

# Preparing for Building Equality: Insights for Success

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Premier  
and Cabinet



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## EXECUTIVE SUMMARY

### At a glance

- Women make up only 13% of Australia's construction sector, the nation's third largest employer. Lifting women's participation is critical, both in terms of mitigating construction labour shortages and leveraging the positive effects for industry, organisations and women themselves.
- Attitudes about gender that are formed in childhood affect women's consideration of a career in construction and are entrenched within the male-dominated industry. Women in the sector experience isolation, harassment, tokenism and comparatively slow career growth.
- Not only is it challenging to attract women to a career in construction, but it is also difficult to retain them. Few women advance to senior positions.
- To stem this attrition, obstacles at each stage of the 'career pipeline' must be addressed. This pipeline starts when girls are still in school, and spans their education and training, entry to the workforce and advancing in an established career.
- Nationally and internationally, numerous programs exist to increase the number of women in male-dominated industries such as construction. Many focus on encouraging young women to consider construction, but few assist women to succeed.
- The most successful programs to increase women's participation in construction address multiple career stages in tandem. They work strategically with partners to maximise their impact and benefit from the stability of ongoing funding.

### Introduction

There is an urgent need for clever, long-term interventions to improve the number of women in trades and professional roles in Victoria's construction sector. Women make up just 1.2% of construction tradespeople and only 11% of all managers in construction - rates that have been stagnant for over 40 years.

While the challenges of gender inequality are endemic to the labour force, the construction context is unique due to a traditionally masculine culture and resistance to inclusion and diversity.

The Victorian Government is taking action to address the problem by introducing the Building Equality Policy, which mandates minimum gender targets on larger government building projects. A longer-term strategy running parallel with this policy would provide an opportunity for a generational shift in the Victorian construction industry.

## About this report

This report, *Preparing for Building Equality: Insights for Success*, lays the foundations for a new Building Equality Strategy for construction in Victoria.

It draws together the knowledge necessary for the Strategy to deliver on its aims of having a broad, international outlook, using a robust, research-led approach.

This report considers five areas of research to ensure the strategy can capture synergies wherever possible. The five areas summarised in this report include:

- A review of national and international literature
- A review of national and international programs aimed at improving gender parity in construction
- An examination of case studies of outstanding programs nationally and internationally
- Focus groups and interviews with women, women's groups, and employers on their opinions and understandings about gender and professional roles in the Victorian construction industry
- A summary of Victorian Government initiatives relating to women in construction.

## The leaky pipeline

The construction industry's gender problem has been described as a "leaky pipeline". Women face a myriad of challenges during a career in construction. As women encounter these obstacles, the number of women who continue through the career pipeline lessens at each stage, until it's barely a trickle at the later stages.

Supplying this pipeline in the first place is difficult, and the pipeline from education and training to career growth is permeable. It is, therefore, crucial to understand the roadblocks women face at each stage – starting with the obstacles to considering a construction career in the first place, and the barriers to their career progression.



The critical challenge for the new strategy is to ensure women consider construction as a viable career and they are not lost along their career paths.

## Key findings

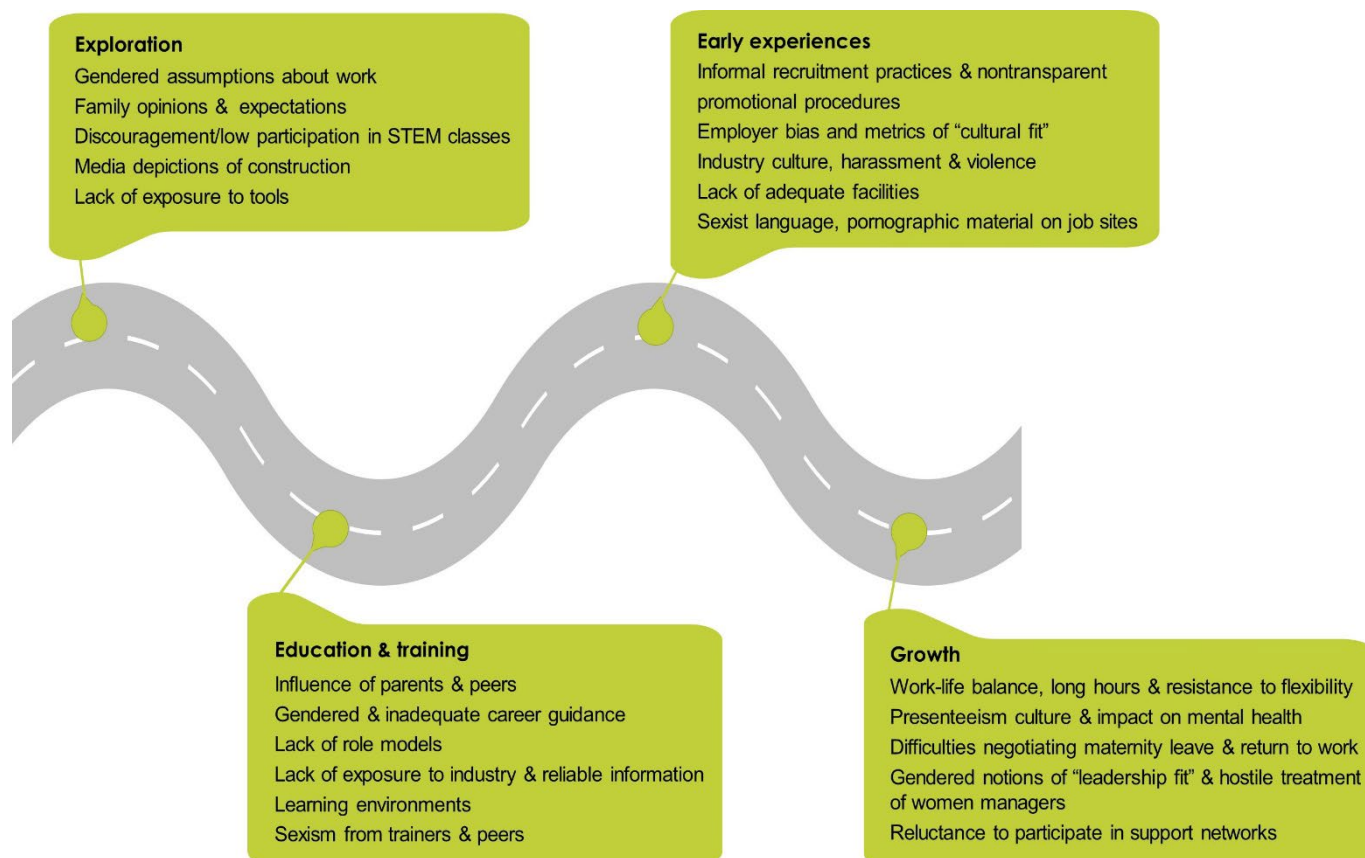
### Review of the literature

The review of 162 academic articles and reports was organised thematically around the career stages and examined for opportunities and obstacles to retention and success in construction.

Key points:

- Positive public perceptions of construction will help to spark girls' interest in this career path. A lack of reliable information and misconceptions of the industry remain key obstacles.
- Higher and vocational education may not be adequately preparing women for the reality of working in a male-dominated culture. Women entering the construction workforce can find the work environment was not what they anticipated.
- Policies that address workplace harassment can work to support and retain women in their early careers when they are supported by top-down leadership and are enforced in the workplace.
- Flexible working arrangements are not the norm, and maternity leave is often handled poorly. Long work hours and pressure to prioritise work have a significant impact on personal and family lives.
- Construction does not, at present, give "permission" for women to lead or succeed as gendered norms of leadership exist and women who are managers are treated with hostility.

The literature review identified key roadblocks at each career stage



### Review of existing programs

A total of 365 programs (249 international and 116 local programs) were reviewed. The programs focused on increasing women's involvement in construction and other male-dominated industries, such as engineering and mining.

Key points:

- Many programs attempted to increase girls' awareness of careers in construction while their ideas about gender and work are developing. Education programs also target those who influence career decisions, such as parents and teachers.
- Hands-on exploration of construction can improve women's confidence using tools.
- Support activities for women in construction have typically included networking initiatives, mentoring programs and professional development.
- Various programs focused on cultural change in recognition that recruiting more women into male-dominated industries would not solve the problem if the culture of exclusion and discrimination was not addressed.
- Many programs were only funded in the short-term, limiting their long-term impact. Programs that succeeded in assisting women's entry to and progression in male-dominated careers were supported by numerous program partners or industry bodies.

### Examining best practice case studies

Six programs (four international and two local) were selected for more detailed examination.

Case Study	Career stages	Focus
Women Can Build - Europe	Exploration Education and training Early experiences	School-aged girls, women, VET sector, companies, trade roles, construction.
Women into Construction's 'Moving on Up' - UK	Education and training Early experiences	Women, career changers in construction, companies, professional and trade roles, construction.
Boss Ladies Project - Denmark	Exploration Education and training Early experiences	School-aged girls, schools, women, companies, VET sector, trade roles, construction.
Frauen in Handwerk und Technik (FiT) - Austria	Exploration Education and training Early experiences	Unemployed women, VET and university sector, professional and trade technical roles (any with a minimum 40% women).
NAWIC Victorian Chapter Mentoring Program	Early experiences Growth.	Predominantly professional roles, women in built environment including construction
Supporting and Linking Tradeswomen (SALT)	Exploration Early experiences	School-aged girls, women, schools, companies, male-dominated trade roles, including construction.



