impact of long-hours commitment, triggering several negative effects to both those working in the construction industry and the industry itself. For employees, long work hours have a significant negative impact on personal health and wellbeing issues that results in illness (e.g., harms to mental health, sleep disorder, coronary heart disease), injury, and death (Dembe et al. 2005, Cohen et al. 2004, Bannai and Tamakoshi 2014, Harvey et al 2017, Theorell et al. 2015, Virtanen et al. 2021). Long work hours conflict with work-life balance (Dinh et al., 2017; Turner et al., 2009; Lingard et al., 2010; Holden and Sunindijo, 2018) and the culmination of long work hours often results in employee burnout (Enshassi et al., 2016). For industry, long work hours negatively affect staff motivation, productivity and safety (Lombardi et al., 2010; Caruso, 2006), turnover (Galea et al. 2018) and impact the gendered dimension of the construction sector, shaping who participates in the construction sector and who does not (Galea et al., 2018; Galea et al., 2022; Sunindijo and Kamardeen, 2017; Baker and French, 2018).

The construction sector's existing work practices largely ignore the National Employment Standards in Australia, which cover all employees regardless of any award, and state that workers must work a maximum of 38 hours in a week. Reasonable extra hours are allowed if they do not affect the health, safety, or personal obligations of employees, although usual patterns of work in an industry are also considered (Fairwork, 2009). The same standards give workers with caring responsibilities, a disability, those who are older than 55, or are experiencing domestic violence the right to request flexible working arrangements. This request may be refused by employers on reasonable business grounds.

Since 2022, employers in Australia are required by law to manage and eliminate psychosocial risks and hazards in the workplace (Safework Australia, 2023; NSW Government, 2022). These risks are work-related hazards that negatively impact a worker's physical and/ or psychological health. They include working long hours, high job loads, lack of autonomy and poor support or unsafe physical environments, isolated work tasks, and bullying and harassment (Safework Australia, 2023). Many of these risks are significant in the construction industry and closely related to the ability to work flexibly.

> 1.2 Work hours, flexible work and gender equality

Work practices in construction are deeply gendered and shaped around a male breadwinner model that dates back over a hundred years where male workers worked 44 to 50 hours a week to earn a living wage to support a wife and three children. While women, as wives, spent long hours within the household undertaking care and household work. Her work in the household enabled her husband to work long hours. The current system of work is built around the clear exclusion of women from the labour market and a clear exclusion of men from domestic work (Dinh et al. 2017). Today the labour market has changed. Women's participation rates have reached record highs (ABS 2023). However, women continue to undertake the bulk of unpaid domestic work (UN Women, 2016), and Australia has not changed its worked practices adopted from 1900, leaving women sandwiched by the pressures of their dual working lives (Dinh et al., 2017).

Long inflexible work hours in construction act to undermine women's retention and progression in construction careers. The sector's work practices fail to consider women's unpaid domestic work and care giving labour (Galea et al. 2018). Indeed, the construction sector often relies on employees' partners to engage flexible work to accommodate its own sector's inflexibility (Galea et al. 2021).

In Australia, the work week was built around a historic male breadwinner model that dates back over a hundred year where male workers worked 44 – 50 hours a week to earn a living wage to support a wife and three children. While women, as wives, spent long hours within the household undertaking care and household work. Her work in the household enabled her husband to work long hours. The current system of work is built around the clear exclusion of women from the labour market and a clear exclusion of men from domestic work (Dinh et al. 2017). Today the labour market has changed. Women's participation rates have reached record highs (ABS 2023), yet Australia has not changed the working week from 1900 (Dinh et al., 2017).

A study on the Australian workforce by Dinh et al. (2017) found that long hours, gender inequality and health are all interconnected. Due to unpaid domestic labour, often undertaken by women, women were able to work 35 hours a week before there was a decline in their mental and physical health. The threshold was on average higher for men, at 46 hours a week, as they often had someone else doing their domestic labour. Lingard et al. (2021) suggest that targeting the issue of working hours in the construction industry can have a triple-win effect of improving workplace practice, individual health and wellbeing, and organisational equality.

In a major industry study on gender equality in the construction sector by Galea et al. (2018), the key finding was:

> *If we want to increase the number of women in Australia's construction sector we need to be willing to challenge working conditions for men.*

Offering flexible work arrangements is understood to be a key lever for organisations to achieve excellence in assisting employees balance their work and life commitments (Russell and O'Leary, 2012). Studies have investigated the potential of implementing flexible work and work-life balance initiatives in construction, evaluating outcomes and benefits to the industry (Brown et al., 2010; Lingard and Francis, 2008; Townsend et al., 2012). However, due to the nature of the sector, the availability of flexible work options in construction remains low.

A report from UK social enterprise Timewise shows that despite the potential benefits associated with flexible work and a workforce preference for flexible arrangements, only three in ten jobs in construction offer flexible options. This placed construction among the labour-intensive sectors with the lowest number of jobs promoted with flexible work available (Timewise, 2022). The limited availability of flexible work options can trap people in low paid flexible work and reinforce the gender pay gap, as women are particularly in need of flexible work (Timewise, 2022).
In Australia, this could be a particularly significant issue, considering the size of the construction sector, which accounts for close to 10% of the national active workforce (Vandenbroek, 2020).

In Australia, a study of two tier 1 construction contractors found that flexible work arrangements were inconsistently applied from site to site and often resisted (Galea et al. 2020). Flexible work arrangements were highly dependent on the employee's relationship with their line manager/project manager. Importantly, there was a significant difference in the application of flexible work arrangements with women often engaging in formal, longer term flexible work including part-time work, that had implications on women's career progression. Men on the other hand, engaged in flexible work arrangements but it was mainly informal, ad hoc, and hidden, limiting the effect on their career progression and perceived reliability (Galea et al. 2020).

The next section of this literature review will define flexible work and map the types of flexible work arrangements. It will provide an overview of existing flexible work interventions in construction and other industries, highlighting elements of success.

2. Flexible work

> 2.1 Definition

Flexible work has been associated with different terms (e.g. flexitime, work flexibility) and different types of flexibility (e.g., flexible career), creating some confusion to its definition (AIM, 2012; Russell and O'Leary, 2012). For Hill et al. (2001: 50), "flexitime is broadly defined as the ability to rearrange one's work hours within certain guidelines offered by the company". Chung and van der Lippe (2020) distinguish between flexitime and time autonomy, where the former presents restrictions regarding the amount of time worked, and the latter offers more freedom to define work schedules in relation to life requirements.

This study refers to the term flexible work or flex work in the same manner, but it relates here not only to differences in timing of work, but also to one's ability to define different locations where the work is performed, and different approaches to managing workload, within guidelines provided by a company. The key purpose of flexible work is to provide an opportunity to employees to manage their own work-life balance by increasing autonomy, and subsequently to improve wellbeing in the workplace. As such, flexible work is defined here as an employee's ability to define alternative time, place and processes within an established company's guidelines and agreement, to manage and perform work requirements in ways that are not conflicting with life requirements, therefore supporting workplace wellbeing, efficiency, and productivity.

