



IWD Scholarship 2021

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Challenging norms in recruitment for Construction:

Redefining the talent pool to increase women's representation at all levels.

PREAMBLE

In March 2021, I was fortunate enough to win the National Women in Construction (NAWIC) International Women's Day Scholarship based on my proposal to research how the Construction industry could reframe its perspective of a female 'talent pool', to reach women from outside of the Construction industry and encourage them to join, benefiting not only the industry but the economic advancement of women in Australia and the wider economy. For most of its history, this scholarship has been undertaken by professional academics. I am not an academic, however I have worked in the Construction industry for 16 years in human resources, change management and more recently Equity, Diversity, and Inclusion at ACCIONA. I have been fortunate to work for three large Construction organisations and become a mother of two children having taken two periods of parental leave. It is difficult to do this research when you are also a part of the industry you are investigating. On one hand, it's easier to reach people to talk to and you can speak from lived

experience. And on the other hand, it is challenging to stand at a distance and remain objective. In this respect, I have approached this work as a curious inquirer and have endeavored to channel the theme of IWD 2021; 'choose to challenge' along the way. Doing this work has changed my own thinking and I hope that it may also make a worthwhile contribution to the industry and perhaps encourage individuals and leaders in Construction to question their own thinking and look at new ways of doing things which improve the industry for all of its people. Thank you to Dr Marzena Baker (School of Project Management, University of Sydney), Professor Lynn Crawford (School of Project Management, University of Sydney) and Tiane O'Connor for their invaluable assistance and support in conducting this research. Thank you also to the leadership of ACCIONA who have supported and encouraged me to undertake this research over the course of the year.

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EXECUTIVE SUMMARY

The Construction industry says it wants women and is committed to unlocking this 'untapped resource' which it desperately needs. The reality though, is that despite its efforts, it is an industry which constantly struggles to 'find' these women and then keep those who it attracts. The industry is Australia's most male dominated and has been maintaining (around) 13% women's participation for decades despite government and industry efforts to persuade women to join Construction (mostly in early career from school or university). Construction also has a leaky pipeline problem. It has proven hard to convince girls and women to join Construction in the first place and then harder still to get them to stay. And yet, the industry barely looks at women from outside of Construction beyond students or those with 'construction experience'. This research has found that Construction organisations fails to reach women not already within the industry. Managers have a very narrow and specific view of the talent base they are seeking in the first place (people with construction experience or qualifications), they largely recruit from their networks and 'word of mouth' which favours the recruitment of more men, and too often fail to advertise the roles or even invite women without construction experience through

their recruitment processes (or their advertisements). Furthermore, they don't understand (or act on addressing) the things that attract these women (career opportunities, salary/wages, interesting work, development opportunities and flexibility to name a handful) and do little to promote an image of their industry as being any different to the pervasive largely negative image of the industry held by the public. And finally, the industry is slow to act on the deeply entrenched cultural and work environment issues which keep women away or drives them out.

This paper is in three sections. Firstly, it investigates the complexity of the 'Diversity business case', secondly, it examines the contemporary economic forces which are driving change in Construction and contribute to the industry's need for women from other industries or with new capabilities. Finally, the paper makes recommendations which those in the Construction industry can take to attract women Career Changers based on the advice and experiences of women already in the Construction industry who have made this change.

SECTION 1

PUTTING TO ONE SIDE THE 'BUSINESS CASE FOR DIVERSITY'

Robin Ely and David Thomas (two Harvard Professors who were some of the earliest to demonstrate the advantages of Diversity to organisations in a classic Harvard Business Review article in 1996) said back then that their research had shown that the one 'cardinal limitation' which is at the root of an organisations inability to achieve the expected benefits of diversity is the "leadership's vision of the purpose of a diversified workforce". A quarter of a century later, they stand by their original findings and say today's dominant leadership vision amounts to an approach best summarised as 'add diversity and stir'. Find lots of 'diverse people', hire them, then stand back and watch the organisation miraculously become more effective and financially successful (Ely and Thomas 2020).

And whether it's Construction or any other organisation in 2022, leaders are perhaps more than ever before, vocally, and publicly committed to 'Diversity'. There is also plenty of evidence for them to point to about the financial benefits or the 'business case' for diversity. For example, McKinsey (2020) who found that "companies in the top quartile for gender diversity on executive teams were 25 percent more likely to have above-average profitability than companies in the fourth quartile—up from 21 percent in 2017 and 15 percent in 2014" or Boston Consulting Group, who wrote that "Companies that reported above-average diversity on their management teams also reported innovation revenue that was 19 percentage points higher than that of companies with below-average leadership diversity—45% of total revenue versus just 26%" (BCG 2018). However, as Ely and Thomas (2020) argue, there are some problems with this, with much of what is publicised as a convincing case for diversity unable to stand up to the rigours of scholarly analysis. And business leaders and consultancy firms then oversimplifying the complexity of organisational diversity (research) to the point where, the business leaders themselves are not very convinced of the business case they espouse.

Despite the familiar headlines which assert that 'the case for gender diversity is in', it is a highly complex and contested domain; whether it's drawing a line between women's representation in organisations to demonstrate the benefits of diversity on team performance or organisational financial performance, innovation, corporate governance, or social responsibility. As Fine et al. (2019), Ely and Thomas (2020) and the IMF (2016) all make clear, one of the key challenges of this research is making assessments of causality of the factors the research uncovers. Are some organisations profitable because of their higher representation of women in leadership positions? or is it the case that profitable organisations have the resources to invest in diversity and can hire more women leaders? Take for example – women on boards. According to a 2016 paper by the International Monetary Fund (IMF) using a 2013 sample of over 2 million companies across 34 European countries, they found that "replacing one man by a woman in senior management or on the corporate board is associated with 8–13 basis points higher ROAs" (IMF 2016). And yet, according to Ely and Thomas (2020), it's more likely that women on boards are either likely to share the opinions of their male colleagues, be marginalised or that the work of the board is so far removed from day to day operations that it doesn't make a consequential impact to a company's financial performance. However, meta-analysis research by Post and Byron (2014) found that a firm's organisational performance and female board representation varied by legal/ regulatory and socio-cultural factors. They found, that women on boards were positively related to accounting performance, and more positively so in countries with stronger shareholder protections while the relationship between female board members and market performance was near zero – even though it was positive in countries with high gender parity and negative in countries with low gender parity. Even the authors of the IMF report (2016), included the caveat that they cannot "precisely identify the causal effect of gender diversity on performance due to the cross-sectional nature" of their data (2016).

What makes this confidence in the 'business case' further challenging, is that according to Ely and Thomas (2020), companies who emphasise the value of diversity because of its financial payoff for the company, turn off people from minority groups. And when those who 'believe' diversity equals financial gains (i.e. its leaders) don't see the 'payoff' they were expecting, then they are more inclined to abandon diversity efforts.

So, what is it that makes Diversity so important then and what does it mean for this research? Well, according to Dover et al. (2020), there are several rationales (motivations) with which organisations can approach Diversity (the 'business case', 'justice' and 'signalling'). The 'business case' rationale frames diversity as an opportunity to achieve business objectives (efficiency and financial success), 'justice' frames it as a responsibility and 'signalling', (often layered on top of the others) is a means for an organisation to persuade interested parties that it has certain values (i.e. for the purpose of public image to achieve some aim i.e. recruitment). In undertaking this research, I have approached this work from the perspective that organisational diversity is a 'responsibility' before it is an 'opportunity'. Reframing the talent pool so more women join Construction (from other industries) is not a pathway to unlocking this 'untapped resource' for superior financial performance (or shouldn't be the motive). Instead, the through line of this research is that the leaders and managers who work in organisations within the Construction industry have a responsibility to promote

equity, diversity, and inclusion. And that choices large and small (from policy decisions to hiring decisions) can challenge the status quo of Construction.

As such, I appreciate that some of the ideas proposed in this paper may be confronting. Nevertheless, I am doubtful leaders are truly compelled to act based on the current 'diversity business case' or that women are encouraged by their portrayal as instruments of profit. Through my observations during my time spent in Construction and what I have learnt from those who have participated in this research (both men and women), is that it is those individuals and leaders who act or are driven by some sense of personal responsibility who create real and sustainable change. It is leaders and managers of teams who are making hiring decisions, promotion decisions, development decisions and acting to create a culture at every level as they go about their working days who are making a difference despite the inherent human tension between the drive of individuals to achieve financial outcomes (the things which get them promoted, bonuses and on to the next role or Project) and social responsibility.

The research that follows is therefore structured, to examine the social and economic forces afoot which compel Construction to demand this 'untapped resource' (women) and for women to seek Construction careers and equity – Section 2. And the responsibility to act - by individuals at every level and organisations to make change – Section 3.

SECTION 2

CURRENT STATE OF WOMEN IN CONSTRUCTION & THE ECONOMY

WHERE AUSTRALIAN WOMEN WORK

In Australia as at November 2021, the five largest employing industries are Health Care and Social Assistance, followed by Retail, Professional, Scientific and Technical Services, Construction and Education and Training (ABS 2021). In fact, Health Care and Social Assistance recorded the strongest growth of any industry over the 20 years to February 2020, with employment rising by 977,400 (119.4%). Construction has also grown in the last 20 years (72.9% over the 20 years to February 2020). Remarkably, even though Construction is the largest employer of men in Australia and Health, Care and Social Assistance is Australia's largest employer of women, far more women work in Health Care and Social Assistance as at Nov 2021 (1,440,100) than men in Construction (987,200) (ABS 2021).

COVID-19 also had a significant impact on the Australian labour market, with employment falling in 14 of the 19 main industries between February 2020 and May 2020 (the first quarter after the onset of COVID-19) (NSC 2020). ABS employment data shows that Construction employment fell from 1,189,700 in November 2019 to 1,185,200 in February 2020 and two years down the track has sunk further still to 1,143,600 as at Nov 2021. And yet Health has continued its pre-pandemic upwards trend from employment of 1,778,900 in November 2019 to a record high of 1,900,100 in November 2021. Retail and Professional, Scientific and Technical Services all improved on their pre-COVID employment figures, whereas Education and Training is yet to fully recover its pre pandemic employment position (ABS 2021). It is hard to understand why Construction has failed to recover amidst a nationwide Infrastructure boom. However, the Construction industry is large and diverse. The industry includes three sub-industries which have all experienced COVID differently. Building Construction (accounting for 25% of the industry headcount) has experienced a fall in employment by 6%, Construction Services (such as Land Development and Site

Preparation, Building Services, Building Installation and Building Completion (accounts for 65%), has fallen by 4% whereas Heavy Civil Construction, which only accounts for only 10% of the industry has seen employment rise by 7.5% (ABS 2021).