The common factors behind their success were:

- They directed initiatives at multiple stages, tackling multiple career barriers in tandem
- They extended their reach and built support by cooperating with multiple stakeholders
- They were bolstered by ongoing funding and partners such as government and industry
- They often began with volunteers and were managed by individuals passionate about changing traditional male occupations.

These programs serve as models that could be successfully replicated in Victoria.

#### *Women Can Build*

Involving extensive consultation, this multi country program resulted in the development of comprehensive well designed materials. Focussing on the VET sector, it engaged women through hands-on experiences, retrained trainers through a MOOC, redesigned courses, and developed action plans for companies. This could be replicated across all Australian States to defray costs. The 100 testimonies provide positive examples to women, their parents, teachers, and employers. The program was also willing to adapt in the case of unintended consequences of their actions gained through a highly consultative process.

#### *Women into Construction's (WiC) 'Moving on Up'*

This organisation is a great example of how changes to government procurement on large public projects has helped establish an organisation that is now self-sustaining. Running programs across the UK, WiC has focussed predominantly on women in the trades. A crucial part of their work has been encouraging cultural change and working with companies over an extended period and at multiple levels. 'Moving on Up' is one of their programs aimed at women progressing to better paid, secure roles. It supports and trains women and their managers. A similar initiative could help, say women in traffic management gain secure employment. The well-developed evaluation captured the value gained from the project.

#### *Boss Ladies Project*

This program has grown from a deep understanding of gender inequity and benefitted from ongoing funding. The importance of the Ambassadors is key to the program, and they are paid for their time. Young women initially encouraged into construction by Ambassadors, in turn, become Ambassadors. The program does more than a 'taster experience', identifying that confidence can only be built via multiple exposures in workshops and camps. The program has developed separate initiatives targeting different levels which operate holistically to encourage girls, support women, and enable cultural change in schools, VET institutions, and companies.

### *Frauen in Handwerk und Technik (FiT)*

This program successfully progresses 2/3 of its unemployed female participants to employment within male-dominated roles. An equivalent program could be implemented Australia-wide to engage women job seekers in training within construction (and other male-dominated industries). Additional financial support provided while gaining their VET or Higher Education qualifications and ongoing advice and support has been a critical element of the FiT programs. Support could be offered by sub-contractors equivalent to ABZ\*AUSTRIA. Knowledge built up within these organisations over a longer period of time has been critical to their success.

### *NAWIC Victorian Chapter Mentoring Program*

Already operating in Victoria and other states in Australia, NAWIC have demonstrated, mostly through the use of volunteers, what can be done to improve women's retention and career ambitions within the built environment disciplines. The program provides a forum for women to connect, gain skills and grow their networks. NAWIC has other programs that could be supported or replicated. Their plan to run a Buddy system with HE students would also address issues women face when first entering the industry. This initiative has the added possibility of creating a chain of ongoing mentor relationships, supporting women throughout their education and early to mid career.

### *Supporting and Linking Tradeswomen (SALT)*

The standout feature of these programs is their flexibility, allowing them to reach participants across the country, which may be of benefit in a large city as well as regional Victoria. Run by a passionate founder and a dedicated group of core volunteers, their focus has been on girls at a formative stage and career changers. In working with these groups, SALT has broken down gendered stereotyping of career options for women and girls, teachers, and industry. The development of their Women's Shed in Sydney provides accommodation for ongoing programs for women. Support for the expansion of SALT, or a similar initiative (involving elements of BOSS Ladies), is encouraged.

### Views of Victorian women and their employers

Perceptions of career roadblocks for women in professional roles in the Victorian construction industry were examined through focus groups and interviews with women, representatives of some women's groups and interviews with directors and CEOs.

#### Key points:

- Participants identified the need to promote a positive depiction of the construction industry to young women while they are still exploring career pathways.
- Career opportunities for women in construction were considered to be virtually invisible, particularly for those who do not have family members in construction.
- From adolescence to late career, women had to negotiate gendered expectations of work and behaviour, and others underestimating them.

- Both women employees and employers raised maternity leave and work-life balance as the most challenging roadblocks in women's careers.
- Professional women said resistance to flexible working conditions, including part-time work and job sharing, contributed to their slow career growth or movement away from senior management aspirations or the industry.
- Women are implicitly expected to organise domestic aspects of the workplace, including catering and birthdays, which contributes to a sense of insignificance and lack of authority.
- Migrant women face additional challenges with dual forms of discrimination at play.
- The directors and CEOs lacked the same level of insight into women's career hurdles, but from their perspective as business leaders, they were able to identify the systemic nature of industry challenges and the need for cultural change.

### Victorian Government initiatives

In recent years, the Victorian Government has supported initiatives to improve gender equality across all industries. The Victorian Government's Building Equality Policy, which came into effect in 2022, works alongside these efforts to create training and employment opportunities for women via government capital works projects.

A list of Victorian Government strategies and plans that may complement a new Strategy is included in this report.

### **Opportunities for action**

There are many ways to increase not only the supply of women to the industry but also to reduce attrition along their career path. These actions must be taken in conjunction with much needed industry change, which will help the working lives of both men, women and their families.

If this broader change is undertaken solely under the banner of gender equality, it could place women in the industry in a more precarious situation, as they will be on the frontline of any backlash.



#### Exploration career stage

**We must improve promotion of the construction industry and the career opportunities it offers.** Negative media depictions of the industry and the perception of a macho culture can deter young women and those who influence their career choices. Making visible the wide range of roles and offerings in construction is critical.

- Government should look to the exemplar case studies for programs that have successfully worked in schools and communities to introduce construction to girls, parents and teachers in Melbourne and regional Victoria.

- Construction industry groups can lead efforts to make the sector more visible to the wider community through media and campaigns. Women should be celebrated through sponsorship of an annual Women in Construction week.
- Industry bodies can work with schools to ensure career counsellors and teachers have a greater awareness of career opportunities in construction. Support programs can allow girls to explore and experience construction activities while they are still at school.
- Construction companies could partner with schools and use local construction projects to expose female students to the variety of trade and professional roles in construction.
- Government should support opportunities within the community for mature women seeking a career change to experience and explore construction. The establishment of a Women's Shed in a convenient and well-promoted location in Melbourne should be considered.



#### Education and training career stage

**We must make sure that construction education and training is welcoming for women and prepares them for the reality of the job so they are more likely to complete their course and enter the workforce.**

- Industry groups should be funded to provide support networks and mentoring for women apprentices and students throughout their education and as they enter industry roles.
- VET providers should be challenged to combat sexism and discrimination in their classrooms by giving staff appropriate training and holding them accountable to a code of conduct.
- The tertiary education sector must ensure their courses better prepare female students for the realities of working in a male-dominated industry.
- Tradeswomen should be supported through female-specific pre-apprenticeship programs, gender parity in apprenticeship training, and assistance with the purchase of tools.
- Government and industry should fund scholarships for mature aged women apprentices, particularly those with dependants, to boost their apprentice wage.
- Scholarships should also be provided to female students, from undergraduate degrees in other disciplines, for post graduate construction management education to assist their entry to professional construction roles.



### Early experiences career stage

**Women must be able to enter a safe and respectful industry.** Women are seeking meaningful, stable, long-term careers that provide room for advancement as well as family life, without taking a toll on their mental health.

- Industry should provide training to all staff involved in recruitment decisions to reduce unconscious bias within their practices.
- Company leaders must head efforts to implement policies and training on diversity and culture that improve inclusiveness and reduce the rewarding of presenteeism. Top-down commitment and a robust implementation of these policies are crucial to their success.
- Companies need to clarify and articulate pathways to different roles so that professional women do not miss out on vital experiences needed for future opportunities.
- Tradeswomen, being in such a minority, must be supported through their apprenticeship and early career. Paid ambassadors could be one way of mentoring them through this challenging period.
- Industry groups should provide mentoring and other support programs or early career professional staff, particularly those in site-based roles.



### Career growth stage

**The construction industry must make promotional criteria more transparent and adapt to support the demands on women having children and raising a family.** One of the most significant findings that emerged from this research was the pressure of the six-day working week and unrealistic demands from clients, which place enormous strain on women who are juggling work with caring roles.

- Industry groups should support women to succeed through good mentoring and leadership training.
- Companies should clarify and discuss promotional pathways with women employees and provide training to senior staff to reduce unconscious bias within promotional decisions.
- Governments and companies can lead the way by trialling new ways of working. They can stipulate realistic working hours and reward innovative work practices such as job sharing, part-time work, flexibility and mental health initiatives.