> 2.2 Types of flexible work

There has been a shift in use of work from home practices since the COVID-19 pandemic (AIFS, 2021), while some authors suggest that younger generations will increasingly expect flexible work to be the norm (Deloitte, 2016). Currently, there are different types of flexible work arrangements, as much as there are different needs and requirements for greater flexibility. Most reports frame flexible work in relation to:

- **Flexibility in time:**
  ranges from flexible time schedule to part-time and trust-based working hours. In the later, work is regulated not by schedules, but by agreed time to complete target.
- **Flexibility in place:**
  telework has been rapidly adopted and supported by technology. It implies that employees have a defined second workplace besides the office.
- **Flexibility in process or tools:**
  in which re-arrangements are based on agreements, sharing work, or other strategies.

On the next page is a table listing different types of flexible work arrangements, with descriptions by the New South Wales Public Service Commission (2019), Diversity Council Australia (2012), and international organisations such as Bain & Company (Coffman and Hagey, 2010), arranged by time, location and process.



Flexibility in time	
Part-time	Options of work hours that are less than traditional full-time work hours (usually contracted hours of less than 35 hours per week)
Flexi time	Ability to change arrangement of daily hours. Informal flexi time refers to taking part of a day off to deal with personal matters. Formal flexi time allows variations to start and finish times, within a fixed range of hours. Daily flex time allows to change start and finish times on a daily basis.
Compressed hours	Working the same number of weekly hours, focused or compressed into a shorter period of time, such as the four-day work week
Staggered hours or split shift	Working blocks of hours separated by a longer than usual break
Time in lieu	Working extra hours to complete objectives when required, reclaimed as time-off
Collaborative hours	Managers, departments, or teams determine fixed collaboration hours within each person's flexible schedule
Rostered Day off (RDO)	Time in lieu and formal rostered days off
Purchase leave	Taking more days of leave per year for a reduction in full time payment
Tailored use of leave	Using annual leave time in different periods to meet life demands
Career break/unpaid leave	Ability to request unpaid career break with indicative period and time of return
Staged leave or phased retirement	Allows for a slower process of retirement, where work hours are progressively reduced over a set period of time.

Flexibility in location	
On site	Employees always work in the official place of work, within their other arrangements
Telecommuting or working from home	Ability to work from home, informally when necessary, or formally with structured days at home and in the office
Hybrid	Ability to split working hours between locations, in the office or at home
Scheduled locations	Managers, departments, or teams determine on-site days

Flexibility in process	
Bid rostering	Lines of work and shift are generated, bid for by team members
Flexible rostering	Employees submit requests for shifts and rostered days off. The roster is then built trying to accommodate requests where possible and practical.
Job share	A full-time role is taken by two or more employees, paid on a part-time basis according to the part of the role they complete. – **twin model:** where two employees share a role and accountabilities. – **islands model:** where two employees split a role and are responsible for different parts of the role (equivalent to two part-time roles) – **hybrid model:** a mix of both the twin and islands model, where two (or more) employees share a role with some shared responsibility and some divided responsibility to play to each other's strengths.
Shift-swapping	Allowing shift workers to trade their shifts

Table 1. Type of flexible work arrangements

These are some of the types of flexible work arrangements discussed in the literature. There can be combinations of these, and other variations depending on personal needs, organisational possibilities, and targeted issues (Brown et al., 2009). There are also variances in relation to the type of position, such as office-based positions, blended roles requiring both on site and office work, and frontline work which is performed on-site. Research from the Champions of Change Coalition (2023) indicates ideal types of flexible work in relation to these roles. Other factors that influence the type of flexible work arrangement beyond roles, include the type of industry and particular project-based arrangements (Galea et al. 2022). There is also variation depending on the technology available to facilitate flexibility. These differences can all generate unevenness in the implementation, accessibility and take-up of flexible work practices.

Types of flexible working arrangements can also be categorised as formal and informal arrangements. Based on a study of Australian flexible working options, Hokke et al., (2020) describe informal work arrangements as policies that allow employees to generally work flexibly on an ad hoc or temporary basis without an ongoing agreement, formal approval or contract amendment in place. These informal arrangements might include leaving work early for family related tasks or an appointment and are common across Australian workplaces. In contrast, formal arrangements are documented policies that allow employees to apply for permanent or on-going flexible working arrangements, often in relation to flex in time, flex in location, leave without pay and changes in working hours (Hokke et al., 2020). Importantly, their study found that when workers had access to formal flexible working arrangements and autonomy, they experienced less burnout, fatigue and stress. However, when formal polices were not in place and employees only had access to informal arrangements, higher stress levels and poorer health prevailed (Hokke et al., 2020).

Time 	**When work happens.** Includes flexible hours/scheduling, part-time work, job sharing, split shifts, compressed hours/compressed week, and an annual variable employment lifestyle rosters (e.g. fly-in fly-out (FIFO)).	**Choice and agency for employees.** Not all types of flexibility are ideal in every role, but some flexibility is possible in every role. Consider: – Choice to work certain scheduled shifts – Ability for employees to design their own rosters and to swap shifts – Choice of location – Flexible start and finish times – Combining and sharing roles – Reduced hours (part-time) – Flexible leave options (e.g. additional purchased leave)
Location 	**Where work happens.** Includes working remotely, on the road, at home and from different sites.	
Tools 	**How work happens.** Includes technology, equipment and workplace design.	
Informal flexible work 	– Ad hoc remote work – Unplanned change to hours – Activity-based working on site	
Formal flexible work 	– Part-time – Regular remote work – Compressed work week – Job sharing – Regular change of hours/days	

Figure 1. Types of flexibility. Table Source: Adapted from Champions of Change Coalition (2023), Shifting Expectations: Flexibility for Frontline, Shift, and Site based roles, page 6)

> 2.3 Drivers and enablers of flexible work

The diversity of flexible work options indicates a broadening scope of the drivers of flexible work. These range from the initial non-discriminatory legislation, to work and family balance concerns given the increasing number of dual-earner families, and contemporary concerns for work and life balance more generally, in a rapidly changing environment, illustrated by the COVID pandemic.