What has this meant for women? From the perspective of Construction, women have fared reasonably well. Whilst women still only represent 13.8% of those employed in the Construction industry, women's employment in Construction increased almost entirely in full time roles over the period Nov '19-Nov 21 (rising 7%) whereas men's employment in the industry dropped 5%. The greatest gains for women have been in Heavy Civil and Engineering, with women's employment in this part of the industry increasing a staggering 60% in a 12-month period (from 13,800 to 22,100 women) (ABS 2021). However, Construction is running at two speeds when it comes to women's participation. Whilst it is 'one industry', the biggest employing part of the industry, Construction Services, has only 12% women's participation, whereas, Building Construction is at 17% and Heavy Civil has 19% participation. Amongst low participation, women are also highly over-represented in occupations such as clerical and administration (57% of all women who work in any part of the Construction industry work in these roles). While, there are record highs of women managers in Construction today, they represent only 16% of the small proportion of women in Construction. Women in Professional or Trades roles are even more under-represented. In fact, there are more men working in Clerical and Admin roles (16,500) than there are women working in Professional roles (15,200) or in Trades (15,300) (ABS 2021).

THE FUTURE OF WORK FOR WOMEN AND THE PLACE OF CONSTRUCTION

But what of the future? The purpose of this paper is to encourage Construction to engage women outside of the industry. This begs the question; is Construction a good choice for women? From an economic perspective, all indications are that Construction will rebound from COVID-19 and continue to grow in the short to medium term. At the end of 2021, Construction reported over 80% more vacancies than it did Pre COVID (ABS 2021). With Government Infrastructure investment to reach \$218 billion with annual spending forecast to reach \$52 billion by 2023 (Infrastructure Australia 2021). Construction employment is projected to rise by 80,700 (6.8%) over the five years to November 2025 with Building Installation Services growing by 8.4 %, Residential Construction by 10.6%, and Heavy and Civil Engineering Construction sectors by 8.8% (NSC 2021).

Research by McKinsey (2021) has demonstrated that the impacts of COVID-19 have only hastened changes to the 'world of work', through acceleration of remote work, rise in e-commerce, and accelerating development of robotics and AI (replacing humans). In their analysis, they determined a common trend across the eight advanced economies they investigated (US, Germany, UK, China, France, Japan, Spain and India), was a forecast decline in job growth in low and middle-wage positions, such as customer service jobs in retail, hospitality, and food service, while job creation will occur in high-wage jobs, such as health care and STEM. According to McKinsey (2021), given the concentration of job growth in high-wage occupations and decline in low-wage occupations, 1 in 16 people may need to find a different occupation by 2030. In the Australian context, research undertaken by the National Skills Commission (NSC) provided a similar forecast, saying Australian workers will be likely to change jobs 2.4 times over the next two years and called attention to the 'big forces at work in the economy'. That is, a shift to higher skilled jobs and an ongoing shift toward services, including care and the 'resilience of non-routine and cognitive jobs' in the face of automation and Artificial Intelligence (AI) (2021). The NSC's five-year industry employment

outlook projects that the long-term structural shift in employment towards services industries will continue. Four services industries, 'health care and social assistance', 'accommodation and food services', 'professional, scientific and technical services' and 'education and training' are expected to generate over three-fifths of the total projected employment growth over the next five years. Employment in STEM occupations are predicted to grow by 12.9%, which is well above the average of all occupations (of 7.8%) and more than twice as fast as non-STEM occupations (6.2%) (NSC 2021).

Based on these predictions, women are well placed for future employment in Australia. Women dominate several of those industries forecast to grow, namely the Health Care industry. However, it makes attracting women towards a career change into Construction even more important and more difficult. Construction needs these women, but there are plenty of growing industries attracting women and it's hard not to wonder if they shouldn't just stay where they are. One counter to this argument is that, as Mosseri et al (2020) point out, all of this explains job quantity, not job quality. Women and men are likely to experience the future of work differently due to entrenched occupational segregation which sees women often in low paying roles with poorer working conditions and excluded from the higher paying STEM jobs of the future (2020). Research by the International Monetary Fund has shown that 11% of the female workforce, compared to just 9% of the male workforce, is vulnerable to technology-driven job displacement (Brussevich et al., 2018 in Mosseri et al 2020). Women also face serious barriers to their ability to transition, especially to STEM jobs. As McKinsey (2021) explain in their paper, there are several reasons for this, including women having less time to reskill due to unpaid care work, being less mobile, having less access to technology and their prevalence in less skilled jobs which makes them less likely to be provided with the investment of training by their employers. Women are at a crossroads, if they can take advantage of opportunities to build new skills and transition, they can capitalise on opportunities. If they cannot, gender inequality at work could worsen.

THE WRAP UP FOR WOMEN AND THE CASE FOR CAREER CHANGE

Even outside of any 'business case for diversity', Construction needs women, likely more than women need Construction. They need their minds, capability, and their labour. The employment prospects for Australian women could potentially be excellent, however, since all of this is part of broader ecosystem of work, including women's economic security and the economy, the future of work for women and Construction are intimately intertwined. Australian industry (including Construction) together with educational institutions need to act now to support girls obtain an education in STEM and for STEM educated women to participate in the workforce. The industry also needs to help women reskill and prepare to take on the roles of the future; high skilled roles in STEM occupations and industries. The future need for more women in these roles is no longer in the distant future, it is unfolding before our eyes - you

only need consider the ever-increasing reliance on drones, visualisation software and satellite imagery to plan and execute projects compared to the past, to understand the digital transformation of the industry (Saccardo 2020 in NSC 2021).

The intent of this research (and specifically this section) is not to suggest that women should quit their jobs and vacate vital industries and occupations for a career in Construction. The point is to make an argument that the Construction industry needs women to be able to continue its transformation and growth. And to do this, it needs to attract and retain this 'untapped part' of the labour force not currently skilled 'in construction' but whose skills could be easily converted. Conversely, Construction provides a unique opportunity for women to build their skills and capabilities that will advance their economic security into the future, whether they stay in Construction for the long haul or not.

SECTION 3

THE RESEARCH: ATTRACTING WOMEN TO MAKE A CAREER CHANGE TO CONSTRUCTION

THE SURVEY AND INTERVIEWS

More information is provided in the appendix on the survey method and characteristics of participants. In summary, women working in Construction were invited to complete an online survey. The main source of data collection was NAWIC members who received the survey via the organisation's monthly newsletter. 632 women responded to the survey. These responses were then analysed (based on their self-reported time in workforce, time in Construction and commentary on career path). Women were then categorised in to three groups: 1: - 'First Career' (192 women). These were women who joined Construction industry as their first job i.e. they joined after completing secondary or tertiary schooling, 2:- 'Career Change' (348 women), women who had

joined the Construction industry after a job or career in another industry and 3:- 'Uncategorised', women who I could not categorise in to these two groups were excluded from analysis. To ensure the research was contemporary, most of the findings relate to Career Change women who have made this transition in the last 10 years (226 women), however the entire dataset provided insights and allowed comparison and I refer to the wider dataset throughout the recommendations. I also conducted interviews with seven women working in Construction who have made a Career Change and eight hiring managers/recruiters to further explore the experiences of women and attitudes and approaches of those making hiring decisions with respect to recruitment and 'Career Change' women.

PART A

EASY RECOMMENDATIONS TO IMPLEMENT

RECOMMENDATION 1

ADVERTISE ALL ROLES TO ENCOURAGE MORE APPLICATIONS, RELY LESS ON NETWORK AND START USING SOCIAL MEDIA

“(We need) better advertising on social media platforms showing women operating heavy machinery, up ladders tying in conduits and placing electrical trays, ladies welding mechanical piping, painting buildings, laying inground services and operating scissor lifts and EWP’s and Telehandlers”

- CAREER CHANGE SURVEY RESPONDENT

It seems obvious to start with this recommendation. However, it provides some insights for later, so it is appropriate to begin here. It goes without saying that if you want more applicants for a position and want to increase your female participation rate then it's probably a good idea to make the role visible, so women can see it and apply.

Australia has a huge hidden job market. A recent report from the National Skills Commission (2020) showed that 22% of employers in Australia did not advertise every position they have available (which was the same rate in 2019 - before COVID). When it

comes to Construction, it rises to 28% of employers. The only other industry with such a high rate of 'not advertising' is Transport, Postal and Warehousing (at 29%) and they employ 655,000 people compared to Construction's 1.1 Million (ABS 2021). The top three most common way employers recruit is still through recruitment websites (like SEEK) and job boards, followed by word of mouth and then social media. Whilst recruitment websites and job boards are the most used recruitment method in all industries, Construction is one of a handful of industries where Word of Mouth is particularly common (NSC 2020).

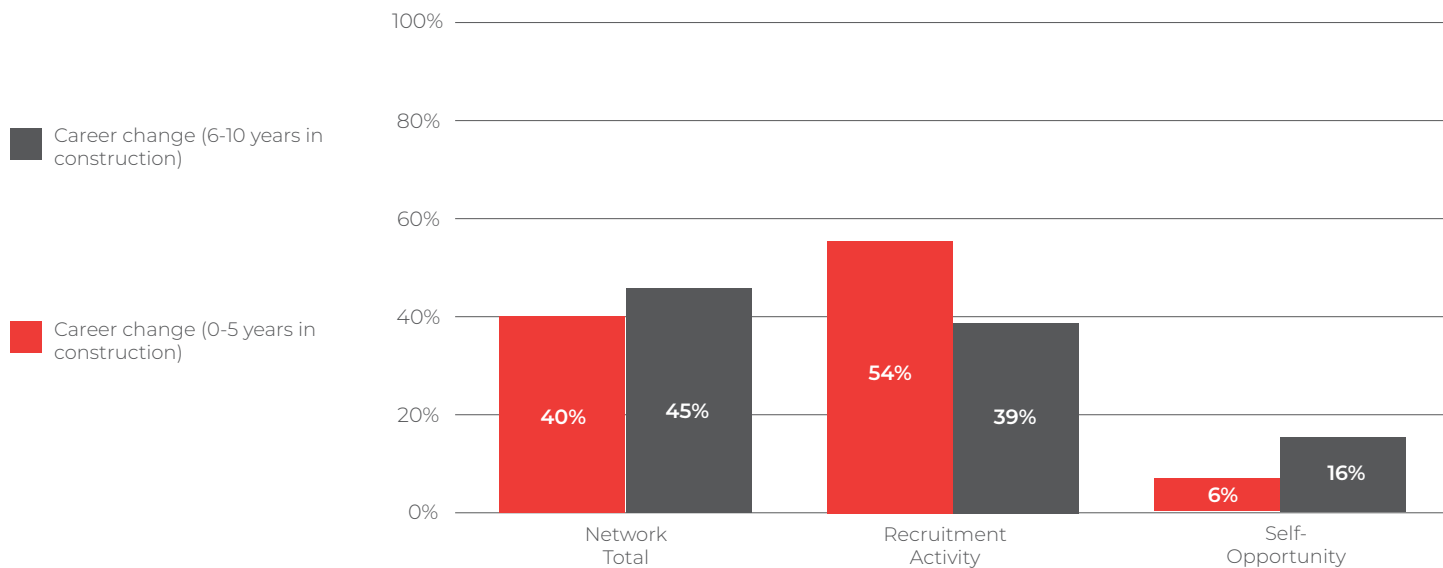
FINDING 1

MOST CAREER CHANGE WOMEN WITH 0-10 YEARS CONSTRUCTION EXPERIENCE FOUND THEIR JOB THROUGH JOB ADVERTISEMENTS (49.3%), FOLLOWED BY NETWORK (41.8%). FOR WOMEN WHO CHANGED CAREERS 6-10 YEARS AGO, MOST FOUND THEIR LAST JOB THROUGH THEIR NETWORK.