- Government and industry groups can support women to succeed by providing resources and training, for example, a guide to support women through pregnancy on-site or training on how to start their own businesses.
- Companies should implement more innovative strategies that support workers' well-being while still meeting deadlines. These could include job sharing and part-time roles.
- Unions and clients should get behind efforts to improve flexible work options, as these will ultimately improve job satisfaction for the entire workforce.

Overall, this report indicated that making the industry 'visible' to women, opening opportunities for mature women and encouraging and supporting them right through their careers will grow the numbers of women entering construction and reduce their attrition. To do this, we need to also embark on industry change, not driven for the sole purpose of gender equity, but to provide respectful, healthy workplaces for all.

# 1. INTRODUCTION

## 1.1 Background

In December 2016, the Victorian Government launched its first gender equality strategy, *Safe and Strong: A Victorian Gender Equality Strategy (the GES)*. The GES sets out a framework for enduring and sustained action to prevent violence against women through gender equality. To further support the GES, in its second Gender Equality Budget statement in June 2018, the Victorian Government announced \$0.5 million to work with the Building Industry Consultative Committee (BICC) to increase the proportion of women working in the construction industry. It resulted in the development of the *Building Gender Equality: Victoria's Women in Construction Strategy 2019-2022*

The strategy was created in partnership with key organisations in the industry. It included a desktop review of current literature, discussions using focus groups, and the development of three questions relating to attraction, recruitment and retention of women in trade and other on-site roles. Specific actions and pilot projects using key industry organisations were undertaken from 2019 to 2021, along with some research and an evaluation.

The Victorian Government's fourth Gender Equality Budget statement committed a further \$5 million over three years "to continue and expand upon the Women in Construction program and implement the Building Equality Policy by creating employment opportunities for women on major government construction projects". Therefore, subsequent funding was committed to further Women in Construction Strategy initiatives, bringing the total overall commitment to this strategy to \$2 million<sup>1</sup>.

One aspect of further work was developing the next strategy, namely 'The Building Equality Strategic Plan'. This plan would include a longer remit, comprising a scoped out eight-year program and a robust evaluation framework. The plan would be grounded in international best practices and a robust research-led approach in its development. The strategy would be cognisant of previous work undertaken, consider the views of Victorian women and their employers, as well as current initiatives within other parts of the Victorian government that may influence, impact, or have synergies with any proposed program of work.

This strategic plan development was divided into two stages. The first gathering together the background materials needed for the program development and the second developing the strategy and evaluation framework.

This report outlines the work undertaken for the first stage.

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<sup>1</sup> Personal communication from Marcelle West, Department of Premier and Cabinet, Victorian State Government.

## 1.2 Scope

This project comprised five specific activities:

- 1 National and international literature review.
- 2 Review of national and international programs aimed at improving gender parity in construction.
- 3 Exemplar programs both nationally and internationally.
- 4 Perceptions, opinions and understandings of women, women's groups and employers concerning gender and professional roles in the construction industry.
- 5 Summary of current state government initiatives related to future Building Equality initiatives.

The third and fourth activities required undertaking key informant interviews, interviews and focus groups. The collection of this primary data was undertaken with University ethics approval. The 5<sup>th</sup> item was based on information gathered through internet searches and advice from the Department of Premier and Cabinet and Department of Education and Training.



## 2. WOMEN'S CAREERS IN CONSTRUCTION: A REVIEW OF THE LITERATURE

### 2.1 Overview

This critical literature review can be used to situate the new Gender Equality Strategy within the current state of academic and industry research. The review considers national and international literature relating primarily to women in construction and pays attention to the wide variety of roles and occupations for women in the industry.

Despite a significant amount of literature on women in construction and other male-dominated industries, we identified a prominent gap in how it is currently considered or presented. The literature does not address the unique challenges women face at each career life cycle stage. A significant amount of literature on women, career development and male-dominated industries classify information within an attraction, recruitment, and retention framework (ARR model); however, a career lifecycle approach can be more valuable when providing supporting evidence for a strategy.

A modified version of Super's (1957) Life Career Rainbow framework was used as a base upon which to interrogate and discuss both the literature and existing programs. This EEEG framework accommodates women who change careers, enter construction later in their life, leave the industry or transition to different roles. A more complete discussion on these stages can be found in Appendix A.

The stages identified in our model include:

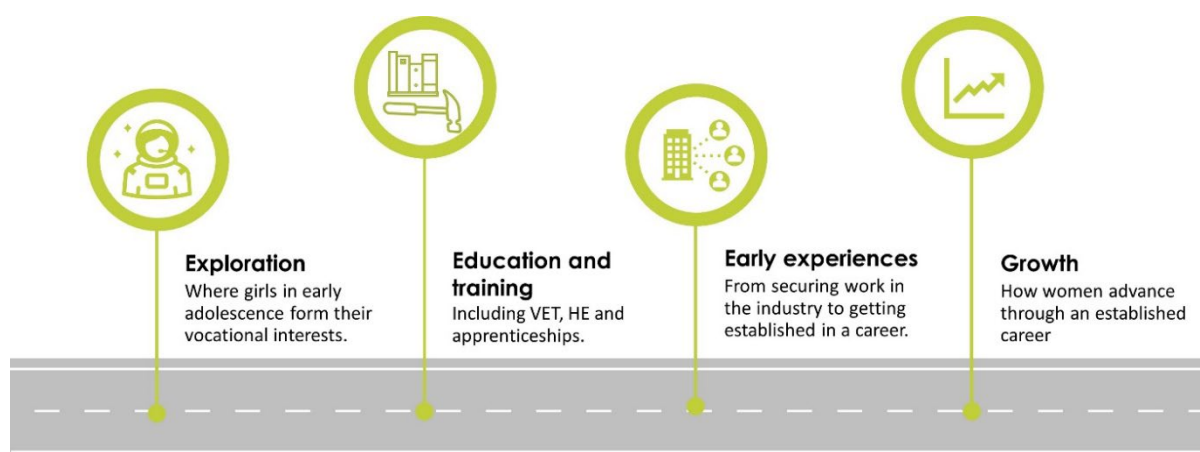


Figure 1. EEEG careers stages model

The substantive body of extant literature documents the obstacles women encounter within the construction industry in managerial, professional and trades roles, both on-site and in office-based roles. A significant proportion focussed on barriers women face in selecting or staying in the industry. The literature reviewed was primarily from western studies (UK, US,

Europe, AUS), thus enhancing their generalisability when applied to women's experiences in the Australian construction industry.

Collecting relevant literature for the review involved developing search terms and consulting scholarly databases. These databases included ICONDA, Scopus, Emerald Journals, JSTOR and SAGE. Utilising specific search terms allowed an initial selection of around 300 results that were then narrowed to the 162 academic articles and reports referenced in the review.

The review begins by identifying the main theories that apply across all career stages and impact women considering a career in construction and their experiences in the industry. These theories offer a holistic approach to understanding the vocational decision-making process as well as the experiences of women within their careers in construction.

The review begins in early life with the formation of self-concept and understandings of gender and work, through to the maturation and advancement stages of women's careers. As noted, the literature review has been organised around 'career stages' beginning in early childhood to teenage years and finishing in late career. This allows interrogation of the environmental factors at each stage. A summary of each career stage is then provided in Sections 2.3 to 2.6. From a career stages perspective, the literature review considers the roadblocks facing women and the opportunities for retention and success in construction.

## 2.2 Related Theories

These five sociological theories offer a holistic approach to understanding the vocational decision-making process as well as the experiences of women in their construction careers. These include an understanding of gender schema, self-efficacy theory, social cognitive career theory (SCCT), homophily and organisational support.

Ideas about what roles and behaviours are appropriate for men and women are established in early childhood and continue to develop over their lifetime. Sandra Bem's (1981) gender schema theory argues that information surrounding a child, gleaned from family, friends, the media and school, helps a child cognitively organise information into masculine and feminine categories (Bem, 1981). Children incorporate gender schema into their identity and begin to evaluate themselves based on the extent to which they adhere to it, thus regulating behaviour and providing the basis for future goals (Martin & Halverson, 1981). Empirical research documents that children express greater interests and perceptions of self-efficacy for jobs that align with their gender (Bridges, 1988; Ji et al., 2004a). Gender socialisation in childhood and the development of gender schematic thinking is a crucial element to gender segregation in the labour market and must be understood in order to tackle gendered notions of work.

Self-efficacy theory, developed by Bandura (1977), suggested a mutually influencing relationship between people and their environment and defined self-efficacy expectations as

beliefs about one's own ability to successfully perform a given behaviour (Lent & Hackett, 1987). Gender influences the context in which self-efficacy perceptions are acquired, and women tend to exhibit stronger self-efficacy for female-dominated pursuits (Bridges, 1988; Ji et al., 2004).

The SCCT framework builds on self-efficacy theory to examine career choice as a process in which individuals and their environment mutually influence each other (Lent & Hackett, 1987). Career-relevant self-efficacy beliefs are central to the SCCT as they are linked to performance and the development of interests and goals (Brown & Lent, 2013).