Supportive regulations

Australia has a legislative framework in support of flexible work, based on the grounds of prohibiting discrimination by factors of age, race, sex, caring responsibilities, among others. The Fair Work Act 2009 establishes these and other direct provisions for "individual flexibility arrangements" to attend to different needs, beyond modern awards and arrangements. The literature points to two legislative issues related to flexible work. One is that it legally gives employees the right to request flexible arrangements, but it does not establish a requirement for companies to implement widespread flexible work options available to all. The other is that these regulations have been historically associated with feminised childcare responsibilities (Cooper and Baird, 2015). While research shows that requests for flexible work have been traditionally linked to returns from maternity leave, and the need for part-time work (Cooper and Baird, 2015), patterns have been changing with increasing aspiration from men for flexible work arrangements. This is due to the increasing number of dual-earner families, intensified fathering, and family expectations, intergenerational diversity, among other factors leading to increasing flexible work aspirations and needs among men (Russell and O'Leary, 2012), calling for a reframing in language and organisational effort (Gatrell et al., 2011).

Work-life balance concerns

Work-life balance initiatives have been recognised as a key human resource strategy, particularly in a competitive market context (Russell and Bowman, 2000). The work-life balance discourse generally attends to the fact that life and work commitments are inseparable and mutually influential (Cieri et al., 2007). Work-life balance concerns are not gender oriented but relate to the diverse demography of workers, whether with juggling work and study, continued engagement of older workers with other interested, those with caring responsibilities beyond childcare, the importance of maintaining recreations, hobbies and other interests outside work (Ransome, 2007). The cultural changes with greater value given work-life balance follow generational trends. A report from Deloitte (2016) shows that millennials place significant priority on work-life balance as well as opportunity to progress, followed by flexible work arrangements. Digital technology has had a significant impact on these changes in perceptions and priorities as well as opportunities, as demonstrated by the rollout of remote work during the COVID-19 pandemic (Vyas, 2022).

Benefits for employees and companies

Acknowledging the benefits associated with flexible work can be a powerful driver to mainstreaming organisational decisions for flexibility in the workplace. In a report for Diversity Council Australia (DCA), Russell and O'Leary (2012) list four major reasons for flexible work as mainstream practice: businesses sustainability and adaptability to change, increased gender equality, attraction and retention of talent, more productive workplaces. Based on a survey 3,300 employees in challenging work positions, Coffman and Hagey (2010) found that the adoption of flexible work can raise the corporate reputation of a company, with employees more likely to promote it to others, while also supporting the retention of quality employees in management roles by 25% for male and 40% for female employees. The attraction and retention of valued employees has long been recognised as a key driver for organisations to adopt flexible work and other initiatives in support of work-life balance (Cieri et al., 2007). It is also proven that, for both men and women, flexible work improves job effectiveness (Hill et al., 2001), work satisfaction by reducing work-family conflict and increasing enrichment for men and particularly for women (Carlson et al., 2010), and better management of work overload (Gatrell et al., 2011). Such benefits represent organisational effectiveness and efficiency for companies, along with other positive workplace qualities (Lingard et al., 2021).

> 2.4 Challenges and barriers

While flexible work has been widely claimed as the new norm, in Australia and elsewhere, research demonstrates a gap between policy and practice, recognising a disparity between the uptake of flexible work offerings and acceptance and discourse in policies (McDonald et al., 2013; Cooper and Baird, 2015). This is associated with intangible barriers and cultural workplace norms, such as stigmatisation of flexible work initiatives, ideals of role requirements, and consequently the uptake of flexible work initiatives by leaders and managers, as an acceptable efficient practice when correctly implemented.

Stigmatisation of flexible work

One of the factors contributing to the stigmatisation of flexible work arrangements are traditional, yet persistent views of the ideal worker as a dedicated employee who is committed to long hours and being present in the workplace (Khateeb, 2021). While such an 'ideal worker' arguably does not exist, evidence shows that implementing flexible work practices does not entail reduced expectations about the amount of work which can be done, or an acceptance of poorer performance (McMahon and Pocock, 2011). With the right attitude, flexible work can be effective in enhancing performance by focusing the organisation, team and employee more clearly on outcomes rather than inputs, on goals rather than processes (AIM, 2012).

In addition, stigmatisation of flexible work is compounded by gendered conceptions of flexible work. This is due to its association with the facilitation of work and childcare roles, and gender equality initiatives (Chung, 2020). In some industries, particularly male-dominated sectors, the implementation of flexible work, especially if associated with gender equality policies, reinforces gender inequalities (Galea et al., 2020). Orienting flexible work and other work-life balance initiatives with gender discourses contributes to stigmatisation, which limits its acceptance (Galea et al., 2022; Lee et al., 2022). Nevertheless, flexible work arrangements do contribute to gender equality in the workplace (Chung and van der Lippe, 2020). In the construction sector, Galea et al. (2020) identified that female employees tend to request formal flexible work arrangements, while male employees tend to opt for more informal flexible work arrangements. This, as discussed, further embedded gender stereotypes and inequalities. In response, as asserted in a report by Champions of Change Coalition, "when more employees have access to flexible ways of working, traditional gender stereotypes and barriers that have limited women's engagement and progress in the workplace are disrupted" (Champions of Change Coalition 2023, p. 2). Such gendered stigmatisation of flexible work is particularly invalid given the ever increasing parental role of men, and therefore the general need for flexible work beyond gender discourses (Gatrell et al., 2011). To address this, organisations need to mainstream initiatives for general work-life balance purposes to have a better chance of acceptance across the board, of promoting cultural shifts in the workplace, and of experiencing the associated benefits.

The nature of job roles

There are also barriers to successfully implementing flexible work practices in relation to job roles (Roderick, 2018; Golden, 2001). A study by Golden (2001) on the flexible work available to different roles in a diversity of industry shows that availability of flexible options tends to increase in relation to educational levels. Further, while it is agreed that office-based positions are more amenable to flexible work arrangements, some indicate that the more significant take up of flexible work has been from those in management and leadership positions (Cassells et al., 2018). At the same time there is also a perception that managers and leaders are available at all times, indicating that despite flexibility, there is also a level of 'spill over', with less clear boundaries between work and life for those in these roles. Frontline workers, however, are much less likely to have access to flexibility opportunities (Champions of Change Coalition, 2023; Lingard and Francis, 2004). Based on social exchange theory, Lingard and Francis (2004) explain that, from whichever perspective, differences and perceived 'unfairness' in treatment between different roles can have an effect on a worker's sense of discontentment and resentment, and are a determinant of a worker's attitudes and behaviour affecting the workplace.

Leadership and managerial support

There is agreement in the literature that leadership and managerial support are the cornerstone for the successful implementation of work-life balance and flexible work initiatives. However, this means that it is also one of the main barriers (McDonald et al., 2013; Talukder et al., 2018). This is affirmed also by employees' perceptions which found a majority (86%) of employees "ranked leadership support as the most important consideration for them", followed by challenging work and compensation, and of much less importance were flex job options (Coffman and Hagey, 2010: 7). Leadership support is particularly significant not only in terms of availability but also the success of flexible work arrangements at the individual level. As research has shown, differences in the success of initiatives depend on whether flexible work arrangements are driven or initiated by the employee or employer (Pocock et al., 2004; McDonald et al., 2013). In addition, the limited genuine uptake of flexible work by leadership influences employees' adherence and the ability for flexible work mainstreaming (Coffman and Hagey, 2010).