I found this same heavy reliance on networking as discussed above in my research. When I asked Career Change women in the survey (with less than 10 years'

construction experience) how they found their last job in Construction, the results revealed they were more likely to have been recruited through formal Recruitment Activity initiated by employers (49.3%), especially job advertisement, although Network activity was also very important, accounting for almost 41.8% of jobs secured (see Table 1 later in the paper). For these women, those who had been in the industry longer (6-10 years), Network was the most common way they found their last job compared to women in the group with 0-5 years' experience where it remained Recruitment Activity (see Figure 1).

Figure 1: Recruitment Channel for current role in Construction (Career Change and <10 yrs. Construction experience)

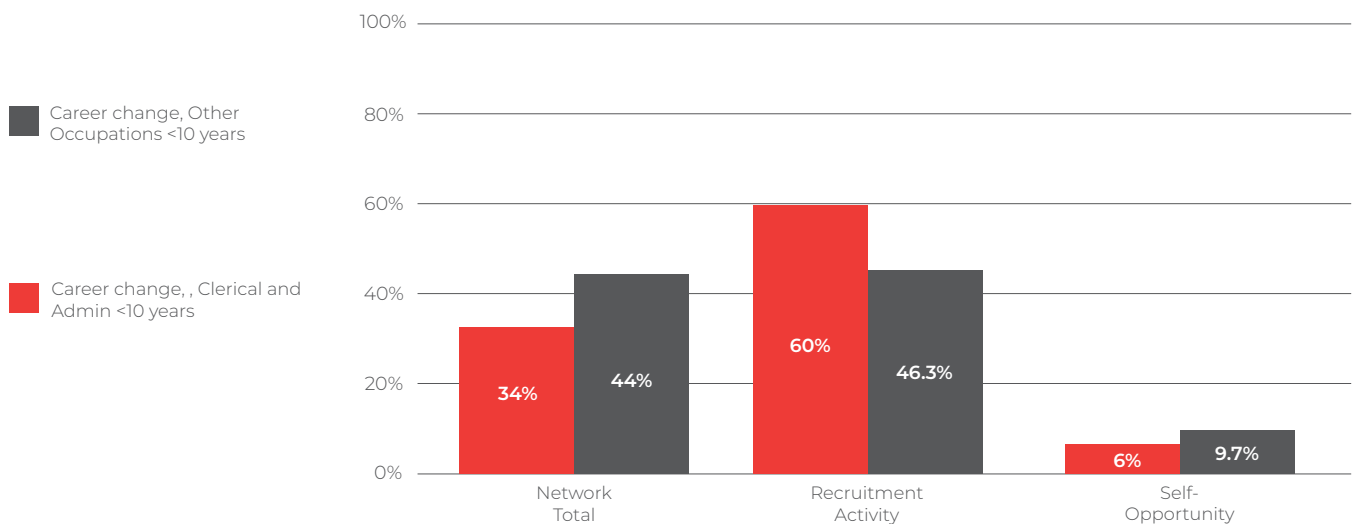


FINDING 2

WOMEN CAREER CHANGERS, WORKING IN NON-CLERICAL/ADMIN OCCUPATIONS IN CONSTRUCTION ARE ALMOST AS LIKELY TO HAVE FOUND THEIR LAST JOB THROUGH THEIR NETWORK AS THEY DID EMPLOYER INITIATED RECRUITMENT ACTIVITY (44% VS 46.3%) WHEREAS WOMEN IN CLERICAL/ADMIN ROLES ARE MORE LIKELY TO HAVE FOUND THEIR LAST JOB THROUGH JOB ADVERTISEMENTS THAN NETWORK (60% VS 34%).

Given the high proportion of women in Construction who work in clerical/administration (although this overrepresentation was not reflected in the survey cohort) I also considered the difference in recruiting method by occupation within the Career Change cohort (<10 Years' Experience). Here the difference is stark. Those women occupied in clerical and administration positions were much more likely to have found their last job through employer initiated Recruitment Activity, compared to women in other occupations where it was almost as common for it to be Network (44%) as employer Recruitment Activity (46.3%). (See Figure 2)

Figure 2: Recruitment Channel for current role in Construction (By Occupation and <10 yrs. Construction experience)



FINDING 3

ONLY ONE (0.4%) CAREER CHANGE WOMEN FOUND THEIR LAST JOB USING SOCIAL MEDIA (INSTAGRAM), DESPITE THIS BEING THE 3RD LARGEST RECRUITMENT CHANNEL IN AUSTRALIA.

Aside from the heavy use of 'Network', it is also of interest to note in the data how few women have found their jobs through social media (just

1 woman – See Table 1). Given this is a growing recruitment channel in Australia and underutilised by Construction, this is an enormous opportunity for Construction to reach more women. To increase female applicants for Career Change women (and likely anyone) the industry needs to make the jobs visible.

Table 1: Recruitment Channel for current role in Construction (Career Change <10 yrs. Construction experience)

SOURCE OF RECRUITMENT	CAREER CHANGE 0-5 (N=156)	CAREER CHANGE 6-10 (N=69)	TOTAL (225 RESPONDEES)	CAREER CHANGE CLERICAL & ADMIN <10YRS (50)	CAREER CHANGE CLERICAL & ADMIN <10YRS (50)
Through a friend working in the industry	22	10	32 (14.2%)	7	25
Through a family member working in the industry	6	5	11 (4.9%)	3	8
Through my professional network	33	16	49 (21.8%)	6	43
Through Other Network	2	0	2 (0.9%)	1	1
NETWORK TOTAL	63 (40%)	31 (45%)	94 (41.8%)	17 (34%)	77 (44%)
Headhunted/Direct Contact by Recruiter	3	0	3 (1.4%)		0
Job advertisements (i.e., SEEK/LinkedIn/newspaper)	59	17	76 (33.8%)	22	54
Through a Job agency	21	9	30 (13.3%)	8	22
Instagram	0	1	1 (0.4%)	0	1
TAFE Ad Career/Open Day Work placement	1	0	1 (0.4%)	0	1
RECRUITMENT ACTIVITY	84 (54%)	27 (39%)	111 (49.3%)	30 (60%)	81 (46.3%)
Work Experience at Company/Internship	1	0	1 (0.4%)	1	0
Cold Call/Direct Approach to Company	1	0	1 (0.4%)		1
Internal Promotion	4	6	10 (4.4%)	1	9
Transfer or Internal Job transfer	3	4	7 (3.1%)	1	6
Self Employed/started own Company	0	1	1 (0.4%)	0	1
SELF-OPPORTUNITY	9 (6%)	11 (16%)	20 (8.9%)	3 (6%)	17 (9.7%)

RECOMMENDATION 2

SHOWCASE THE VARIETY OF OPPORTUNITIES AND CAREERS AVAILABLE IN CONSTRUCTION AND THE OPPORTUNITIES THAT CONSTRUCTION PROVIDES TO DO EXCITING, INTERESTING, AND MEANINGFUL WORK.

"I feel proud to say, 'We're building <the Project>, and people go, 'Oh, wow!' and they want to know all of the facts and figures and what's happening, is it still going on track and all that. So, there's a lot of interest externally, and you feel good that it's something that is so prominent."

- CAREER CHANGE INTERVIEWEE

"Advertise how broad employment positions are in construction (breaking down the stereotype that construction is all about 'being on site' and physical labour). I've spoken to women before who were unaware of the types of roles construction offered on the office-side. This would allow them to find their position which suits their skillset."

- CAREER CHANGE SURVEY RESPONDENT

Extensive research (Bigelow et al 2015, Moore and Gloeckner 2007, Perrenoud et al 2020 and Oo et al 2020) has shown that when it comes to attracting young women to Construction, several family and societal factors, individual traits and characteristics and environmental and sociological events draw women to the industry (or drive them away). Family, parents - especially fathers in Construction have an outsized influence in encouraging girls to pursue a construction career as does mentorship and role models. On the other hand, the education environment is frequently found to be the greatest negative environmental influence, with stereotypical representations of Construction careers provided by career advisors driving young women away from Construction. Perceptions of career opportunities play a highly influential factor in attracting women as do

individual traits such as high school academic skills and interests, personality, and strength of self-efficacy.

Beyond early career choice, there is limited research on those factors which attract women to Construction. However, recent US research by Perrenoud et al (2020) which examined the attraction of women in to managerial roles in Electrical Construction in the US (drawing on earlier research by Bigelow et al 2017, Bigelow et al 2018 and Bigelow et al 2019) found that women rated career opportunities followed by salary and wages, family relationships in the industry and available training and industry image as the five most positively influential factors for them entering the Construction industry.

FINDING 4

CAREER OPPORTUNITIES (76.6%) FOLLOWED BY SALARY AND WAGES (73%) WERE RATED AS THE MOST POSITIVE ATTRACTION FACTORS BY BOTH CAREER CHANGERS (WITH < 10 YEARS CONSTRUCTION EXPERIENCE). INDUSTRY IMAGE IS ONLY RATED BY 41% OF THESE WOMEN AS A POSITIVE INFLUENCING FACTOR.

In my research, I asked Survey respondents to rate from highly negative on one end to highly positive on the other these same 'influencing factors mentioned earlier from Perrenoud et al (2020). I compared Career Change women's responses and First Career women (with less than 10 years' experience in Construction) as I thought this would be an interesting point of comparison given much of the analysis in this space has been focused on women who join early in their career, and I was curious to see what, if any, difference there were between the two groups. I found that both First Career and Career Change women rated 'career opportunity', followed by 'salary/wages' as their two most positive influences for joining the Construction industry in that order (see Figure 3 for results). However, First Career women rated 'career opportunity' more strongly as an attraction factor (82.6% positive, compared to 76.6%), whereas there was less difference with respect to the impact of salary/wages as an attraction factor between these two groups.