Homophily is the principle that interaction occurs at a higher rate between people who are similar in terms of class, race, gender, and education (McPherson et al., 2001). It is a widely cited explanation for women's exclusion from organisational networks and senior management positions (Ibarra, 1992; McPherson et al., 2001b). Homophilic interaction and recruitment practices are common in the workforce, and construction is no exception.

Finally, organisational support theory finds that employees in an organisation develop global beliefs concerning the extent to which an organisation values their contribution and cares about their well-being (Eisenberger et al., 1986). Perceived organisational support (POS) has been linked empirically to improved job satisfaction, work attendance, and affective commitment to an organisation (Allen et al., 2003; Rhoades & Eisenberger, 2002).

Organisational support plays a significant role in supporting women in non-traditional work and enforcing diversity policies that promote inclusion in the workplace (Allen et al., 2003; Leslie, 2019).

Taken together, these five theories form the basis of the literature review and inform a nuanced understanding of the obstacles facing women in male-dominated fields of work.

## **2.3 Exploration career stage**

This part of the review considers the exploration stage, starting in early childhood, to encompass the development of individual identity and educational and vocational aspirations. Super (1957) describes the exploration stage as the period in which individuals identify their unique capabilities and interests and consider how they align with occupations (Smart, 1998). This section looks at the development of individual identity and gender schema and moves through to the development of educational and vocational aspirations. The section finishes by looking at vocational decision making.

### **Development of individual identity and gender schema**

Gender socialisation and environmental influences in childhood significantly impact the types of careers young people consider as accessible and appropriate. The SCCT model suggests that individuals acquire ideas about occupations concurrently with the development of their identity (Lent et al., 1987). Martin and Halverson (1981) argued that gender identity is

formed by the age of three, and others have found that gender stereotypes of work are set by year 10 (cited in Struthers & Strachan, 2019). Following the SCCT framework, self-efficacy beliefs and outcome expectations relevant to occupations are formulated through learning experiences, vicarious learning, social persuasion, and affective states (Leung, 2008). The career cycle's exploration stage is when these experiences occur, and individuals formulate the early conceptions of their career path.

A substantial body of literature confirms that children have acquired gendered understandings of work by a young age. A US study of 6–12-year-olds found that children viewed construction-related jobs as highly masculine (Tieg & Susskind, 2008). Similarly, Millward et al. (2006) found that girls aged 14–16 years old are more likely to consider plumbing, mechanics and building as masculine (Millward et al., 2006). Culturally influenced sex-typed information gleaned about occupations are translated into perceptions of efficacy for participating in these roles. Numerous empirical studies reveal that young girls and boys generally express stronger self-efficacy for occupations that they perceive to be aligned with their gender (Ji et al., 2004). Their study of Grade 8 students found that male and female students expressed more interest and self-efficacy for occupations they perceived as employing more of their own sex (Ji et al., 2004).

In more recent research by the Australian Department of Education in 2017, the top 10 career aspirations for Australian girls aged 14–15 years included traditionally the gendered roles in teaching, nursing and beauty (DESE, 2017). Interestingly the boys' top 10 list included engineering and transport, ICT and science professionals (DESE, 2017). Findings that students are more inclined to consider pursuing occupations compatible with their gender identity is supported by both Gender Schema Theory and the SCCT, which emphasises how environmental factors impact career choice (Ji et al., 2004; Lent et al., 1994). Despite changing gender norms and increased awareness of gender segregation in the labour market, these statistics demonstrate that young people's understanding of and interest in careers is still organised along gendered lines.

Women with non-traditional gender schemas and egalitarian views about women's roles have been found to engage in non-traditional occupational pursuits. For instance, in a study of IT employees' gender schemas, Lemons and Parzinger (2007) found that women in IT had higher levels of non-traditional gender schema than women in the general population. Interestingly, men in IT were also found to have high levels of traditional gender schemas. This causes a schism between male and female employees in this male-dominated field, resulting in job dissatisfaction and frustration for female IT workers when encountering traditional ideas about women's work (Lemons & Parzinger, 2007). Hence, gender schemas are internalised and enacted by both men and women and remain relevant throughout life. However, schemas may be modified and taught (Bem, 1991; Perry, 1994). Bem argued that two antecedents to gender schema are age and education (Bem, 1991). Therefore, it has

been argued that occupational-related learning should occur in primary school years as gender identity develops (Tradeswomen Australia Foundation, 2019). Strategies that engage parents and school-aged girls at an early age should be aimed at countering gendered preconceptions, stereotypes and bias against women participating in male-dominated work (Tradeswomen Australia Foundation, 2019).

### **Development of educational and vocational aspirations**

Gender essentialism theory posits that women are inherently predisposed to caring, and social roles are deeply embedded in western culture (Meyer & Gelman, 2016; Struthers & Strachan, 2019). Traditional beliefs are that women are less rational, abstract and objective than men due to their focus on emotion and people. This difference informs the disparity between fields where men and women dominate, with women are often found in low-paid, caring roles with weak union support and unskilled status (Bagilhole, 2002). This is a significant issue for the labour market that causes rigidity and exacerbates skills shortages and an obstacle at the exploration stage that informs young women's educational and vocational aspirations development.

Assumptions that women are not interested or capable in STEM-related subjects is a major barrier to attracting women to the construction industry (Jones et al., 2017; Hackett, 1985). The literature reveals how entrenched gender stereotypes and cultural and economic barriers inhibit women's participation in STEM courses and male-dominated VET courses, leading to trade qualifications (Struthers & Strachan, 2019). Gender differences in mathematics preparation have been deemed a "critical filter" in women's career development that can prematurely "close off" career options, as fewer females pursue maths to a high level in schools (Hackett, 1985; Struthers & Strachan, 2019; Tradeswomen Australia Foundation, 2019; Bridges et al., 2019). Hackett (1985) theorised that mathematics was sex-typed as a male domain. In keeping with the self-efficacy model, Hackett found that gender socialisation, alongside the influence of parents, teachers, and peers, affects maths-related anxiety and maths-related career choice (Hackett, 1985). Classroom barriers also exist and contribute to young girls being "intimidated physically, emotionally and intellectually" in classes where male students feel they should dominate (Simon & Clarke, 2016, p. 588). These findings continue to manifest in contemporary research. The 2021 STEM equity monitor<sup>2</sup> found that school-age girls reported considerably less interest and lowered confidence in engineering and technology compared to boys (STEM Equity Monitor, 2021). This report also demonstrated how young women's self-efficacy perceptions decrease throughout their teenage years. When considering engineering as a STEM subject, 37% of girls aged 12 to 13 reported being interested, and 38% of girls reported being confident. By ages 14 to 17, 35% of girls were interested in engineering, and 31% of girls were confident (2019-20 youth in

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<sup>2</sup> The 2019–20 Youth in STEM Research was a survey of 3000 young people aged between 12 and 25 years.

STEM survey). Supporting women's pursuit of STEM subjects at the exploration stage is a crucial enabler of future participation in both trades and professional roles in the built environment.

The literature suggests that the incongruence of construction trades with female identity is also a significant deterrent (Struthers & Strachan, 2019; Bagilhole, 2002). Gender schemas operate to delineate masculine and feminine behaviour. A study<sup>3</sup> of young female school students found that fear of being harassed or labelled "gay" was a challenge to entering the male-dominated industry. One participant stated, "if you go into those trades, you lose some of your feminine identity ... that's important to girls ... you get called butch or a tomboy" (Struthers & Strachan, 2019, p. 11). Thus, women who choose these occupations risk a loss of feminine identity (Bagilhole, 2002; Struthers & Strachan, 2019).

Moreover, public and media representations of the construction industry reinforce gendered notions presumptions that construction is inherently "men's work". Negative media perceptions of the construction industry as "dirty", "dangerous", and "macho" have been cited as a factor that results in females self-selecting out of the industry (Francis, 2017, p. 255). The perception that trade roles are dangerous and require masculine traits such as strength and stamina may inform women's lack of interest in the field and negative expectations for careers in construction (Francis & Prosser, 2013; Ness, 2012). Indeed, one study of gender attitudes in the Scottish construction industry revealed men's beliefs that women are not "designed" to lift heavy material, may struggle with the physical aspects of the work, and may not have natural ability for the trades (Agapiou, 2002). Such justifications for not employing women in trades speaks to gender schematic notions of masculinity as a key element of construction culture. These gendered generalisations are culturally entrenched and influence women's lack of vocational aspirations for construction.

Familiarisation with tools and use in primary schools is a method to introduce young women to the built environment and encourage interest at the exploration stage. The literature confirms that young males gain first-hand experience with tools and technology in childhood in a way that is unlikely to occur for young women (Byrd, 2004). Shrewing (2009a) argued that early familiarisation with tools is a factor that would influence women considering the trades as a vocation, as lack of exposure is a significant obstacle to the attraction of women to the industry (Shrewing, 2009a; Minooei et al., 2020).