Trust in the workplace

Closely linked to leadership support and the success of flexible working initiatives is trust in the workplace (Yunus and Mostafa, 2022). Multiple studies have demonstrated that employees are more likely to be engaged, work collaboratively, communicate effectively and be more productive when they trust their leaders in a supportive work environment (HBR, 2014; Yunus and Mostafa, 2022; Forbes, 2020; Dirks and Ferrin, 2002). Based on a study of flexible working and the role of trust in management, Yunus and Mostafa (2022) found that for a workplace to be built on trust and one that supported flexible working, leaders needed to promote autonomous working models. This autonomy included allowing employees to have authority over their work schedules, and how and when they choose to complete tasks.

Given these leadership issues, many of the challenges to the successful mainstream implementation of flexible work in organisations can be overcome by the application of well-established managerial skills (AIM, 2012) and a leadership culture that values trust.

> 2.5 Mainstreaming flexibility

Despite various challenges , it has been shown that the adoption of flexible work arrangements is possible across a number of different organisations, and in fact beneficial when appropriately rolled out (Roderick, 2018). To tackle challenges and reap the benefits, the Diversity Council Australia suggest the way forward is mainstreaming flexible work in organisations (DCA, 2012). Mainstreaming flexible work helps build a greater acceptance in the workplace and minimise negative effects and responses (AIM, 2012). The Australian Institute of Managers (AIM) explains that mainstreaming means "changing the culture and practice of the organisation as a whole, not simply responding to an individual or small group of employees' requests for flexible work" (AIM, 2012: 12), also emphasised by Coffman and Hagey (2010). However, changing culture in mainstreaming flexible work throughout an organisation requires a strategic approach.

In mastering the design and implementation of effective flexible job models, companies must consider two general takeaways: the first is that one size does not fit all, and flexible arrangements may need to be tailored to employees' different needs. The second is for companies to provide evidence that the flexible work models on offer are efficient and supported by management and senior leaders in the industry (Coffman and Hagey, 2010). Highlighting success stories through ongoing communication and role models is key in changing views and growing acceptance, and that there is a system to ensure levels of control, trust and productivity (Claremont, 2020).

Many of the proposals to mainstream flexible work are consistent with the numerous guidelines and recommendations proposed by different agencies in Australia and internationally (Coalition, 2023; Coffman and Hagey, 2010; Timewise, 2021a; Russell and O'Leary, 2012; Work, 2023; Agency, 2019), despite some differences in prioritisation. For instance, Diversity Council Australia (DCA, 2012) proposes that culture, leadership, awareness, and career pathways are key factors in mainstreaming flexible work. The NSW Public Service Commission (PSC) (2019) also prepared a flexible work development guide for managers, which includes four key areas: education, exposure, experience, and environment.
The Champions of Change Coalition (2023) also indicate four areas of mainstream flexibility: high performance, visible leadership, inclusion for all, and genuine enablement. Within these different areas or dimensions, there are some key commonalities, and some variations.

Table 2 attempts to summarise some of the key recommendations. The consensual points are: the importance of leadership; raising awareness through communication and celebration including changing the language around flexible work to support a change in culture; providing training for managers, and; establishing ways to monitor, evaluate and review initiatives. Some guidelines are more specific about some elements, such as the articulation of a vision or case for flexible work as core to the organisation. Also, the development of an initial action plan with elaborated options, outcomes, targets and metrics. Many indicate that inclusivity is met by ensuring that flexible work responds to individual needs (universality). Other guidelines highlight the importance of establishing flexible arrangements that are team focused, so that it is consensual and considerate of the work of the team instead of individuals. Some further point to the need for flexible work to be career focused, ensuring that it is not detrimental to career progression. Some are specific to other elements, such as engaging clients and different stakeholders. This can be particularly significant to some sectors. In general, all the points raised are relevant to consider, while some of them are conditions of success – vision, plan, leadership, training, and evaluation.



	Fair Work 2023	Bain & Co 2010	WGEA (n.d.)	DCA 2012	NSW PSC 2019	Timewise 2021	CCC 2023
Gather baseline information and input		■	■			■	■
Articulate a vision/case for flexible work, a core to operational models	■		■	■		■	■
Lead the way	■	■	■	■	■	■	■
Involve staff/team in designing FW and approach			■		■	■	■
Resource appropriately for flexible work and career			■	■			
Create FW action plan (option, outcomes, targets, metric)	■	■	■		■	■	■
Run a pilot or trial			■		■	■	
Have flex champions, role models and mentors for support	■	■			■		
Raise awareness, communicate, and celebrate (language)	■	■	■	■	■	■	■
Career focused		■		■			
Team focused	■		■	■	■		
Training for managers	■	■	■	■	■	■	■
Create flex patterns, guidance, and tools			■	■	■	■	■
Ensure flexibility is universal, for all roles, for all individuals	■		■	■	■		■
Integrate into job descriptions		■		■		■	
Monitor, evaluate, and review	■	■	■	■	■	■	■
Make adjustments	■		■		■		■
Explore new technology available	■		■				■
Engage client, supplier, stakeholders			■				■

Table 2. Factors to mainstreaming flexible work in organisations

In addition to guidelines for implementing flexible work throughout organisations, there are also some benchmarks provided by DCA (2012) which can be useful in measuring how the company is doing in relation to Australian and international markets, regarding work satisfaction, adoption of flexible work arrangements, among other measures of success.

These are general guidelines. However, as indicated, to be successful, flexible work needs to be contextualised to the particularities and demands of individual sectors. The next section highlights characteristics of the construction industry which must be considered when adapting flexible work initiatives for the sector.

3. Particularities of the construction industry

> 3.1 Time determinants by construction project typology

There are several strict determinants of time in the construction industry, adding pressure and challenges which need to be considered in designing and testing flexible work interventions for success. These include type of procurement and contractual arrangements, work relationships between contractors, type of client, use of machinery, project location and project size.

Also, project-based construction work is conditioned by temporary interdependent collaboration between different agents, orchestrated through agreed and fixed schedules and budgets, earlier defined by clients, and established through procurements usually based on tendering or biding processes (Naoum and Egbu, 2015), which affects time pressures particularly problematised by often unrealistic proposals (Lingard and Francis, 2004). Within this, time becomes a determinant of success (Serrador and Turner, 2015), adding risk management pressures to different contractual arrangements.

Another factor in the construction industry affecting time pressure and the ability to implement changes to time management is the level of interrelationship with subcontractors. Project managers become the 'guardians' of project schedule, ensuring that subcontractors are managed in accordance. In this, an environment of ongoing time-pressure is created in project-based work, trickled down from client schedule, project manager to subcontractors. Through subcontracting arrangements, there are no regulatory basis to guide work time parameters. In this regard, Eriksson and Westerberg (2011) suggest that a collaborative contractual process can be determinant of performance.