There were three other key differences between the two cohorts: 'family influence', 'industry image' and 'no other opportunity for work'. For First Career women, 'family influence' was a much greater positive influence, with 60% rating this as such. Whereas, for women who had made a Career Change it was much less of an attraction factor (positive for only 38% of women). In terms of 'industry image', whilst both groups rated this factor as a moderately positive influencing factor (both at 41%), First Career women rated the industry image as a negative influence (28%) which demonstrates that the image of the Construction industry still suffers from a poor enough reputation to deter women when they are making early career choices, although Career Change women did not rate Industry Image as negatively (19%). Finally, First Career women who responded negatively to 'no other opportunities for work' was double that of Career Change women (28% compared to 14%). It was also the only factor in any of the cohorts, which had a greater percentage of women rating it as a negative factor than those who rated it positively. Curiously, these results are like the findings of Bigelow et al (2021), which used this same scale and dataset as Perrenoud et al (2020) to analyse attractiveness to the US electrical Construction industry by age (rather than gender). In their analysis, they found that the under 30's negative responses to 'no other opportunities' were much higher than older age groups.

Figure 3: Influence of Factors which attracted women to Construction (less than 10 years construction experience)

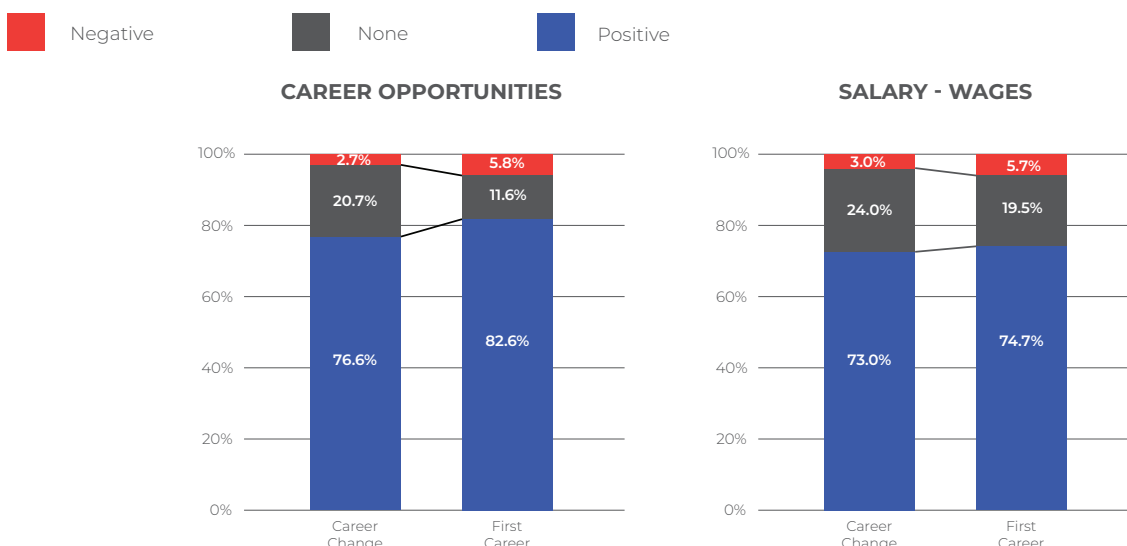


Figure 3 Continued: Influence of Factors which attracted women to Construction (less than 10 years construction experience)

Negative None Positive



FINDING 5

WOMEN UNDER THE AGE OF 35 (CAREER CHANGERS AND FIRST CAREERS) REPORT HAVING SEVERAL OTHER OPPORTUNITIES FOR WORK, BUT STILL ELECT TO PURSUE A CONSTRUCTION CAREER BECAUSE THEIR POSITIVE PERCEPTION OF THE CAREER OPPORTUNITIES OUTWEIGH NEGATIVE PERCEPTIONS (SUCH AS INDUSTRY IMAGE)

Given Bigelow et al's (2021) findings, I thought age would be an interesting dimension to investigate further in the data on attraction to join Construction, especially as Career Change women with less than 10 years' experience were well represented in the sample, with slightly more under 35 years of age (56.2%) and the remaining 43.8% over 35. Whereas First Career women were almost entirely under 35 (96.6%), with only a tiny 3.4% over 35. When the data analysis was conducted to examine the experiences of women with less than 10 years construction experience, the results showed that the influence of family was a much less significant attraction factor for women over the age of 35 (at only 27.8%) Whereas more than half of women under 35 (51.2%) reported influence of

family as a positive influencing factor. Career advising, is less an attraction factor for women over 35, which is to be expected given they are furthest away from career advising in the school system. Industry image is about the same between the two groups. However, 'no other opportunities for work' is rated as a negative influencing factor for women under 35 at 20.6%, and only negatively rated by 12.5% of women over 35. This data suggests (like Bigelow et al 2021) that women under 35 (of which almost every First Career woman is), had other opportunities in other industries, but still chose Construction. This difference is also supported by the results for the 'career opportunities' factor, where 82.6% of First Career women indicated that the career opportunities available in Construction attracted them to the industry. On the other hand, Career Change women may have slightly fewer career alternatives, but still see significant opportunity in Construction, hence the lower negative response rate for the 'no other opportunities for work' factor and high rate of 'career opportunities responses'.

FINDING 6

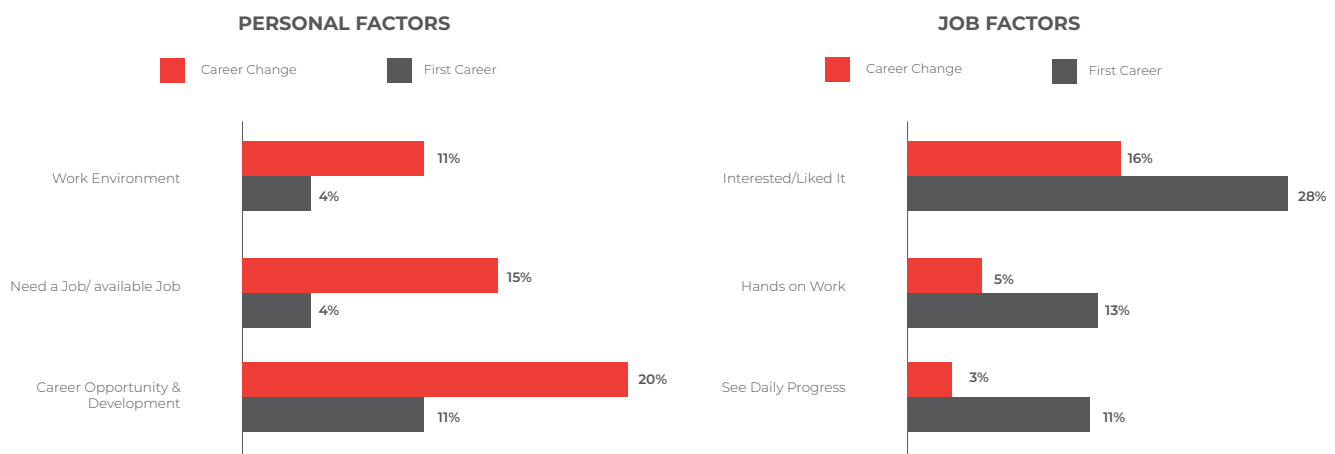
CAREER CHANGE WOMEN SELF-REPORTED THAT FACTORS SUCH AS CAREER OPPORTUNITY (20%) AND DEVELOPMENT, BEING INTERESTED IN OR LIKING CONSTRUCTION WORK (16%) OR NEEDING A JOB AND FINDING ONE IN CONSTRUCTION (OR ONE BEING AVAILABLE) (15%) ATTRACTED THEM TO CONSTRUCTION.

Survey respondents were also asked to answer an open-ended question about other reasons which attracted them to Construction (see Table 2 later in the report). They were asked after the survey questions, so they could reflect on those reasons which were not available to rate earlier in the survey. For those First Career women, the top three other reasons for choosing a construction career, were finding it 'interesting/liked it' (28%), followed by it being 'hands on work' (13%) and 'variety of challenges/locations/projects' (13%). On the other hand, Career

Change women rated the top three reasons as 'career opportunity and development' (20%), interesting/liked it' (16%) and 'needed a job/available job' (15%).

It would appear from comparing the two cohorts (Career Change and First Career), that whilst both had been in the Construction industry the same time (less than 10 years), personal factors appear to have a much greater influence on attracting Career Change women and the nature of the work appears to have a much greater influence on those who are First Career. This is most obvious when comparing the difference between these factors between the two cohorts (see Figure 4). In terms of personal factors, Career Change women rate these factors higher; 'career development' (20% vs 11%), 'needing a job/available job' (15% vs 4%), 'work environment' (11% vs 4%). In terms of job factors, First Career women rate these job factors higher i.e. 'had a degree or related training' (11% vs 2%), 'see daily progress of work/build things' (11% vs 3%), 'hands on work' (13% vs 5%) and interesting/liked it (28% vs 16%).

Figure 4: Career Change and First Career Women (<10 Years Exp). Response to open-ended question on factors which influenced their choice to join Construction



FINDING 7

BEYOND CAREER OPPORTUNITIES AND DEVELOPMENT, THE RESULTS OF THE SURVEY AND INTERVIEWS DEMONSTRATE THAT CAREER CHANGE WOMEN FIND CONSTRUCTION WORK INTERESTING, EXCITING, AND VARIED AND THIS IS AN ATTRACTION FEATURE FOR WOMEN, OFTEN LEFT UNEXPLOITED BY ORGANISATIONS AS AN OPPORTUNITY TO COMBAT NEGATIVE IMAGES OF CONSTRUCTION HELD BY THE PUBLIC.

When looking at the coded attraction factors data (Table 2) through the lens of age, women under 35 report 'interesting work' (22.2%) more frequently than they do 'career opportunity and development' (17.5%), nevertheless the top five for the two age cohorts are largely the same as each other and the same as the analysis of Career Change/First Career with the exception of 'hands on work', which is more often cited as a factor for under 35's.

The survey findings indicate that construction work can attract more women to the Construction industry, and especially Career Changers by emphasising the career and development opportunities available to women in Construction and explaining the depth and breadth of opportunities available. As one Career Changer from the survey responded "Showcase more women in the industry, across a big variety of roles in the industry. Very often when an image of women in construction is provided it shows hard hats and high-vis, whereas there are a raft of other roles available. I had no idea of the diversity of jobs in construction, as

well as the diversity within a job - this is what excites me about the industry."

In this same vein, even though 'needed a job/available job' also rated highly as an attraction factor for Career Change women, they also rate 'variety of work' just as highly and 'interesting/liked it' slightly higher as attraction factors. Meaning that Career Change women are attracted to the work that happens in Construction and find it interesting and exciting and want to be part of it too. Several women in the interviews, shared that this feature was one of the things they enjoyed most about their jobs, the ability to be part of something, to look out on site and see it changing every day, to make a difference in their community. Construction could do more to provide an insider view of Construction related work and the different kind of career opportunities available through a variety of mediums, including social media.