Utilising positive images of women in hard hats and participating in construction roles in recruitment material and targeted advertising is an initiative suggested in the literature to improve the industry's public image and make it more attractive to women (Dabke et al., 2008; Clarke, 2015). The notion of vicarious modelling (Bandura, 1997) described an individual becoming more empowered and confident to undertake a task when they see

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<sup>3</sup> Qualitative study of 68 15yo to 18yo female students in Queensland.

someone else doing it (Bandura, 1977). Minooei et al. (2020) suggest that the construction industry can make itself more attractive to young talent by featuring young adults in their advertising campaigns. However, Bigelow (2018) found that advertising is currently an ineffective method for recruiting students to construction, suggesting that advertising material needs to change in order to be a positive influence.

Gottfredson proposed circumscription as the process of eliminating certain occupations from consideration if they do not align with an individual's gender identity (Gottfredson, 1981). Young people evaluate their perceptions of jobs according to gender as well as other factors like prestige and perceived self-efficacy (Gottfredson, 1981). One study of students aged 14-16 found that gender strongly defined how jobs are perceived and evaluated, even when there is little awareness of the reality of the job (Millward et al., 2006). Several studies demonstrate that women express higher self-efficacy and expectations for female-dominated occupations, such as dental hygienist and dietician, than male-dominated activities, and lower self-efficacy for male-dominated occupations (Bridges, 1988; Matsui, 1994; Ji et al., 2004). These findings are consistent with Gottfredson's theory and suggest that, in practice, young women are evaluating occupations based on their gender compatibility with the role. As Mandy Reynolds, Chair of Women in Construction (UK), surmises: "It is more comfortable to conform than to differ and, at 16, who is interested in breaking down barriers anyway?" (Bagilhole, 2014).

### **Vocational decision making**

Vocational choice is inherently constrained by one's education, resources, and familial attitudes. Gottfredson argued that compromise occurs when women reconcile their vocational aspirations with external realities such as financial need and discriminatory hiring practices (Leung, 2008). Indeed, educational and parental support may be necessary requirements to overcome gender discrimination and other obstacles faced by women entering male-dominated fields (Wright, 2016).

Numerous studies conducted with young people concerning occupational choice have found that parents, teachers, and careers counsellors are all significant contributors to the final decision made (Kniveton, 2004; Bright et al., 2005). A substantial body of evidence suggests that individuals rely heavily on their immediate influences, including friends and family, for career-related information. Some evidence suggests that parents and family are the most influential factors (Minooei et al., 2020). In a mixed-methods study<sup>4</sup> of construction management students Bigelow et al. (2018) found that having a father in the construction industry positively influenced both daughters and sons, but with more influence on daughters (Bigelow et al., 2018). This finding is mirrored by others. Simon and Clarke (2016)<sup>5</sup>

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<sup>4</sup> The sample in this US study was 460 male and 90 female students.

<sup>5</sup> Mixed methods Australian study, survey of 217 industry and educational stakeholders, followed by semi structured interviews with 20 respondents.

found that young women enrolling in an apprenticeship tended to have a close relative in that industry or had been referred by friends. Shrewing (2009b) studied female students in non-traditional trades and found that support from trade families and opportunities to experience tools in childhood had been influential in their career decision (Shrewing, 2009b).

The influence of fathers promoting trades during “bring your daughter to work” days has been referenced as having a positive impact on vocational interest (Wright, 2016; Struthers & Strachan, 2019; Bigelow et al., 2019). Working alongside a “tradie dad” can be a confidence-building activity that exposes women to tools and skills (Struthers & Strachan, 2019). Evidently, family relationships should be a focus when attracting young women to the industry. A US study<sup>6</sup> found similar familial influences and argue that fostering work environments where employees are engaged with their family life will positively affect recruitment to construction (Bigelow et al., 2019).

However, the influence of parents more often operates as a deterrent to women entering the trades. One study of UK students found that 54% of participants’ parents had tried to exert influence over their career choice, and 69% said their parents sought to influence their choice of university (Tradeswomen Australia Foundation, 2019, p. 3). VET classes continue to be perceived as a second-class option by parents and students alike, considered the direction for “non-academic boys” (Tradeswomen Australia Foundation, 2019). Misconceptions about vocational educational training obscure the reality that VET graduates earn wages equal to, if not exceeding, university graduates and have higher employment rates than undergraduates (Tradeswomen Australia Foundation, 2019).

A 2020 report by the Tradeswomen of Australia found that parents often do not consider trades an option and do not believe their daughters would have an interest, citing their lack of exposure to developing practical skills during childhood (Tradeswomen Australia, 2020)<sup>7</sup>. Increased awareness of the realities of VET courses may contribute to positive outcome expectations for students and parents when considering career options. Unfortunately, manual trade classrooms have been described as highly masculine and characterised by disruptive behaviour and language that deliberately excludes female students (Bridges et al., 2019). To prevent the attrition of women at this early career stage, policies must be in place to ensure the safe and supported learning of female students in classroom environments where they are the minority (Tradeswomen Australia Foundation, 2019; Bridges et al., 2019).

The challenge of overcoming parental expectations and stereotypes is compounded by the quality of occupational guidance teachers and counsellors receive. The influential role of career counsellors in the vocational decision process has been widely cited in the literature

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<sup>6</sup> A US study of 429 construction workers representing the drywall (230) and electrical (199) trades.

<sup>7</sup> This study used a focus group of 15 parents to supplement findings from a survey of 400 industry stakeholders. This small sample size may limit the generalisability of findings but remains a conceptually relevant finding that is echoed in other studies.



(e.g. Jones et al., 2017). Francis and Prosser (2013) found that career counsellors perceive construction to be a better career for young men and exhibit a gender bias in their advice. However, this study revealed that when careers counsellors personally knew someone in construction and had more information about the field, they were more likely to direct young women to the industry. Oxenbridge and colleagues (2019) documented that women in the Australian automotive trades had been discouraged from pursuing apprenticeships in high school, having been told by male teachers and careers advisors that they were too intelligent and better off attending university. A 2020 Tradeswomen Australia report revealed that careers counsellors felt the key barriers to young women considering trades was a lack of female role models and female teachers in TAFE, male-dominated imagery, and parents pushing children into university (Tradeswomen Australia, 2020). Simon and Clarke (2016) suggested that well-informed career exploration supported by local industries, which actively breaks down stereotypical notions of jobs for women, constitutes effective careers guidance. This finding was affirmed by Francis and Prosser (2013), who advocated for an educative model, wherein students and counsellors gain first-hand knowledge from members of the construction industry to counter negative stereotypes and misconceptions about the industry.

Beyond the powerful influence of parental role models, female role models within the industry are crucial to driving change and fostering students' sense of resilience (Simon and Clarke, 2016; Green & Stitt-Gohdes, 1997; Ji et al., 2004). Numerous studies echo the notion that "you can't be what you can't see", suggesting that female ambassadors are needed (Tradeswomen Australia, 2020, p. 6). Targeted advertising using positive female images has been at the centre of several campaigns to attract women into the construction industry (CITB, 2014) and may represent a substantial intervention strategy to attract women during their teenage years.

Overall, a lack of reliable information about construction is one of the most influential factors preventing women from considering and pursuing a career in this industry. While students frequently express interest in knowing more about trades, lack of information about VET courses or access to work experience results in female students excluding construction from their consideration of potential occupations (Struthers & Strachan, 2016). Simon and Clarke (2016) found that young women need low stakes opportunities to "taste" a wide range of career options during secondary school and before (p. 591). These opportunities would work to demystify the trades and expose students to the numerous benefits of a career in this field whilst allowing women to explore their own skills and interests (Simon & Clarke, 2016; Struthers & Strachan, 2019). Having work experience in construction-related jobs can improve women's intention to choose a career in the industry. Minooei et al. (2020) found that work experience enables young adults to understand the work environment and job lifestyle better. These factors are critical to the decision-making process and development of self-efficacy for a pursuit (Taylor, 2005; Minooei et al., 2020).

Following the exploration stage is a discussion of the challenges unique to the education and training phase of a career in construction.

## 2.4 Education and training career stage

This section starts by considering issues in the VET and higher education sectors and then discusses issues during apprenticeships.

### VET and tertiary education

Higher education forms the interface between career choice and working in the construction industry (Clarke et al., 2015). Women are confronted by significant barriers to a career in the construction industry that begins with difficulties in VET and tertiary courses. As the main pipeline to apprenticeships, VET courses remain overwhelmingly male (Struthers & Strachan, 2019). Women are generally concentrated in the lower-paid VET trades of hairdressing and customer service (Simon & Clarke, 2016). In Australia, the gender gap in VET program enrolments has increased over the past ten years, with 17,000 more male students enrolled than female students in 2017 (Misko et al., 2017, p. 24). In a study of Swiss secondary students enrolled in VET classes<sup>8</sup>, Makarova et al. (2016) found that women in vocational school and training are perceived in accordance with stereotypical notions of the female role. In this study, women experienced being addressed as naturally less skilled, needing the help of male colleagues and being segregated to particular tasks during their apprenticeships and training (Makarova et al., 2016; Byrd, 1999). These stereotypical beliefs were particularly pronounced within training companies where women gain their early professional experiences during VET (Makarova et al., 2016).