In such limited regulatory context, the project client can be a determinant in the possibility of implementing different flexible work arrangements (Lingard et al., 2021). Specifically, Lingard et al. (2021) indicate that government clients have greater capacity to implement changes and innovations in flexible time arrangements given the usually regulatory operational environment (Walker and Lloyd-Walker, 2016). However, as Lingard et al. (2021: 9) highlight, working time in Australia is not dependent on top-down state regulations, but by stakeholder negotiations, involving enterprise bargaining between trade unions and employers. Therefore, changes to normalised practice require the involvement of multiple stakeholders (Berg et al., 2014).

Project-based construction work is also dependent on fixed assets, machinery, location and need for workforce temporary placement, as well as project size (e.g. number of floors) and patterns of time intensiveness and cost, all of which limit individual time autonomy and control (Champions of Change Coalition, 2023). These have not been explored in the literature as determinants of time in the construction industry to be managed in flexible work arrangements. However, they are nonetheless determinants of time and risk management of construction projects in general, and therefore of significance when defining flexible work arrangements in project-based work.

Time determinants in the construction sector become problematised depending on the type of project. There are two main differentiations, which have different times demands and constraints to flexibility. These are vertical projects, such as buildings, or horizontal projects, such as rail, roads, bridges or utilities. The key differences between these two types of projects are the ownership or clients, and the project management approach. In vertical projects, the owners are normally from the private sector, and project management usually involves a large number of subcontractors which become fundamental to budget and schedule management. In horizontal projects, clients are usually from the public sector and contractors do not have to manage many sub-contractors. However, the management of horizontal projects are more equipment centered, requiring the phased use of various types of specialised and costly machinery. Given these characteristics, a study by Shrestha and Prajapati (2022) shows the differences in project performance between the two project types, with vertical projects presenting a better performance against cost growth and intensity variables. This indicates that essential differences in the time management strategies of workers in the two project types cannot be overlooked when considering approaches to improving work-life balance, health, and wellbeing in the construction sector, more broadly. Considering the influence of various time determinants in relation to project type helps define more generalised suitable options for the industry.

> 3.2 Time determinants and commuting

Travel time to and from job sites can exacerbate the culture of long hours and lack of work-life balance in the construction industry (Holden and Sunindijo, 2018; Lingard et al., 2012). When they are recruited, a worker is likely to be aware of the travel time associated with the job and location they will be allocated. However, as many projects are temporary and trades are mobile, an individual can find themselves being reallocated on a regular basis to different sites that require extensive travel time not included within their standard working hours contract.

Based on a study of factors that affect work-life balance in the Australian construction industry, Holden and Sunindijo (2018) found that more than 52% of the participants commuted for more than one hour per day in Sydney with 76.4% already working more than 50 hours a week. The study also found that when supervisors did take into consideration a worker's residential address and commute time, higher job satisfaction and less stress was evident. Interestingly, they did not find a direct correlation between lengthy commute times and a negative impact on the participants' work-life balance. This could be because of the workers' expectations of commute times in Sydney or the limited size of the study.

A recent study by Xiao et al., (2021) on the commuting times associated with working in high-tech industries found long travel times significantly impacted productivity, quality and innovation, with the most talented workers suffering the greatest (Xiao et al., 2021). Although this study is not related to construction, the findings are useful. Alert, talented workers are crucial to the safety, quality and productivity of the industry.



4. Flexible work interventions in the construction industry

From their systematic review of the literature on flexible work in the construction industry, Lingard et al. (2021: 56) assert that "to date, very limited research has been conducted (or at least published in peer-reviewed outlets) that evaluates working time reduction or modification interventions in the construction industry". Likewise, apart from the works investigated by the authors, efforts to evaluate flexible work interventions in the construction industry are limited, particularly within academic publications, while many are based on grey literature from the industry or consultant organisations.

Study from Lingard et al. (2021) depict a list of flexible work interventions in industries other than construction, which also have similar extreme work demands on employees. The trialled interventions applied at the organisational level considered the following flexible work options:

- Reducing the work week or compressed week
- Reducing daily work hours
- Reducing the work month
- Reducing the work year with additional leave

A compressed work week has been studied within the construction sector in 2004 – 2006 (Townsend et al. 2012) and in 2020 – 2022 (Galea et al. 2021). These studies highlighted that the evaluated interventions present positive and encouraging outcomes to work-life balanced, particularly in relation to compressed work weeks. The common barrier of income loss could be considered in further approaches, in terms of creating comparative measures.

In a study of two tier 1 construction companies, Galea et al. (2021) canvases the following interventions, which were implemented but not evaluated:

- wellbeing/flexible leave where employees could access an additional four days' paid leave per year,
- a rostered compressed work week (five in a six-day work week),
- an individual, informally managed, 'give and take' response to flexible work arrangements
- group exercise programs.

This section presents cases of flexible work implementation from grey literature. It describes the strategies applied in the process of implementation, the types of flexible work, the evaluation methods, reported benefits and challenges, and lessons learned also for future evaluation. The cases explored are:

- Probuild Construction, an Australian firm that mainstreamed flexible work throughout its organisation.
- Timewise, a consultant organisation from the UK, which designed, implemented and reviewed four flexible work interventions in different construction businesses in the country. This study has been evaluated but not peer reviewed.

> 4.1 Probuild Constructions Pty Ltd

In 2005, the Centre for Work + Life at the University of South Australia, and funded by Equal Opportunity for Women in the Workplace Agency (EOWA) studied flexible work interventions at Probuild Construction, a major construction contractor. The case study was based on qualitative data extracted from interviews with the company's leaders, managers and employees from different tiers. The intention of the case study was to draw on best practice to raise awareness and encourage others to pursue work-life balance practices (McMahon and Pocock, 2011).

Strategies

The report describes a list of strategies implemented in the process, which very much align with indications in the literature on mainstreaming flexible work. These are summarised and presented in Table 3.