Finally, as the results of the study show, women who make a Career Change will be at different stages of their life and this will alter their perceptions of construction and the factors that influence them to join. As the analysis of survey results have shown, women over the age of 35 were less deterred by the industry's image compared to women under 35 and perhaps reflecting later life stages, the work environment such as hours of work, flexibility became more important. Targeting women over the age of 35 from other industries who are less perturbed by the industry's image, whether as an outcome of life experience or work experience also grows the cohort of women role models and leaders in the business.

Table 2: Other self-reported factors which attracted women to Construction (<10 years Construction exp)

CODED ATTRACTION FACTS	CAREER CHANGE (<10 YRS.) (%)	FIRST CAREER (<10 YRS.) (%)	DIFFERENCE	<35YRS (N=126)	>35YRS (N=59)
Career Opportunity and Development	20%	11%	9%	17.5% (22)	16.9% (10)
Interesting/liked it	16%	28%	-12%	22.2% (28)	13.6% (8)
Needed a job / available job	15%	4%	11%	9.5% (12)	15.3% (9)
Variety of challenges	15%	13%	2%	8.7% (11)	13.6% (8)
Features of the work environment	11%	4%	7%	7.9% (10)	11.9% (7)
Job security	5%	0%	5%	3.2% (4)	3.4% (2)
Attractive Employer	5%	2%	3%	2.4% (3)	6.8% (4)
Make a difference for Gender Equity	5%	6%	1%	4.8% (6)	6.8% (4)
Hands on Work	5%	13%	-8%	8.7% (11)	3.4% (2)
Be part of a legacy	4%	1%	3%	4% (5)	6.8% (4)
Previous experience in Construction	3%	6%	3%	4% (5)	3.4% (2)
Family in industry	3%	-	3%	0.8% (1)	5.1% (3)
Non-Family Relationships	3%	2%	1%	0.8% (1)	-
See daily progress	3%	11%	-8%	7.1% (9)	1.7% (1)
Good at STEM	2%	6%	4%	4% (5)	-
Good Pay	2%	-	2%	1.6% (2)	1.7% (1)
Benefits	2%	-	2%	0.8% (1)	3.4% (2)
Had a degree/training	2%	11%	-9%	5.6% (7)	3.4% (2)

*Attraction factors with a difference >5% highlighted

PART B

MORE COMPLEX RECOMMENDATIONS TO IMPLEMENT

RECOMMENDATION 3

CREATE MORE INCLUSIVE RECRUITMENT PRACTICES AND THEN WORK WITH MANAGERS TO OVERCOME INFORMAL PRACTICES WHICH ARE PERVERSIVE IN CONSTRUCTION AND PREVENT DIVERSITY

“I’ve never advertised for a role. I normally have a role that’s vacant, and then I will have one or two particular people that I think or know that could fit that role, and then I will go and try and get them for that role and recruit them into that role.”

- HIRING MANAGER

Recent findings by George and Loosemore (2019) in Australia, suggests that masculinity in Australia may be more inclusive and less hegemonic than people assume and may not be as great a barrier to gender equality and diversity policies in Construction. They argue that today's 'construction masculinity' more closely reflects contemporary attitudes towards masculinity in wider society (perhaps because Construction is the largest employer of youth in Australia). Despite this observation, Australian and international research points to an industry which remains as highly masculine as ever. Despite commitments to diversity and formal policies and procedures which are intended to deliver gender equity, there is still a mismatch between policy and reality (Galea 2015). According to Galea (2015), informal recruitment practices in Construction and the predominance of men in leadership positions tend to disadvantage women during the recruitment process. Men are more likely to be recruited through informal networks including their family and family friends, schooling, sporting and industry connections in Construction, whilst women are more likely to be recruited through formal recruitment processes, like public job advertisements, applications and interviews (Dainty and Lingard 2006 and Galea et al 2020). When selecting candidates for jobs, managers (who are mostly men) also tend to “conform to organisational

norms and/or to their own work ethics” and favour applicants with existing connections in the company (Dainty and Lingard 2006. P.111).

According to Fielden et al. (2000), men's use of networks are not only helping them secure positions but also good salary and terms. On the other hand, women must rely on more formal structural recruitment methods (job advertisement online) and are disadvantaged through stereotyped expectations of their career and personal priorities during the recruitment process. This is an outcome of an industry with typically inflexible and traditional employment frameworks established to accommodate the life cycles of men whose wives do not have full time careers. Galea et al (2020), also found this 'network effect' when it came to internal movements within organisations on to new projects, where Project Directors (mostly men) through a practice of 'picking your team' and taking 'your people with you' led to better outcomes for men, since men in their study appeared to have more awareness of this practice and then used their social networks to best position themselves. This preference for men and these mechanisms at work described above which perpetuate this preference, may be largely unintended and not deliberate acts of gender discrimination by men. As Holgersson (2013) argues,

“it is not necessarily men’s negative perceptions of women per se that lead them to primarily recruit men, but rather their preference for certain men” that embeds in organisational structures and cultures, such as in Construction where leadership is primarily men, practices that simultaneously ‘reproduce male dominance’ while allowing men to believe and feel they are pro-equality.

I would also add here that the very nature of the way in which Construction operates only heightens this ‘preference’ and compounds the issue. Almost every organisation within the industry operates in a commercial framework where making money is predicated on delivery of a project (procured competitively) in a high-risk environment with tight time and cost outcomes. A Project Director is made responsible then for delivering this outcome whilst

balancing many other priorities; safety, technical requirements, client expectations, community and stakeholders outcomes etc. and at a magnitude in many cases, far beyond the scale of what is familiar in most any other industry. For this, they are rewarded. And it is this very environment which lends itself to the kind of decisions discussed here (i.e. hiring people you have worked with before – probably men). All decisions (probably many) which do little to build a diverse workforce, but ultimately increase their sense of certainty of project performance against the risk of increased costs through greater headcount (more supervisors for inexperienced staff), reduced productivity and more time (whilst people learn), higher training costs (to help people to learn). The penalty for poor project performance is much higher than it is for lack of diversity in the team.

FINDING 8

CAREER CHANGE WOMEN WHO HAVE JOINED THE CONSTRUCTION INDUSTRY IN THE LAST 10 YEARS REPORTED FEWER BARRIERS TO RECRUITMENT (21%), COMPARED TO WOMEN WHO HAD JOINED THE INDUSTRY 10 PLUS YEARS AGO (34%).

Unexpectedly, in the survey results, I found that the majority of women who had joined the Construction industry in the last 10 years, when asked whether they had faced any challenges during the recruitment process said no (both Career Change and First Career). With only 32% of those First Career women reporting challenges and 21% of those who had made a Career Change.

Interestingly, as a further comparison, when I looked at those who had joined more than 10 years ago in both cohorts (First Career and Career Change), there was a rise in those who had encountered challenges during the recruitment process, with 44% of First Career women who had joined Construction directly more than 10 years ago reporting that they had encountered barriers, and 34% of those who had made a Career Change reporting the same.

FINDING 9

FOR CAREER CHANGERS WHO HAD FACED A BARRIER DURING THE RECRUITMENT PROCESS, THE MOST FREQUENTLY CITED CHALLENGE WAS A LACK OF CONSTRUCTION EXPERIENCE (33%), FOLLOWED BY DIFFICULTY GETTING AN INTERVIEW (20%) AND THEN GENDER DISCRIMINATION – SEXISM (18%).

The survey included a free-text field, where women could share the nature of the challenges, they faced during the recruitment process (if they had faced any). Given that most women felt they had not experienced any challenges, the response rate for this question was low, with only 18% of Career Changers and 23% of First Career women (both with less than 10 years' experience' in Construction) sharing any challenges experienced (26 women all together).

However, for those who did provide insights, for First Career women, the number one challenge was 'Gender discrimination - sexism' (29%) followed by 'difficulty getting an interview' (18%). Whereas for women who had made a Career Change and shared their challenge, the most frequently cited challenge was 'lack of construction experience' (33%), followed by 'difficulty getting an interview' (20%), then 'gender discrimination – sexism' (18%).

All of this presents a combination of factors which make it hard for women to join Construction, especially if they are making a career change and don't have construction experience or related qualification. Firstly, they can't see the advertisements (recruitment though networks), and that requires them to be heavily reliant on their network to secure a job in Construction, which they are less likely to have. Should they overcome all of this, they are disadvantaged because of stereotypes about the ideal 'fit' for Construction and a bias of male managers towards hiring people like themselves. They are even less likely to be considered a good fit because they haven't been able to prove themselves through their construction experience, can't hit the ground running because the industry is unfamiliar (and will need

training), or because those hiring them are unable to appreciate and value the new capabilities they bring to the organisation from their previous work or life experience (see discussion of diversity case above).

The high prevalence of women in the survey data who have made a career change and joined the industry through their network (at a commensurate level to First Career women) indicates too that these women have been able to overcome some of the barriers associated with lack of Construction experience and other challenges mentioned earlier because they as a group are more networked in to the industry than would be typical (through family, friends or other connections). Comments such as this one from the survey data illustrate this "(I had) very little response to my CV and cover letter to job ads. If I did eventually speak to someone, the recruiter would say that I would struggle because I hadn't had any experience in the industry despite having many skills to bring to the table from my former profession. I had to resort to my professional/family network after having no luck after 5 months of job hunting". And while, several of the managers in the interviews said they valued the contributions of women because of their diverse perspectives and would value contributions of people with new perspectives and different capabilities, the informality and a lack of objective selection practices which over-emphasises construction experience and a reliance on networks for recruitment, disadvantages women and makes it especially hard for Career Changers to make it into the industry.

RECOMMENDATION 4

ORGANISATIONS SHOULD INVEST IN DIFFERENTIATING THEMSELVES FROM THE PERVASIVE INDUSTRY IMAGE OF CONSTRUCTION TO ATTRACT WOMEN TO MAKE A CAREER CHANGE

“Show it for what it really is. The industry has been nothing but supportive and welcoming to me. The work is never as hard or tough as society makes it out to be. A lot of media portrays construction as rough, but we need to show women that it is a safe, explorative and creative industry.”

- CAREER CHANGER IN SURVEY

People are attracted to organisations which are a good fit with the perception of their own values, they want to work for organisations where they feel it's a good fit for them and a place where they can achieve their goals (Van den Broeck et al 2014, Ng and Burke 2005). However, research has shown that when potential employees are 'far from the organisation' i.e. they are perhaps just thinking about changing industries rather than at the point of having applied for a job with one company and coming in for interview, they rely on their perceptions of industry values rather than that of the organisation to direct them. So even, when organisations within an industry are different from each other or very different from the 'industry norm' – the candidate will not really differentiate between them, the industry image is all pervasive (Vanderstukken et al 2019). This is a problem in attracting Career Change women. Construction has an image problem which we have explored earlier. Since these women will be less likely to know the industry and the organisations within it in their job

search activity, unless organisations actively target these women and differentiate themselves from the pervasive image of Construction, women are unlikely to look at Construction as an option let alone an individual company (Vanderstukken et al 2019). This would be the case in any industry. Say you work in Construction now and entertain the thought that you might like a total change of industry. For most people, this is a scary and risky move. In the interests of time saving, you would probably think about what industry you might be most happy in before you started your job search, so you could narrow things down. What would you think about a move to manufacturing? Unless some organisation is especially well known to you, you are very unlikely to start your job search by looking at a particular company. This is the issue for Construction and the attraction of women making a Career Change – the unknown attributes of individual companies.