The language used by instructors in class and a general lack of respect has been raised by women in apprenticeships as impacting the learning environment (Byrd, 1999; Gambin & Hogarth, 2016). Makarova et al. (2016) found that women adopt a resilience strategy when faced with discrimination in the workplace, which is characterised by assertiveness, steadfastness, and disconfirming female stereotypes by acting “more like men” (p. 15). These findings are in line with research suggesting women in male-dominated professions may inadvertently reinforce negative elements of the industry by adhering to the demands of a masculine work culture (Makarova et al., 2016; Wright, 2016).

The existing literature document that new female university graduates frequently choose not to join the construction industry upon graduation (e.g., Dainty et al., 1999; Ling & Poh, 2004; Morello, Issa and Franz, 2018). For tertiary graduates, a significant disparity may exist between expectations and the reality of the work environment (Oo et al., 2020; Ling & Poh, 2004). Dainty et al. (1999) demonstrated that new female entrants to the construction

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<sup>8</sup> This study had a relatively small sample size of 71 Swiss secondary students and used semi-structured interviews as their methodology

industry enter with a poor understanding of working within a male-dominated industry and may have a sanitised version of the realities of the construction industry, having only learnt about it in the sheltered university environment (Dainty et al., 1999; Oo, 2020).

It has been well documented that women who received STEM degrees are less likely to choose STEM careers than men and, amongst women who go into STEM fields, nearly twice as many leave their field than do their male counterparts (Makarova et al., 2016). Women studying the built environment at a tertiary level may be isolated and disadvantaged through a “hidden curriculum of rituals” despite equality policies set out by educational institutions (Clarke et al., 2015, p. 20). Higher education may serve as a gatekeeper to male-dominated industries. Engineering courses have been documented as hostile environments for women where the behaviour of male students is intimidating (Kivell, 1999). Women also experience benevolent sexism from teachers, supervisors and co-workers who may patronise them or adjust their professional standards whilst simultaneously emphasising the virtues of pursuing careers in STEM fields (Makarova et al., 2016). Cumulatively, the experiences of benevolent and overt sexism negatively impact the retention of women at the VET and tertiary education stage of the career cycle.

### **Apprenticeships**

Obtaining an apprenticeship in construction can be difficult for women, where employers actively seek cultural and behavioural attributes that align with the workplace culture (Jones et al., 2017). Family and friend networks are important in securing an apprenticeship (Shrewing, 2009a; Foley et al., 2020). Oxenbridge et al. (2019) found that women working in the automotive trades in Australia reported a common experience was having to submit 80 to 150 apprenticeship applications over a 6-8 month period. Interviewees in this study had received gendered comments including “when are you likely to get pregnant?” and “you wouldn’t have the sufficient strength” (Oxenbridge et al., 2019, p. 17). Mature age apprentices over the age of 21 are required to be paid an award rate as opposed to a junior apprentice rate and consequently face additional hurdles to employment (Oxenbridge et al., 2019). Because women are more likely to enter the trade at a later age, incentives for employers to take on mature age apprentices has been suggested in the literature as an enabler at the education and training stage of the career cycle (Jones et al., 2017; Bridges et al., 2019).

Failing to complete an apprenticeship can significantly impact an individual’s career, with numerous studies documenting that completion of an apprenticeship leads to improved employment chances and higher wages. Factors affecting completion of apprenticeship training are varied, with workplace conditions and personal circumstances of the individual cited. The Australian National Centre for Vocational Education Research (NCVER) has reported that longer periods within prior schooling are associated with higher levels of completion (Cully & Curtain, 2001). A review of UK apprenticeship completion found that

women are more likely to complete an apprenticeship within female-dominated work such as childcare and learning and less likely to complete in male-dominated areas such as electrotechnical (Gambin & Hogarth, 2016). An Australian study found that bullying, feeling pressured, and being treated as cheap labour were driving forces behind apprenticeship non-completion (Cully & Curtain, 2001). Working environments were the primary source of dissatisfaction amongst those who failed to complete apprenticeships in other studies (Snell & Hart, 2008).

The literature focused on improving the apprenticeship system and increasing completions identify the need for support structures. Industry networks with mentors and role models, as well as government funding to support these programmes, have been highlighted as an avenue for reform (Simon & Clarke, 2016). VET providers should be challenged more. In particular, to combat sexism and discrimination and conduct female-specific pre-apprenticeship programs. These have been cited as a means to create an environment where aspiring tradeswomen can build their confidence (Tradeswomen Australia, 2020).

Following the education and training stage, where challenges pertain to making educational choices and experiencing gendered learning environments, is the early experiences career stage in which a unique set of obstacles face female entrants to the construction industry.

## **2.5 Early experiences career stage**

### **Recruitment practices and employer bias**

Recruitment processes are a critical component of an organisation's gender diversity strategy, and supporting the retention of women in construction is highly dependent on improving these processes. Gaining employment in the construction industry is one of women's first workplace hurdles. They encounter informal hiring practices and gendered notions of "cultural fit" that militate against their employment. The literature documents numerous examples of women's disillusionment with industry culture and its recruitment practices, and these are cited as some of the most significant barriers to women's retention in construction (e.g. Menches & Abraham, 2007).

Employers often use a metric of cultural fit when hiring workers, and construction is no exception. However, due to the male-dominated nature of the field, notions of cultural fit are often gendered, restrictive and lack transparency (Galea & Powell, 2018). Obligations to behave in a way that adheres to a masculine work culture results in workers having to commit to total availability, long hours, and a culture of presenteeism, which have become symbols of excellence and commitment in construction culture (Kamardeen & Sunindijo, 2017; Galea et al., 2020; Bryce, 2019; Watts, 2012). Galea and colleagues (2018) argue this practice operates to maintain a monoculture rather than a diversity of employees and practices. Other studies have confirmed that the practice of recruiting employees who are a good cultural fit reinforces a heteronormative and masculine culture to the detriment of

women and LGBTQI+ workers (Galea et al., 2017). These processes are enabled by informal hiring practices, strategic male networks, and affective judgements that a candidate may be a “good bloke” (Jones, 2019). The homophilic practice of employers recruiting workers who reflect themselves in terms of gender, ethnicity, and education disadvantages women and perpetuates a culture where women are other (Jones, 2019; Ibarra, 1992).

The prevalence of gender schematic attitudes in which sex-type construction as an inherently masculine profession means qualities such as strength and stamina are often inherently sought after in recruitment (Galea et al., 2020). This devalues “feminine” traits like attention to detail and adherence to safety, which are equally as important in a construction setting (Agapiou, 2002). Employers also use the need for physical strength to deter women from applying, even though most elements of trade work do not require excessive physical strength (Fielden et al., 2000). Women may be perceived as a threat to a traditionally male working-class culture; Cockburn (1991) has said that “the presence of woman, one woman, any woman, is enough to destroy the mystique that women could not do the work and its corollary, that men must be superior because they can” (p. 180). Consequently, recruitment in the trades continues to be weighted heavily towards traditional incumbents: young men.

In both trade and professional roles, career paths in the construction industry predominately rely on social connections and word of mouth (Galea et al., 2020; Oo et al., 2020). These informal networks that constitute the traditional ‘pipeline’ for employment (or promotion) are rarely made explicit or accessible to women. Women in construction are more often hired via formal processes, which may be more strenuous and time-consuming (Galea et al., 2020; Clarke et al., 2015; Fielden et al., 2001; Galea et al., 2018). In a UK study,<sup>9</sup> Dainty and Lingard (2006) revealed that women found the process of entering organisations more problematic than men. The study found that almost half of the women participants believed discriminatory recruitment practices were likely to lead them to seek positions in other parts of the industry, which did not present as much resistance to their employment.

Internal project recruitment has also been documented as a highly informal process for both professionals and tradeswomen in the construction industry. Galea et al. (2020), in a mixed-methods study of construction professionals,<sup>10</sup> found that men had greater awareness of the practice of ‘picking your team’ or ‘taking your people with you’, which was based on prior relationships and informal referrals. The study found that women were not afforded the same access to informal networks and sponsorship as men, which resulted in women being less likely to be employed in high profile roles on-site. This practice is well-documented in the literature and suggests that homophilic ties between men in the workplace embolden them

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<sup>9</sup> A study of 41 matched pairs of male and female construction management employees with contracting companies.

<sup>10</sup> This study involved participant observation of 14 company events, on-site observations and shadowing 44 male and female construction professionals, and 61 interviews across six major construction sites.

to proactively negotiate their male networks to secure job opportunities (Watts, 2007; Galea et al., 2018; Oo et al., 2020).

For tertiary graduates, research suggests that graduate recruitment programs have comprehensive formal recruitment and candidate assessment processes (Galea et al., 2018). Recruiting directly from colleges and universities has the advantage of access to generally higher proportions of women (Clarke et al., 2015). However, highly structured programs with transparent criteria are not immune to the issues of gendered sponsorship found in job site recruitment. Galea and colleagues (2018) found that sponsorship by line managers was more important in relation to gaining career experiences. Graduates were also expected to have significant technical competency rather than afforded the opportunity to learn in a supportive environment. Graduate programs may have internal gender targets but successfully supporting the women subsequently recruited depends on these targets being backed by comprehensive strategies (Galea et al., 2018).