Approach	Description
High level commitment	The company's board and two directors recognised work-life balance as a major issue and showed commitment and involvement in training managers, monitoring, reviewing outcomes and promoting.
Focus and direct resources	A work-life balance expert was consulted, a work-life balance reference group (WLBG) was formed with staff, union and managers and regular yearly meetings were held to develop the program.
Gather information	In consultation with the WLBG and experts, a survey was conducted as well as focus groups with employees and their partners. The survey was delivered face to face, with employees, the director and a work-life balance employee champion. Low responses were followed by second strategy. Results revealed very low (3/10) work-life balance satisfaction, and related impacts on wellbeing, health and relationships.
Change workplace culture	The WLBG was guided to set out a strategic foundational framework to approach the recognised cultural issue. This included: (1) statement of commitment, (2) supportive culture to implement policy, (3) appropriate practices determined in consultation with staff. **They defined five guiding principles: 'there must be mutual benefit'; 'it is a team effort'; 'one size won't fit everyone'; 'hard work can be done flexibly'; and 'good communication is fundamental to success'.** In consultation, the work-life balance program was defined with four key components, which included flexible work together with wellbeing initiatives, career development and leave arrangements. Flexible work arrangements included: **part-time work hours, working from home, job-share, flexible start/finish times and ad hoc informal flexibility. These were applied in agreement with staff and company needs.**
Engage managers	This was part of changing culture. Following a launch event with employees and partners, the company delivered a program to train and develop managers, to discuss common fears, align them to company goals and imperatives and invest in work-life balance. Managers were provided with a plan outline and encouraged to tailor it to their needs. This was signed off by directors and implemented as a six-month pilot. The results were evaluated and discussions on learnings supported the definition of a permanent work-life balance plan. This action-learning process "created a sense of ownership" and facilitated managerial behaviour that transpired in a change in the company culture.
Demonstrate change	In the launch of the trial, the company presented the results from the survey to employees. An information pack was provided as guidance to all employees. A performance review was also carried out monthly, providing an opportunity for one-on-one conversations with managers.
Promote program	Besides face-to-face communication and ongoing implementation, the work-life balance program was promoted through written communication with information, stories, email and staff newsletters. Three main messages were conveyed: to talk about it, it is a journey not a project and there is something for everyone. Key policies were also shared.
Managers' accountability	There were specific KPIs for managers. Managers had to report on conducted conversations about work-life balance, monitor the progress and report back to business leaders.
Monitor and report	Monitoring and reporting were a cornerstone of the work-life balance program. Individual goals were documented and monitored on a monthly basis, to assist managers to forecast and plan for changing needs. The monthly report was sent to directors and board members.

Have different responses for different needs	There were key differences in needs between salaried and hourly-rate employees. The first required more ad-hoc flexibility to attend to life commitments, the second preferred working on Saturdays due to pay rates. The program recognised these differences. Tailored choices to individuals were discussed with managers.
Maintain and extend the program	The program was evaluated in 2008, after three years, to ensure effectiveness and areas of improvement. The program was ready to be framed by national standards and formalised to ensure equity and consistency. In implementing the flexible work arrangements, the following steps were carried out: clarify, consult, consider, complete. Further initiatives for health and wellbeing were implemented in 2009.
Change business practice	The business introduced early conversations with clients about the importance of work-life balance issues for both the industry and their projects' success. Tender documents included details of this, showing the company's values and commitment.
Engage in industry leadership	Work-life balance was promoted more broadly, in proactive discussions at industry events, government organisations, among other initiatives.

Table 3. Strategies applied to implement the work-life balance program at Probuild

Takeaways from the study

The implementation and development of the program involved a survey with staff to understand needs, co-design of work-life balance options with managers, and ongoing monitoring and reporting. While a survey and focus group were used at the phase of collecting baseline data, it is not evident how the ongoing monitoring or evaluation was conducted.

It would potentially be beneficial to develop a working reference group as a diverse and independent soundboard to the program, involving staff representatives, union and company managers. Flexible work options varied between salaried and hourly-pay employees. This variation could be expected and perhaps facilitated as options to guide initial decision making.





> 4.2 Timewise: four comparative interventions in construction

Timewise, a UK-based social enterprise supporting organisations with implementing flexibility in the workplace, partnered with Build UK to pioneer flexible work trials in four construction companies: BAM Construct, BAM Nuttall, Skanska UK and Willmott Dixon. The immediate goal of the pilots, which varied from six weeks to three months, was to change workplace mindset about flexible work and to evidence the impact on workers' job satisfaction and wellbeing (Timewise, 2021b).

The methodology was based on four phases (Figure 2). First, diagnosis at the organisation level, to understand cultural and operational constraints to flexible work; second, the co-design of pilots to give workers a sense of control and input; third, the guided implementation of the pilots; and fourth, the evaluation and sharing of the findings, with pre and post measures of key indicators designed with the support of participants.

In addition, Timewise applied a flexible work model for frontline roles, which had a more challenging time-demand pattern to implementing flexible work options. As explained, "in a frontline environment, flexibility needs to be considered primarily in the context of when people work, rather than where or how much" (Timewise 2021, p. 11). The model was based on three elements: stability, advanced notice, and input. Stability related to how much working patterns changed from week to week. Advance notice was the amount of time workers had into changes to their work schedule. Input was the degree of influence they had on their working patterns. This influenced the options of flexible work and ways in which they could be implemented.

To some extent, the mentioned strategies of diagnosing, co-designing, implementing the pilots and evaluating align with the previous case of Probuild. In the process, elements of leadership, awareness, training, and monitoring were also embedded.

Strategies

While the strategies discussed follow to some extent the four phases model, this interpretation of the pilots aims to understand the key points in the success of flexible work interventions.

Approach	Description
Diagnosis and understanding context	Information was gathered to understand the current context. In this case, the study was more thorough in identifying key issues. The diagnosis was based on qualitative data collected through focus groups with site-based workers and interviews with leaders and managers.
Workers' input into working patterns	This identified possibilities for desk-based site workers including the implementation of home-based working. Identified possibilities for frontline workers included: – Compressed/shortened weeks, for those who work away from home, – Late starts/early finishes for those who need them, – Facilitating staff to cover for each other, – The ability of salaried employees to take back unpaid overtime in less busy periods of the project cycle.
Changing cultural attitudes and behaviour	– Promoting the long-term business case for flexible working – Redefining flexible working – it's not just for one-off needs. – Changing the language – Addressing trust issues – Making it safe to discuss flexibility needs at work
Improve managers' capabilities to implement flexible work	– Understanding flexible job design: what's possible, given the site constraints, and how can both individual and organisational needs be met? – How to have proactive, open conversations about flexibility needs – Ideas for how to deal with objections, for example on issues of trust and performance
Designing pilots	In consultation with leaders, managers and stakeholders at all sites, there was an agreement for desk-based workers to have increased working from home. For site-based workers, there were variations: BAM Construct: This company adopted an ongoing consultative method for shift setting, work with site operation hours and meeting contractors' commitments. Weekly meetings were held to check on deliverables and changes to preferable flexible arrangements. New technology was introduced, such as online calendars and improved communication supported the process. BAM Buttall: This company trialled accumulating hours for exchange of one day off, and splitting the team into two pods, to rotate the flexi-day. Skanska UK: There were two sites. On one, given its more homogeneous nature, it followed the preference for starting earlier and finishing earlier, with a schedule organised by objectives. On the second, due to longer operating hours, it opted to start and finish earlier every fortnight, with a choice of break times. Willmott Dixon: The company already had an 'agile working' approach in place. It continued this with modifications proposed by Timewise: introducing flex rotas, operating two teams on site and swapping home working every week and home working initiatives due to the pandemic.
Monitoring and reporting	Input was collected before and after the pilot regarding: – sense of wellbeing, job quality and work-life balance – culture and perception regarding flexible work