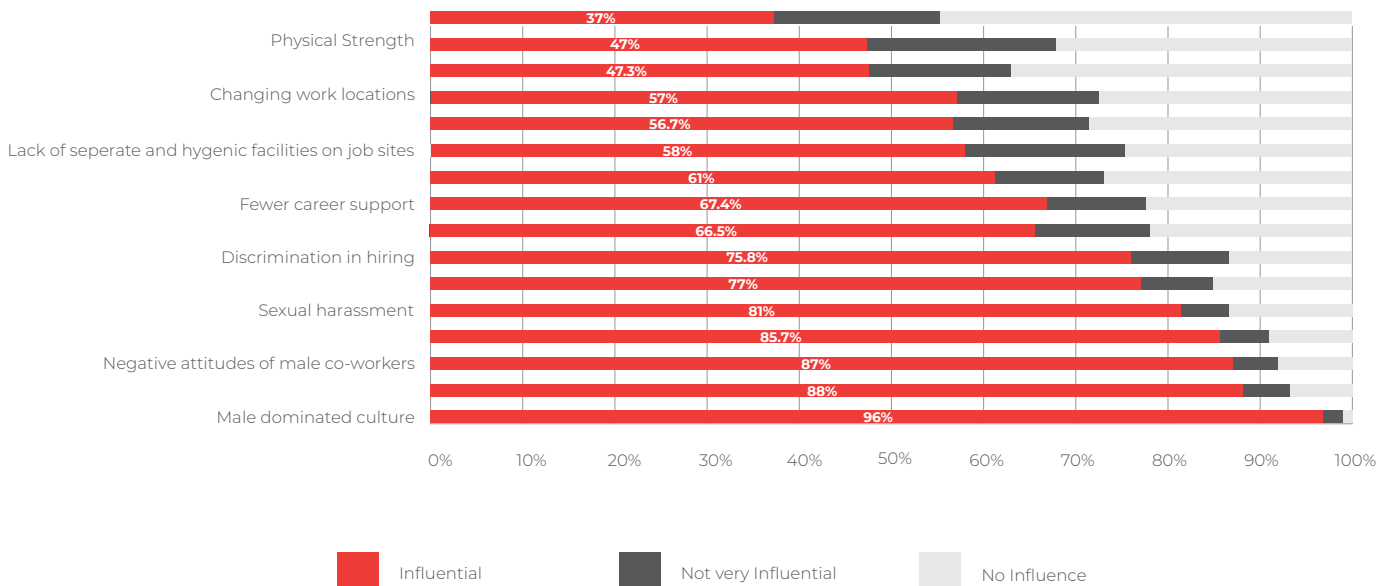
FINDING 10

96% OF CAREER CHANGERS WITH LESS THAN 10 YEARS' EXPERIENCE REPORTED THAT THE INDUSTRY'S MALE DOMINATED CULTURE PREVENTED WOMEN FROM WORKING IN THE CONSTRUCTION INDUSTRY

To understand more about the factors which deter women from Construction, I included a question in the survey which asked women to rate 16 factors that they believe keep women from working in Construction, rating them from 'not influential at all' to 'extremely influential'. For Career Changers with less than 10 years' experience, the most significant barriers were 'Male dominated culture' (96% said it was

an influential factor), followed by 'Unequal treatment on job' (88%), 'Negative attitudes of male co-workers' (87%), 'Difficult to balance work and family' (85.7%) and 'Sexual harassment' (81%) - (see Figure 5). Apart from 'Difficulty in balancing work and family' (which perhaps should be included because as seen earlier it is an example of an industry work environment setup for men), all of these factors point to a culture that would not align with the values of most people, let alone a woman looking to make a career change.

Figure 5: What factors do you believe keep women from Working in the Construction Industry (Career Change < 10 yrs. construction experience)



FINDING 11

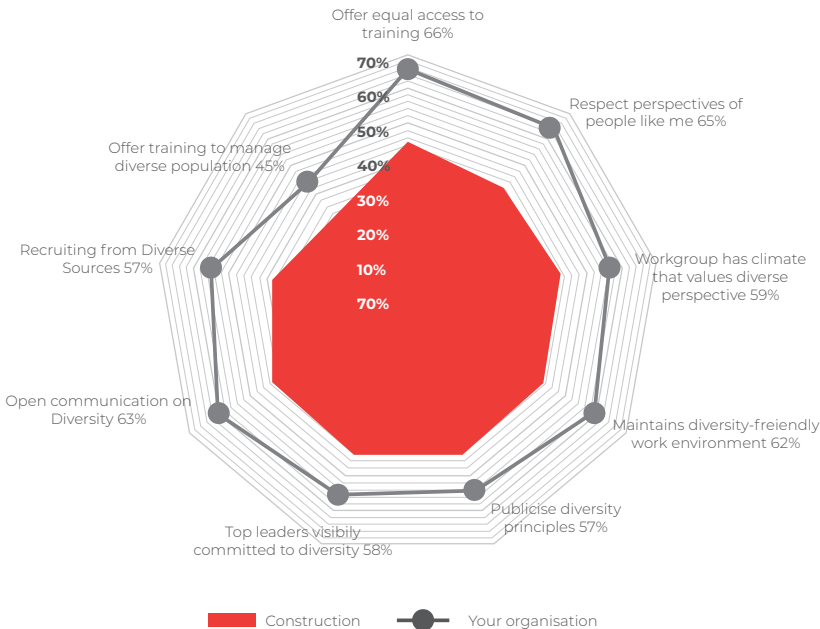
CAREER CHANGE WOMEN HAVE A MORE POSITIVE PERCEPTION OF THE VALUE THEIR OWN ORGANISATION PLACES ON DIVERSITY THAN THEY DO THE WIDER CONSTRUCTION INDUSTRY IN WHICH THEIR OWN ORGANISATION OPERATES WITHIN.

As discussed earlier, several women who made a Career Change joined Construction through their network. It is possible that these women were more inclined to join these organisations, because they were afforded greater visibility of that organisation's values, rather than the pervasive image of the industry most might have. This difference in perception of industry and organisational reality is most telling when I asked Career Change women to rate perception of diversity being valued in both the industry and in their organisation (from 1 -well below expectations to 5- well above expectations). For every factor, the mean score was higher (meaning it was more positively rated), for participants rating their own organisations than for their rating of the wider Construction industry (see Figure 6). For each factor, about a third of Career Change women said the industry was performing below expectations, whereas about 45% of women for each factor said the industry was performing above expectations. On the other hand, 60% of

Career Change women said their organisation was performing above expectations for each factor and about 20% below expectations. The best performing factors for industry were offer 'equal access to training' and 'respect perspectives of people like me' (positively rated at 46% and 43% respectively) whilst the worst performing factors for industry were 'recruiting from diverse sources' and 'offer training to manage diverse population', which were scored below expectations by 38% and 48% of women respectively.

When it came to rating of organisation, women rated the same two diversity factors as their top factors, but there was a significant jump in the number of women who rated them positively compared to their industry rating; for instance 'offer equal access to training' rose from 46% to 66% and 'respect perspectives of people like me', rose from 43% for industry to 65% when organisation was rated (Figure 6). This pair of comments from a survey respondent are an example of this complex experience between industry perception and organisation perception. On Industry "I think there is genuine blindness or ignorance amongst the male workforce and leaders about the value of diverse workforce, and the hostility of most workplaces." And on organisation, they said "This is mainly led by one strong champion (the CEO). If she moves on, I suspect the workplace would revert to a much less diversity-friendly place."

Figure 6: % of 'Above Expectations' Rating of Diversity Factors in Organisation and Industry (Career Change women < 10 years' experience)



Clearly the industry, needs to address those things which deter women from Construction which have been identified, the answer is not simply to recruit more women making a Career Change, but to address the wider issues around women's participation in Construction which have been well researched and described elsewhere. However, if organisations wish to attract Career Change women, then they must pay special attention to efforts to differentiate their organisation from wider market perceptions of the industry and build familiarity with job seekers from

other industries. As the results on Diversity factors illustrate, whilst Construction still has a long way to go to get beyond diversity rhetoric, Career Change women are experiencing a better reality in their own organisations than the wider perception of the industry (even when they work in the industry). It's unlikely an entire industry can change the perception of the public in the short-term, however individual organisations can and become competitive in the market by doing so.