Informal recruitment practices, male sponsorship and the metric of cultural fit also represent early barriers to women's recruitment into the trades. Successful recruitment strategies used by organisations internationally include obtaining feedback from women applicants about the recruitment process, offering an induction program and buddy system, and providing feedback to candidates (Australian Human Rights Commission [AHRC], 2013). Strategies to ensure women are supported and treated fairly during the recruitment process include reviewing the values that underpin cultural fit, making recruitment policies formal and transparent, training recruiters to recognise stereotypes and unconscious bias, and establishing recruitment targets for women (Galea et al. 2018; ACHRC, 2013; Bridges et al., 2019).

## **Workplace culture**

The construction industry's culture is rooted in traditional masculine values and characterised by gendered attitudes towards women. Organisational cultures that are unsupportive of women jeopardise the retention of these valuable workers. Non-inclusive, "macho" work cultures that tolerate abuse and harassment can negatively impact the well-being of male and female workers alike, where help-seeking behaviours are not encouraged and avoided, and mental health issues are dismissed (Powell et al., 2018).

Organisations can be considered gendered institutions, which reproduce gendered roles (Cockburn, 1991; Watts, 2007). In construction, the masculine hegemonic collective workplace identity positions women as interlopers or outsiders (Watts, 2007; Foley et al., 2020). Work practices that reflect men's lives and situations – such as being the traditional breadwinner – are perpetuated in many fields of work and compound the pressure on women and men in post-traditional families (Dainty & Lingard, 2006; Watts, 2007).

Construction sites' "football and families" culture prevents female inclusion and demands assimilation into male cultural norms (Clarke et al., 2015).

It has been said that women in construction face a choice of whether to confront barriers, conform to masculine cultures or leave the organisation or sector altogether (Dainty & Lingard, 2006). An emphasis on employing those who are a "good fit" has been said to militate against diversity and create a hostile environment for women and members of the LGBTQI+ community who do not conform to the heteronormative masculine culture (Galea & Jardine, 2021). This regressive practice then requires women workers to adapt to "gain acceptance" by the majority (Watts, 2007; Wright, 2016). For some women, adherence to this culture results in the adoption of a "one of the boys" survival strategy, where women are redefined as an "honorary male" (Foley et al., 2020; Oxenbridge et al., 2019; Wright, 2016; Ness, 2012). Actively disconfirming female stereotypes and acting "more like men" is a strategy for acceptance adopted by many women in STEM and other male-dominated fields (Makarova et al., 2016). In a study of 71 Swiss women enrolled in VET training, Makarova and colleagues (2016) identified four strategies for adjusting to environments where women are the minority: excellence, resilience, assimilation, and avoidance. Assimilation involves negating or toning down female appearance in response to the psychological pressure and heightened visibility of being a woman in a male-dominated field. Women have a heightened awareness of "sending the right message" in the workplace, which may include wearing male clothes and adapting their hair and clothes (Wright, 2016; Kanter, 1977).

Kanter (1977) argued women would have to accept some form of "role entrapment" by adopting restricted and caricatured roles within a system where they are underrepresented (Makarova et al., 2016, p. 4). The way in which women's appearance is regulated in work environments of all kinds affirms Kanter's theory. It may also be undertaken to desexualise both straight and LGBTQI+ workers. Galea and Jardine (2021) suggest that for LGBTQI+ women, a strategy of presenting a "tough exterior" is frequently adopted to avoid the sexual harassment directed at more feminine colleagues and to mitigate hostility that may be directed at their sexuality (p. 12). This strategy may result in dismissing harmful behaviour and harassment as an occupational hazard (Watts, 2007). Interestingly, in a study of women in civil engineering, Watts (2007) found most female respondents felt women were somewhat responsible for aggressive male behaviour directed at them. She identified female colleagues' attire, make-up, and language use as behaviours that could be addressed to deter harassment from men (Watts, 2007). These findings indicate the normalisation of these behaviours and the difficulty of challenging norms that have become accepted as part of a workplace culture. This is affirmed by Wright's (2016) finding that becoming "one of the boys" may involve a willingness to "turn against the girls" (p. 167).

The construction industry has proved itself resistant to change. However, research suggests that when men have experience working alongside women, they find their contributions to

project outcomes are substantial. Agapiou (2002) found that male Scottish construction workers stated that the presence of women on a job site made it safer by enhancing adherence to health and safety regulations. Commitments to standards of the craft and safety improved productivity as well as increased social cohesion are recognised benefits of women's contribution to male-dominated industries (Bridges et al., 2019; Eisenberg, 2019). Moreover, the male-centric conflict styles present in the construction industry may be reduced by female representation; Loosemore and Galea (2008) argue that feminised communicative styles and behavioural responses to conflict in the workplace may mitigate chances of escalation and confrontation in the construction settings.

Interventions aimed at improving women's early construction industry experiences must address a culture that excludes women and facilitates their harassment. The literature offers several recommendations for changing masculine culture. This includes demonstrating a 'no tolerance' approach to sexism and discrimination of all forms, stopping the reward and promotion of excessive hours, providing training about stereotypes and unconscious bias, and leading from the top, with senior leaders and managers supporting gender diversity (Galea et al., 2018, p. 19; AHRC, 2013).

### **Facilities and PPE**

Lack of access to proper sanitary facilities and well-fitting PPE are barriers frequently cited in the literature as endemic to construction sites (Tradeswomen Australia, 2020; Dabke et al., 2008; Watts, 2007). In a study of women's job satisfaction in the construction trades, Dabke and colleagues found that respondents were least satisfied with the provision of separate and hygienic sanitary facilities (Dabke et al., 2008). This finding is also echoed in Watts (2007) study of female civil engineers, who cite the lack of access to clean and safe toilets and the experience of "being watched" as common for professionals on-site (2007). A Tradeswomen Australia report (2020) documented that 25% of women reported access to facilities as the most significant barrier for women in trades, with respondents mentioning changing in their car after work due to lack of female changing rooms. Moreover, in some situations, the complete absence of appropriate toilets requires tradeswomen and professional women to take considerable time from their work to drive to access public toilets away from the job site (Watts, 2007; Bagilhole, 2002).

The failure to provide basic infrastructure such as changing rooms, sanitary bins in hygienic bathrooms and well-fitting uniforms is both a physical occupational health and safety risk and a way to reinforce women's outsider status (Jones et al., 2017; APESMA, 2010; Goldenhar & Sweeney, 1996; Wright, 2016). A physical work environment that caters to both men and women in terms of uniforms, facilities, and equipment is equitable (AHRC, 2013). Providing access to proper sanitary facilities and changing rooms is a practical and achievable measure to improve women's experiences at work (Oo et al. 2020; Tradeswomen Australia, 2020).



## Harassment: direct and indirect

The literature demonstrates that direct and indirect harassment of women in construction takes a physical and psychological toll and negatively impacts the experiences of tradeswomen and professional women in their early careers, contributing to turnover intention (Jones et al., 2017; Foley et al., 2020; Struthers & Strachan, 2019; Watts, 2012). Gendered violence is violence perpetrated against someone because of their gender. It may take many forms, including exclusion, the expectation to manage increased aggression from males, open resentment and undermining of women, being assigned feminised tasks such as office work and sexual comments, innuendo and sharing of pornographic images (Jones et al., 2017; Watts, 2007; Galea & Powell, 2018). These behaviours mostly occur in workplace cultures where masculinity has become the hegemonic identity.

An unfortunate reality for women in male-dominated fields is the increased likelihood of experiencing harassment. In 2021 in Australia, two in three women were reported to have been subjected to sexual harassment at work (ACTU, 2021). Research, however, demonstrates that women in female-dominated or gender-balanced environments are far less likely to suffer sexual harassment than those who work in male-dominated industries (Foley et al., 2020). Timmerman (2005) found that the most harassment prone unionised occupation in male-dominated spaces is the “female construction worker”. Indeed, the prevalence of direct gendered harassment on construction sites is widely documented and is one of the most significant reasons women leave construction site roles early in their careers or during apprenticeships (Jones et al., 2017).

Holdsworth and colleagues (2020) survey of 168 women working in trades and semi-skilled roles found that 31% of participants had experienced sexual harassment, and 25% had endured verbal aggression. This same study interviewed 43 women working in construction, finding that 79% had experienced inoffensive language and behaviour by male co-workers, including sexual innuendo, unwanted sexual advances, and threats of sexual violence. Holdsworth and colleagues (2020) distinguish between sexual violence, which may encompass humiliation, disrespect, and sexual harassment. Bullying can describe dismissal, exclusion, being ignored and physical and verbal aggression. Women in this study reported a perception that they would be punished for reporting inappropriate behaviour or sanctioned as troublemakers. This understanding was exacerbated by a culture of silence and male bystander tolerance (Holdsworth et al., 2020).