Table 4. Strategies applied to implement the work-life balance programs by Timewise (2021)

Findings and benefits

Before the trials, flexibility was practiced at the companies on an ad-hoc basis for occasional, reason-specific needs. The initial diagnosis phase indicated a gap between policy and practice, partly because of the sites' operating hours, but mostly due to managerial attitudes. Findings showed that initial issues with flexible work in the organisation related to:

- Operational reasons: belief in the interdependency of roles, site-specific operating times, daily briefing structure, and hourly-paid workforce.
- Workers' views: the benefits of pay for long hours, the impact of travel to work, culture and behaviour around flexible work, and inconsistent practice.
- Managers' views: commercial considerations, concerns for wellbeing, managers' capabilities.

The pilot studies considered the above-mentioned strategies, and the final assessment, through the survey and focus group with participants, indicated that:

- There was a perception of decreased productivity from the start of the pilot: this should also take into account the COVID-19 pandemic. On one of the sites, there was a stated perception of improved productivity. Feedback from all pioneers highlighted that the projects were still running on time and budget.
- There was improved ability to dedicate time to health and wellbeing: for some respondents, this became more significant than the extra cash from working longer hours.
- Employees were less likely to feel guilty about starting late or finishing earlier.
- There was improved trust about the productivity of working from home.
- There was improved onsite health and safety on one of the sites.

In addition, the results showed a change in attitude from managers, and consequently an initial change in culture and behaviour.

Lessons for the sector

This case study also showed that flexible work arrangements can be applied to frontline construction work, resulting in positive outcomes to wellbeing and no detrimental effect on productivity. For flexible work to be successfully implemented, some key points to consider are:

- Starting at the top: establish a clear leadership vision and understanding, clarity about possible work patterns, and parameters for formal versus informal flexibility.
- Making flexible working patterns compatible with operational constraints.
- The importance of running pilots before rolling out initiatives, to consider operational and cultural barriers.
- The potential for better flexibility design if it becomes mainstreamed in the industry and conversations with client and contract are also included in the process. This was demonstrated by the company which already had 'agile working' implemented and was open to innovating further by providing more diverse flexible options.

Takeaways from the study

The Timewise case shows that, despite the resistance of the construction sector to implement flexible work more widely, flexible work can be implemented in line with operational needs, without affecting productivity and targets. It highlighted that, given the uniqueness of construction site operations, it is important for flexibility to be designed within the operational constraints, and to include ongoing reporting and monitoring.

This study shows the benefit of evaluation, by using both surveys and focus group discussions before and after the pilots have been implemented. Co-designing the flexible work interventions has also proven beneficial in ensuring managerial involvement and empowerment from staff in defining the suitable options. To some extent, the results from the survey presented in the report could be more extensive, showing more detailed changes in pattern. Future pilots could also benefit from longer periods of testing.



> 4.3 Recommendations for future flexible work interventions evaluation in construction

Leadership driven:
the literature and guidelines indicate that building the case for flexibility and having leadership commitment and uptake of flexible work is paramount to the success of flexible work mainstreaming – as well as, therefore, short-term interventions. It is important to do the groundwork prior to implementation. Cases from grey literature, which are more often industry-driven rather than research-driven, indicate this. Therefore, interventions can consider including awareness building in the process of preparing, designing, implementing, and evaluating interventions.

Co-designing:
similarly, the literature indicates the importance of building on baseline information on existing flexible work needs and offerings in an organisation. This builds the foundation for the co-design of strategies that are responsive to employees' needs, as well as in line with the constraints of the organisation and its projects. The process of co-designing in response to workers' needs builds trust and triggers the process of cultural change. Co-design with clients in the pre-construction and tender phase would ensure the project timeline takes into consideration realistic work hours and flexible work interventions.

Multi-stakeholder group:
it has been highlighted in the literature that negotiations for working hours in the construction sector need to involve different stakeholders, given the lack of top-down government regulatory influence. While this is recognised in the literature, only limited evaluated trials involved a multi-stakeholder group in the process. Involvement of a multi-stakeholder reference group can play a key role in the trial of flexible work interventions, through the different stages of design, monitoring, and promoting.



Monitor and evaluate:
Most evaluation studies considered pre- and post-evaluation. Previous studies reviewed by Lingard et al. (2021) have mostly relied on qualitative data for evaluation, with one case being evaluated through quantitative measures by survey. The other two cases considered in this discussion applied a mixed method approach, including survey, focus groups and interviews. Few studies have considered ongoing evaluation throughout the implementation. Through this, it was possible for the company to make adjustments and improvements. However, the Probuild evaluation was an organisational purpose-driven trial, which differentiates it from the other studies. The intervention from Timewise again only considered a pre- and post- evaluation survey. Reported findings from the survey did not add any significantly in-depth content, which could be enriched in further studies to support theoretical claims. It would be beneficial for future studies to consider lengthier interventions, in accordance with available resources, with intermittent evaluations to allow for possible adjustments. In addition, adding a mixed method approach to enrich and validate some of the qualitative data with quantitative input should be considered.

Length of interventions:
interventions driven by academic research without an organisational-driven purpose and funding may be limited in resources. It would be beneficial for future evaluations to seek funding for longer implementation periods and ongoing monitoring. This would enrich existing data and validate theoretical claims.



5. Flexible work interventions in other industries

The construction sector is not alone in seeking flexibility for an under-pressure workforce. Other sectors are grappling with the same challenge of trying to introduce less rigid working options into workflows that have inherent time demands, around the clock operations or other complications.

Like construction workers, architects work long, unsustainable hours due to demanding workloads and clients, constant deadlines, competitive working environments, and cultural influences (Matthewson and Roan, 2016; Fowler and Wilson, 2012; Stratigakos, 2016). These conditions impact women more than men and significantly contribute to the lack of acceptance of flexible arrangements in the profession. Meanwhile in the nursing sector globally, employees frequently cite the lack of flexibility and control over their work schedules as factors in their decision to quit the workforce (Koning, 2014).

The following studies outline trials that have so far shown some promise in Australian workplaces or point to factors that could be critical in making flexible work a success.

> 5.1 Energy

VIVA Energy (Champions of Change Coalition, 2023), a major Australian energy supplier and manufacturer explored blended working options for frontline workers at its 24/7 Geelong Oil Refinery Plant. The majority of the work had traditionally been rostered on shifts with many workers needing to be physically onsite to operate. However, with the global pandemic, VIVA encouraged leaders and supervisors to explore and experiment with flexible modes of working.