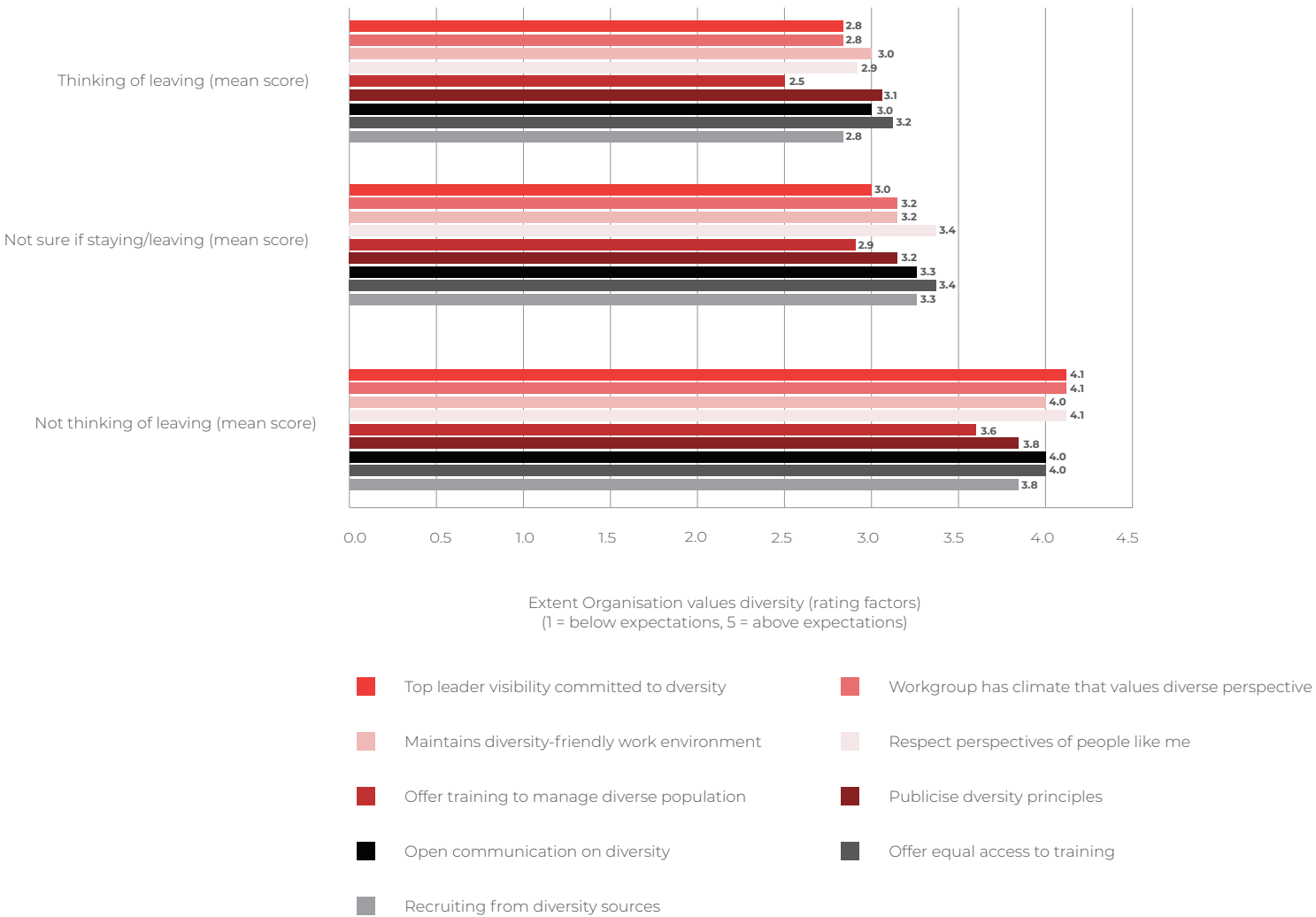
FINDING 12

ON AVERAGE, CAREER CHANGE WOMEN WHO SAID THEY WERE THINKING OF LEAVING THEIR ORGANISATION ALSO RATED THEIR ORGANISATION LOWER ON EACH DIVERSITY FACTOR, COMPARED TO THOSE WHO SAID THEY HAD NO PLANS TO LEAVE WHO RATED THESE FACTORS HIGHER.

It is difficult to determine the reasons why women might view their own organisations more favourably than the wider industry. It is possible that given their relatively short tenure in the Construction industry (ranging from 0-10 years) that they know their organisation well and have close proximity to the organisation's commitment to diversity but hold the same view about the industry as industry outsiders, because they are new. Another possibility is that their organisation does value diversity more than the industry beyond it. Either way it is a perception of the women answering the survey not a measure of the organisation. Given this, I was curious to see, whether there was a connection between

perceptions of diversity in an organisation and Career Changers impression of the organisation more broadly. Interestingly, when I looked at the results of the answer to the survey question 'are you thinking about leaving your current organisation?', those who said yes, scored their organisation's performance on every diversity factor lower than those who said they planned to stay at their job or organisation (see Figure 7). This presents the possibility that Career Change women who believe diversity is valued in the organisation, are more satisfied with their organisation or at least less likely to leave. These results are consistent with the findings by Holmes et al. (2021) from their 25 year meta-analysis of diversity climate research which found that employee's perceptions of diversity influence their feelings about their work and the organisation and have "consistently positive effects on a variety of important workplace outcomes". For example, they found diversity climate was strongly predictive of employee attitudinal outcomes like job satisfaction, organisational commitment, and engagement, and to a lesser extend performance and retention.

Figure 7: Intent to leave organisation and rating of their organisations performance on diversity factors (Career Change <10 years experience)



RECOMMENDATION 5

CONSULT WITH WOMEN TO DEVELOP PEOPLE STRATEGIES WHICH MEET THE NEEDS OF WOMEN

“There should be consultation with women to understand what factors and incentives would make them consider working in construction. There should be females looking at how construction is currently run and provide advice on how to make it more appealing. As long as the industry stays male dominated without female input, there will not be much growth I believe.”

- CAREER CHANGER IN SURVEY

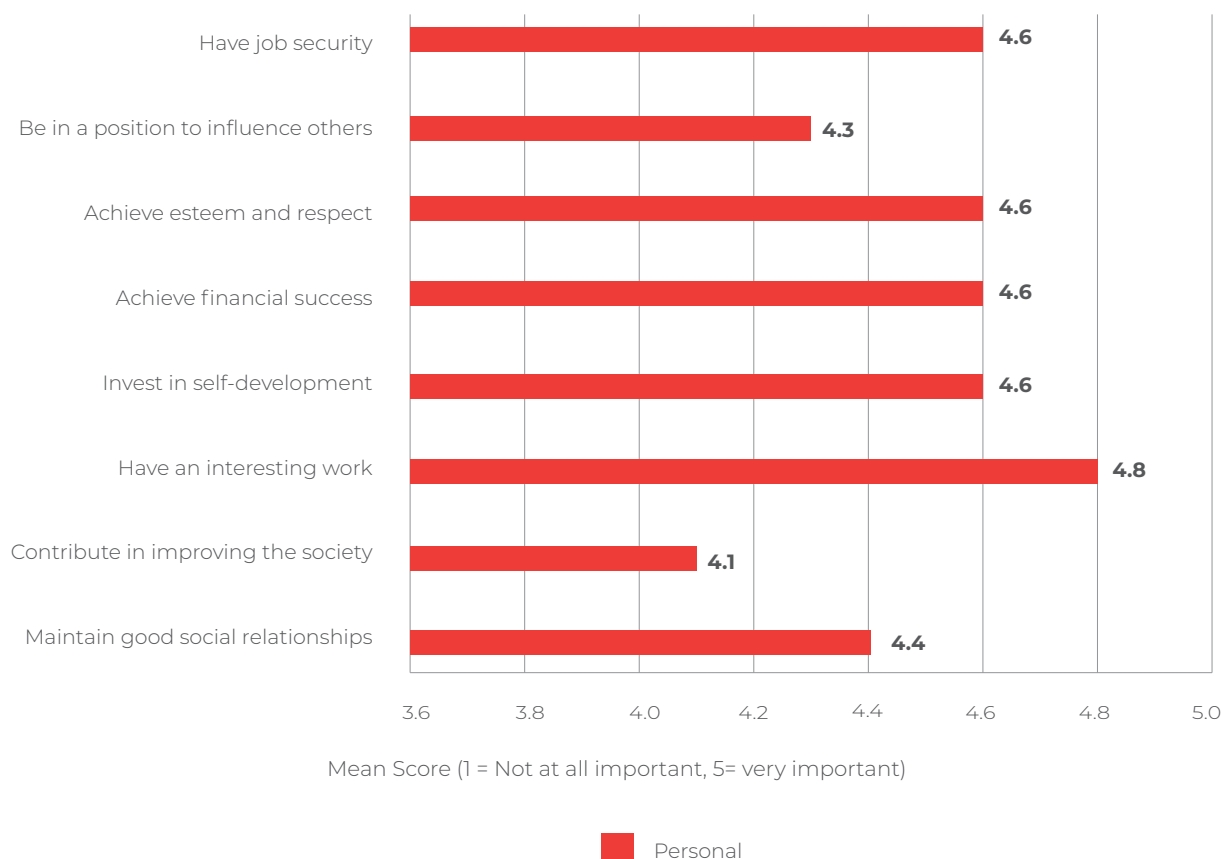
FINDING 13

11.5% OF CAREER CHANGE WOMEN ADDED FLEXIBILITY OR WORK-LIFE BALANCE AS A FACTOR WHICH WAS IMPORTANT TO THEM IN THEIR JOBS WHEN GIVEN A LIST OF FACTORS TO SELECT FROM.

Beyond asking women in the survey about their motivations for joining Construction as discussed earlier, I also asked women to rate the importance of eight factors which measured those aspects of employment that they most valued personally (from 1- not at all important to 5 – very important). Unsurprisingly, all these factors were important to Career Change women with less than 10 years' experience (results shown in Figure 8). Interestingly, whilst these same women were attracted to the Construction industry by Career Opportunities, followed by Salary/Wages as discussed earlier in the

paper (when they were offered factors to rate in the survey) they contributed largely 'personal factors' such as 'career opportunity and development', 'needing a job' or 'work environment' (based on their responses to the 'free text' question within the survey). The things that were personally the most important to women in their jobs when asked this question directly was to 'have interesting work' (with 78% of respondents rating this as very important and the remaining 22% of respondents saying it was slightly important), followed by 'job security' and 'achieving esteem and respect'. What was especially interesting, was that following this question, there was an additional free text question within the survey where women could add any other factors, they felt were important to them in their job. Here 11.5% of the survey's 226 Career Changers wrote Flexibility and/or Work/Life Balance.

Figure 8: The factors which are important to Career Changers (<10 years' experience) in their jobs



FINDING 14

THE MOST FREQUENT SUGGESTIONS PROVIDED BY CAREER CHANGE WOMEN IN THE SURVEY, TO ATTRACT MORE WOMEN INTO CONSTRUCTION WERE: OFFERING FLEXIBILITY (22%), MORE WOMEN IN LEADERSHIP ROLES (14%), EQUAL PAY, AND OPPORTUNITY (13%), MORE TRAINING AND DEVELOPMENT OPPORTUNITIES (11%) AND BROAD CHANGES TO THE CULTURAL ATTITUDES WITHIN THE INDUSTRY (11%).

In the survey, I also asked women who had made a Career Change what they thought Construction could do, to attract more women (a free text question, for which each response was coded in to a list of factors which were then counted). These suggestions not only reflect solutions to barriers to employment for women making a Career Change but are also invaluable insights into those factors which retain women who have made a Career Change and the experiences of women in the industry. As discussed earlier, Construction as an entire industry must

address these issues for its continued sustainability. Organisations which address these issues and set a higher standard in the industry, can leverage these opportunities to set themselves apart from the wider image of the industry and recruit and retain women making a Career Change (and in fact all potential employees who see their values reflected in the organisation).

Interestingly, these suggestions reflect other findings throughout the research. These suggestions reflect the same themes which were raised in earlier discussions regarding those factors which attracted Career Change women to Construction, those factors which Career Change women think prevent women from joining Construction and those aspects of their jobs which Career Change women value the most.

Below (Table 3) summarises the most frequently suggested recommendations by women (ranked by frequency), and some of their comments.

Table 3: Recommendation of Career Change women (<10 yrs. Experience in Construction) for Construction to attract more women to the industry from other industries

1. PROMOTE FLEXIBILITY IN ALL ITS FORMS (22%)

“Be open to talk about flexible working arrangements at the start of hiring or job advertising process, so women can manage their career and family and have clear expectations about their roles.”

“Offer part-time positions, flexible with work hours around school drop offs and pickups, provide training opportunities that are flexible, additional study opportunities but actually provide study leave, include them more within general meetings and discussions, engage with them of higher opportunities and support them to move into senior roles. Being a single female, I have put off having kids as I know that I will lose job opportunities and be overlooked due to my family commitments. There has to be a better way to give women the same opportunities and not be prone to HAVE to choose one or the other. This is why a lot of woman generally go into the public sector for the part-time work and benefits as it provides that additional assistance”

1. PROMOTE FLEXIBILITY IN ALL ITS FORMS (22%) CONTINUED

“Having flexibility in work hours and return to work option post extended leave (i.e. maternity). Have options for women with children to enable drop off/pick up at school. This should also be extended to men so that their partner is not having to do all of the childcare which in turn affects their work. This will also help prevent burnout in the industry for both men and women.”

“Allow women the freedom to make their own choices as to how they manage their work/life without judgement. Train managers to better support this. Support parents to return after career breaks (parental leave) including getting their careers ‘back on track’. Create a culture where men take parental leave (not just the availability of parental leave).”

“Flexible working hours and conditions, family friendly conditions (ability to take parental leave, half days, flexi time, days in lieu, designated shut down for during school holidays (Christmas and easter- not work occupations) shared job positions , encouraging professional pathways at uni , professional positions (not labor based), reduced working hours, mentoring, support, training pathways”

2. MORE WOMEN IN LEADERSHIP ROLES (14%)

“Concerted efforts to have women in senior leadership, stronger leadership from men on no tolerance for bad behaviour”

“Have actual female leaders, instead of just talking about it. Removing toxic male leaders that promote a culture of sexism.”

“More women in leadership positions, dedicated mentoring programs for women in construction”

“Allow more flexibility in roles, promoting internal females into positions of power/ leadership to ignite change in industry and these women will be advocates to their peers, friends and family”

3. ENSURE EQUAL PAY AND OPPORTUNITY (13%)

“Reward and remunerate roles appropriately and provide opportunities to network internally and externally. Provide appropriate career pathways, even if the individual is highly skilled as people need ongoing learning and development.”

“Equal opportunities, empowerment of women, development opportunities, safe environment.”

4. MORE TRAINING AND DEVELOPMENT OPPORTUNITIES FOR WOMEN TO ADVANCE (11%)

"Look at leadership/development programs that specifically support women's growth in industry. If you can't see it, you cannot be it - simple as"

"Training in the technical space. Women get discouraged in roles if they don't have managers that want to them to learn. They may be great at one thing and just need some support in something else to be great at a role."

"More female apprentices. To learn the ropes and how to handle subcontractors as well as get the notches on the board in terms of experience early on. I would say for every male apprentice, companies should employ a female apprentice. This may not be realistic for smaller companies but larger national companies could implement this."

"Elaborate on the opportunities available and give clear experience stories on what can be achieved. More women in senior positions will support the inclusive culture required to manifest great people and energy"

5. A BROAD CHANGE TO INDUSTRY CULTURAL ATTITUDES (11%)

"Get to the root cause of issues. A \$15k signing bonus isn't enough incentive to entice women to join projects where misogyny is rife. Promoting flexible working options on LinkedIn isn't going to mean anything if site managers shame people who use them. Enforcing 'appropriate workplace behaviour' training is meaningless if prejudiced language continues to be used by managers. P&C/HR/whatever you want to call them telling young, junior women that predatory men 'mean well but are just old school' and not enforcing any real disciplinary action for poor behaviour just exacerbates the issue."

"Providing a cultural change within their workforce if predominantly male and leaders showing women equal respect to encourage their involvement until it is seen and felt as normal. Need to lead by example as the work force respond best to this."

"It's the entire generation above about 35-40 years old. I find the younger workers / project managers to be more tolerant of diverse backgrounds. Although you can see the influence from the older generation. Its an entire cultural shift from a 'boys boys' jobsite."

"Better education to male colleagues about workplace harassment and treatment of women in the workforce"

"More support for women particularly if they report harassment etc, be fair and look into root causes rather than just move the woman into a different team or out of the company."

"From my experience, coming from another industry to construction can be a very difficult transition, and it takes a long time (or maybe not ever) to earn respect from men (particularly older generation) that have been in the industry their whole career. It is very difficult for a woman to be removed from the pre-conceived notion that we are all 'administrators' or useful for clerical support only. I think particularly in my field of Project Management, women have some invaluable natural traits that make this an excellent career path if they are afforded the opportunity."

CONCLUSION

The International Women's Day 2021 campaign theme of #ChooseToChallenge was a call to challenge and call out gender bias and inequality. Underpinning this theme is a universal truth; challenge brings change – “necessity is the mother of invention” being its corresponding proverb. It is the lifeblood of growth and innovation and whilst frequently painful and hard, it hones and develops capabilities, resilience, and new thinking. Without it much continues the same until some other force comes long anyway for better or worse.

The intent of this research was to investigate one small question in the midst of a period of significant economic, global and industry change - whether the Construction industry could reframe its perspective of a female “talent pool” to reach a new ocean of ‘non-traditional talent’, which would benefit not only the industry but the economic advancement of women in Australia and the wider economy. The answer is yes it can.

The findings of this research demonstrate that Construction needs women to make a career change to Construction more than these women need Construction. Organisations within this industry need their workforce to do the work that needs to be done now and the new thinking and ideas which will

position these organisations to be ‘future ready’ and sustainable beyond the tenure of most managers who resist diverse recruitment. Construction also has a responsibility to ensure women can join and thrive in the industry. Construction can provide excellent opportunities for women willing to make a career change. Opportunities to work in interesting, challenging, and exciting jobs where they can share their skills and build new ones for the future. However, Construction and the organisations which comprise the industry must make changes which provide women with more visibility of careers in Construction in their best light. Women need to see all the available jobs. And Construction must remove the barriers that prevent them, applying for, winning, and then staying in those roles (and advancing). By adopting some of the recommendations of this paper, construction organisations can significantly change the recruitment and subsequent workforce landscape. By accessing a wider pool of women, they will increase the participation of women in their companies and potentially change the culture of the industry and meet their social responsibilities to women and society.

APPENDIX

1. RESEARCH METHOD

The design of this research was based on a mixed research method, including a questionnaire survey and semi-structured interviews. The questionnaire consists of six parts: demographic and personal characteristics (1), pathway to the Construction industry and attraction factors to the Industry (2), Job Satisfaction (3), Diversity Climate (4), recommendations for the attraction of women into Construction (5) and intention to stay (6). In section 2 (pathway to the Construction), women were asked to gauge the extent to which several factors influenced their decision to join the Construction industry and free text to share any other additional factors. They were then asked if they faced any challenges in the recruitment process and the asked to share what these experiences were (free text). In Section 3 (Job Satisfaction) they were then asked how satisfied they were with their work in the Construction industry and the extent to which they agreed with the statements about factors which were important to them in their job. And then those same factors in terms of their belief that they are important for a job in the Construction Industry, followed by free-text where they could include additional factors. In Section 4 (Diversity Climate), they were asked about the extent to which they agreed with statements regarding diversity being valued in the Construction industry by their current organisation and then an assessment of the factors they believe keep women from working in the Construction industry. In Section 5 (Recommendation), they were then asked to share what they thought employers in Construction needed to do, to attract more women to the industry from other industries. Finally, in Section 6 (intention to stay), they were asked whether they are likely to stay in the Construction industry in the next three years and what factors would affect their decision to leave their construction career in the future.

The questionnaires were pilot tested with three women employed in Construction. Based on feedback from the pilot surveys, the questions were refined.

The survey was administered using the snowball sampling method. The targeted respondents for the survey were all women working in the Construction industry. Data collection started through communication of the survey through the National Women in Construction newsletter emailed to members. The vast majority of survey responses were obtained through this channel (over three quarters). The Survey was then issued by Engineers Australia (Victoria) in their email newsletter, to ACCIONA employees (the authors employer) in their weekly newsletter and provided to the authors' personal networks. Respondents were able to distribute the survey link and QR code to their respective networks. The questionnaire survey targeted all women who worked in Construction; however, questions were included to determine which respondents had made a career change or commenced in Construction as their first career. The intention of this approach was to allow comparison between those two cohorts of respondents.

Interviews were then conducted with 7 women in the Construction industry who has made a career change and 8 hiring managers/recruiters in Construction to further explore the experience of women who had made this career change and the role of managers in Construction to facilitate or encourage these women to join the industry. Interviewees were selected based on a narrower criterion from the questionnaire. Women who were interviewed must have made a Career Change into Construction in the last five years, and Managers or Recruiters must be working in a managerial or recruiter role in the Construction industry. Interview invitations were sent to the authors' professional networks and a selection of women who had identified in their survey response that they would like to participate in an interview. The ethical aspects of this study were approved before data collection began by the Human Research Ethics Committee (HREC) of The University of Sydney.

2. CHARACTERISTICS OF SURVEY RESPONDENTS

632 women responded to the survey. These responses were then analysed (based on their self-reported time in workforce, time in Construction and commentary on career path) and women were categorised in to three groups: First Career (192 women). These were women who joined Construction industry as their first job i.e. they joined after completing secondary or tertiary schooling. Women who had joined the

Construction industry after a job or career in another industry were coded as categorised as 'Career Change' (348 women). It is important to note that women who had been in employment (i.e. part time) whilst studying, before commencing a career in Construction were coded as 'First Career'. Any woman who could not be coded based on incomplete data or who could not be categorised in to one of the two cohorts were 'Uncategorised' (92 women). These women were not included in analysis regarding the experience of women who had made a career change.

Characteristics of survey respondents

CHARACTERISTICS	FIRST CAREER (192)	CAREER CHANGE (348)
YEARS OF EXPERIENCE IN THE WORKFORCE		
0-10	87	60
11-20	56	154
21+	49	134
YEARS OF EXPERIENCE IN CONSTRUCTION		
0-10	81	226
11-20	59	97
21+	52	25
COUNTRY OF BIRTH		
Australia	121	256
Rest of World	68	91
Not Disclosed	3	1
AGE		
15-24	34	11
25-34	63	123
35-44	49	118
45+	46	96

CHARACTERISTICS	FIRST CAREER (192)	CAREER CHANGE (348)
MARITAL STATUS		
Married/In a Relationship/Defacto	131	241
Separated/Divorced	12	30
Single	49	75
Not Disclosed	0	2
NUMBER OF DEPENDENTS		
0	114	205
1	28	53
2 or More	48	90
Not Disclosed	2	0
CURRENT OCCUPATION IN THE CONSTRUCTION INDUSTRY		
Senior Manager	35	53
Professional	80	120
Technician / Trades Worker	5	6
Community / Personal Service Worker	0	3
Clerical / Administrative Worker	12	59
Sales Worker	1	7
Machinery Operator / Driver	0	0
Labourer	4	0
Middle Manager	30	41
Manager/Supervisor	25	58
Not Disclosed	0	1
CURRENT OCCUPATION IN THE CONSTRUCTION INDUSTRY		
Self-Employed	7	12
Full Time	158	298
Part Time	19	30
Casual	8	4
Contract	0	4

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