Clear boundaries were set, including minimum working hours within the office and agreements on urgent requests. Leaders agreed to be flexible and open-minded to trialling new working arrangements.

The company explored job share opportunities for operators working in the 24/7 oil refinery. A team of operation managers created job share roles, which included a new part-time shift within the Enterprise Agreement. Competency requirements for recruitment were revised and based on mechanical talent and transferrable skills instead of previous measures on experience level. The role redesign to incorporate part-time job share included extensive consultation with all workers, open communication, support for the new roles, and extensive training on diversity and the implementation of part-time rosters.

Historically, this line of work had struggled to attract and retain women due to the full-time, inflexible 24/7 shift work schedules. Over four years, the role redesign has seen women's participation in operator roles increase from 9% to 23%.

> 5.2 Architecture

The 'All Roles Flex' policy was developed and tested in large Australian architectural practices (ACA, 2022b; ACC, 2021). Rather than being an alternative arrangement, All Roles Flex offers flexible work as the starting point for each worker, in any role and on any project. Employees request an arrangement to suit their situation.

BVN is a large architectural practice with offices in Sydney, Brisbane, New York and London (ACA, 2022a). The practice began with the Champions of Change All Roles Flex policy and has adapted it through consultation with staff over a ten-year period. A number of factors have been critical to the success of its flex policy. The visibility of leaders taking up flexible working arrangements played a significant role in influencing junior staff to explore the options available (ACA, 2022a). Transparency was also key. A daily staff email confirmed everyone's whereabouts and staff logged their work hours and locations on a shared file. This was found to break down misconceptions that flexible working was only for caring responsibilities. It broadened employees' understanding of how the policy worked to benefit all and promoted healthy working arrangements to suit each individual's life.

A separate case details a successful job sharing arrangement at Woods Bagot, a company working on the Western Sydney International Airport project (Parlour, 2023). Two women who had returned to leadership roles from maternity leave were seeking a flexible arrangement to balance the demands of caring for a young family. Critical to the success of job-sharing on this large infrastructure project was effective communication, a relationship built on trust and shared experience, and adaptability. The women aimed to have two to three days where they were in the office together, however they kept their arrangement flexible rather than rigid to better deal with external life pressures. The pairing of experience, personalities and complementary skill sets was also important, and not limited to problem solving abilities, emotional empathy, communication and negotiation skills and organisational traits.

> 5.3 Nursing

A study in South Australian public and private acute care hospitals investigating flexible working options by Howard et al., (2014) found that flexibility in rostering was commonly requested to accommodate parenting duties and to a lesser extent illness, injury or wanting more leisure time outside of work. The acute hospital settings were using rosters where staff could submit a certain number of shift requests. But ultimately, the final decision was made by the unit manager based on staff skill sets and patient numbers. These rigid rostering systems were complicated by the acute hospital setting and night shift requirements. Access to flexible working in the night shift setting was found to be in conflict with general hospital procedures. Communication and a clear allocation of tasks was critical if flexible working was to succeed.

The study found that although most nurses believed that they had equal access and opportunity to either full time or part time roles, the ability to transition between these or to share roles was challenging. Furthermore, a number of nurses involved in the study believed that models of care would have to change for flexible working to be successful. Another barrier identified to flexible working in nursing included a perceived disconnection in communication between different levels of management on how to manage flexible working requests. The study concluded that training of staff on flexible working opportunities and the uptake of management tools and self-scheduling rosters to handle requests was important.

An integrative literature review by Koning (2014) on flexible working schedules in nursing detailed a range of benefits, challenges and success measures. Critical success factors included leadership leading by example, shared ownership of the successes and failures of the system, and continuous improvement reviews.

6. Conclusion

Flexible work may be considered part of the new normal working environment that has emerged since the COVID-19 pandemic, but it still faces several hurdles to becoming mainstream in the Australian construction sector. There is an intrinsic culture of long working hours in construction that is difficult to shift, even though it is linked with declining health and wellbeing among workers and increasing burnout and turnover of staff. There also exists a stigmatisation of flexible work within construction, and a belief that alterations to working hours and modes will harm productivity. There are also features that are unique to project-based construction work that complicate efforts to change work hours or patterns. Several determinants of time must be considered, according to a project's contractual arrangements, relationships between contractors, type of client, use of machinery, location, and size, to name a few.

These challenges, however, are not insurmountable. The studies in this review show potential pathways to introducing flexibility in construction. Just as flexible work arrangements will look different for every worker, they should also look different at every workplace. The evidence in this review strongly supports the implementation of policies that have the commitment of company leadership from the start. Leaders should first look at how their current flexible work offerings are meeting the needs of employees and use this as the basis to co-design their strategies. Such an approach builds trust in the policy. Alongside awareness-building within the workforce, clients must also be educated about the approach. A group of diverse stakeholders could be useful to steer these strategies from design to implementation. Besides evaluation at points before and after the policy is rolled out, it should be monitored at points throughout, to allow for the policy to be refined and more critically and thoroughly evaluated.

Launching such an initiative is no small undertaking. But the benefits of getting this right are well established. Workers at all life stages are placing a growing importance in the value of work-life balance. Workplaces that successfully build work-life balance into their practices and design will reap the benefits of talent retention, progression, and the attraction of a more diverse workforce.

For construction to finally attract more women into the sector, it must address the long and rigid working hours that are incompatible with caring roles. Workers will meanwhile benefit from improved work satisfaction, less work-family conflict and potential for work overload. The widespread benefits of better work-life balance are a chief driver for businesses to adopt flexible working practices.

The case studies examined in this literature review suggest the key ingredients for success of flexible working in construction and other challenging industries. At Australian construction firm Probuild, staff were surveyed to understand their needs, and the resulting initiative was co-designed and continually improved. The policy was built from the ground up, with the company effectively building the case for flexible work as it progressed. In the UK, social enterprise Timewise demonstrated the importance of designing initiatives specific to site operations and constraints. Co-design was also key to these interventions, as it ensured the engagement of both staff and managers. These themes are echoed in case studies from other industries. At architecture practice BVN, a hybrid work policy has been continually assessed and refined over ten years. A factor in its success was the participation and support of leadership. At energy supplier VIVA Energy, management consulted the workforce widely before re-designing an operations role in its 24/7 oil refinery. After struggling to attract and retain women to the role, the change saw women's participation in the role lift from 9% to 23%. The nursing sector faces various barriers to offering staff more flexibility, however the research has identified some of the same key enablers as other industries, such as the education and training of managers.

This literature review identifies a gap in the existing research, which is in the testing and evaluating of flexibility interventions in construction workplaces. There is little research-based evidence on the impacts of initiatives trialled to date. Most of the material is based on data and insights from qualitative study only. While valuable, this excludes quantifiable evidence that would build confidence that flexible work can contribute to workplace performance.



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