Disparaging behaviours that constitute harassment are hostile, offensive, and denigrating attitudes about individuals based on their gender, including crude jokes, discrediting remarks about members of an entire gender and non-sexual intimidation (Foley et al., 2020). Widely documented is the prevalence of sexist graffiti and pornographic material on construction sites which creates an unsafe environment for women (Watts, 2007; Jones, 2019; Galea et al., 2020). This blatant sexism was documented by Galea et al. (2020), who found that

women reported being filmed in the shower at work, having their breasts commented on and being referred to as “babe” and “sweetheart” (Galea et al. 2020, p.11). This finding echoes those of Fernando and colleagues (2019) and is deeply problematic as women’s only characteristics are sexualised, and valuable attributes of women wholly ignored.

Displaying materials of a sexual nature, making sexually explicit gestures, and unwanted touching is sexually harassing and even criminal sexual assault behaviours. These may be met with denial and avoidance and are often not formally reported by professional women in the study’s sample (Watts, 2007). These behaviours jeopardise women’s safety and undermine their authority (Watts, 2012). The organisational and personal damage of sexual harassment at work may be substantial.

Sexist language is another widely documented means of harassment related to a general lack of respect and collegiality, which may stem from traditional attitudes around gender roles (Bridges et al., 2019). In a study of Australian women working in automotive trades<sup>11</sup>, respondents described ill-treatment by male colleagues taking the form of misogynistic comments, including those aimed at the intelligence of women in general (Oxenbridge et al., 2019). This behaviour was perceived to be a consequence of immature toxic masculinity and jealousy when female tradeswomen displayed their knowledge and competency (Oxenbridge et al., 2019). This study’s tradeswomen (automotive) were subjected to bullying, harassment, and constant victimisation based solely on their gender. These experiences of being ostracised, isolated, and singled out for criticism appears to be quite common amongst tradeswomen (Foley et al., 2020; Bridges et al., 2019). The extreme visibility of both trade and professional women on job sites often manifests in being subject to intense scrutiny and judgement and feeling “watched” (Watts, 2007; Foley et al., 2020; Oxenbridge et al., 2019; Bridges et al., 2019). Micro-management, surveillance, and scrutiny on tradeswomen’s work because of their gender may impede their autonomy and learning (Bridges et al., 2019). Even for professional site-based women, these experiences are compounded by an inherently limited capacity to complain about inappropriate behaviour when managers and colleagues are perpetuating the behaviour (Watts, 2007).

A substantive body of evidence documents how victims of work-related sexual harassment experience lower levels of self-confidence, reduced productivity, loss of motivation and higher turnover intentions (Watts, 2007; Foley et al., 2020). The desire to “fit in” means women’s most common response is to ignore and deny harmful behaviour or accept these incidents as part of the occupation (Watts, 2007). Foley and colleagues (2020) describe harassment behaviours as a form of “retribution for encroaching on traditionally male territory and deviating from social expectations of women” (p. 5). Thus, while harassment

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<sup>11</sup> This Australian study used a mixed methods approach involving 12 interviews with automotive industry stakeholders, a survey of 119 women working in automotive trades and 20 interviews with automotive tradeswomen.

may lead to turnover intention, more common is resignation and acceptance, which may result in psychological injury (Jones et al., 2017).

The literature suggests that sexual harassment is employed as an instrument of power by men to undermine women workers in male-dominated fields (Watts, 2007; Wright, 2016, Foley et al., 2020). This marginalisation strategy has substantial effects, with tradeswomen who have encountered sexual harassment experiencing psychological distress and impacts on their personal and professional self-esteem, which can contribute to turnover intention (Elser et al., 2018, Foley et al., 2020). Bystander behaviour of male colleagues is an enabler of harassment and is a tacit endorsement that such behaviours are endemic to construction culture (Foley et al., 2020). However, in Dabke et al.'s (2008) study of tradeswomen's job satisfaction, it was found that while women with more than fifteen years' experience in construction had experienced abuse early in their careers, they did note that the situation had improved, and the industry was starting to accept women as part of the workforce (Dabke et al., 2008). This suggests that harassment may be less prominent on some sites today and maybe more severe during the early experiences career stage. Its impact may dissipate as women progress and demonstrate their skills and the numbers of women in the industry increase.

Kamardeen and Sunindijo (2017) found that women professionals suffer significantly higher rates of anxiety, stress and depression when compared with the general Australian population. The 119 female professionals surveyed in this study<sup>12</sup> reported four stressors of particular concern, and they had strong correlations with depression and anxiety. These stressors included a lack of appreciation for efforts, undervaluing skills, low support for problem-solving, and bullying (p. 405). Evidently, the harassment and mistreatment of women is a health and safety issue for the construction industry that must be managed to curb psychological injuries and ensure the retention of female workers. While tradeswomen and professional women both experience harassment in the construction industry, on-site behaviours may constitute more explicit examples of harassment and violence where professional women endure more subtle slights, including being overlooked and excluded. Harassing behaviour in any form contributes to women's marginalisation in the construction industry and militates against cultural reform.

### **The role of unions**

Trade unions represent the traditional route for support in the trades and opportunities for equality bargaining for members of the blue-collar labour force. However, trade unions, like the workplaces they represent, have traditionally been male-dominated, giving priority to representing the interests of male union members and deliberately excluding women

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<sup>12</sup> This study was an online questionnaire survey studying measuring work stressors. The sample was 286, with 167 male and 119 female respondents.

(Cockburn, 1991; Clarke, 2015). Women have fought to be represented within trade unions, and their participation is said to be a catalyst for change, as women's presence ensures they can advance their concerns and improve the conditions within the industry for tradeswomen (Clarke, 2015; Cockburn, 1991). However, lack of union support for tradeswomen and a perception that focusing on gender difference may undermine the class solidarity unionism is built on continues to inform a conservative union culture in many countries, including Australia (Oo et al., 2020; Wright, 2016; Tradeswomen Australia Foundation, 2019).

Trade unions have taken a more proactive approach in raising women's participation in male-dominated trades and supporting their retention in recent years. However, a study in the UK notes that this has coincided with the declining power of unions, as their influence and ability to act at a workplace level is relatively weak compared to recent history (Gregory & Milner, 2009). The ACTU Women in Unions Report (2012) found that half of all Australian unions did not have a standard bargaining claim for key priority issues for women, including flexible work arrangements and the right to return to work part-time after parental leave. Women remain underrepresented in senior elected positions within unions. This reflects historical feminist concerns that without the support of union leadership, women's activism and interests will not be supported (Foley, 2003).

Issues of gender equality and fair treatment are a logical extension of the labour movement's original principles. In a study in the UK, Wright (2016) found that trade unions were considered to be less valuable in addressing harassment and gendered issues than in their traditional bargaining areas of pay and redundancy. Sugerman (2019) advocates for tradeswomen attending union meetings as a group to enhance their visibility and encourage participation. Encouragingly, in a study of female electrical workers, Jones et al. (2017) found that women involved in union-sponsored committees received support to address workplace discrimination. For example, one tradeswoman successfully lobbied her workplace to implement anti-discrimination training for all staff (Jones et al., 2017, p. 33). This mirrors an example offered by Wright (2016), where one respondent in their study had won a pay improvement after union-supported intervention in the case of harassment by a male colleague (Wright, 2016, p. 183). Jones et al. (2017) suggested that union actions, including incorporating respectful relationships into education programs, supporting female apprenticeships, and supporting cultural and behavioural change in the workplace, would be instrumental in supporting the retention of women into the industry (Jones et al., 2017).

Women encounter numerous obstacles in the early stages of their construction careers that are endemic to the industry and are experienced throughout the career lifecycle. Next, the growth stage of the career is discussed in detail as a key stage in which women's retention is compromised.

## 2.6 Growth career stage

### Organisational practices

The construction industry is characterised by high intensity, project-based work that does not easily lend itself as easily as some other industries to flexible working conditions. This intensity is driven by clients needing projects finished quickly and efficiently. The long hours' ethos of the industry, underpinned by a culture of presenteeism, informs the assumption of some organisations that work and family are not compatible (Watts, 2009; Oo et al., 2020). Some site-based professionals express resentment towards the rigid and oppressive nature of office-based roles (Dainty et al., 2000). Construction sites are characterised by critical deadlines and intensive work that contrast the consistent nature of head office-based roles (Lingard and Francis, 2004). Alternative working patterns, including part-time, role-sharing and flexible work arrangements, are increasingly suggested as a mechanism through which to support employee well-being (Wright, 2016; Lingard & Francis, 2009). In a study of NHS employees in the UK, Atkinson and Hall (2011) found that flexible working arrangements promoted positive emotional states and led to employees feeling well-treated and valued.

Offering greater flexibility in construction work presents complexities due to the nature of the work, and results are mixed as to whether these strategies increase the recruitment of women (Wright, 2016). Part-time work is offered prior to retirement in many industries due to demand from late career workers, a policy that fundamentally recognises work can be accomplished on a part-time basis (Wright, 2016). For many women, part-time work is an active choice to create a better balance between home and work, yet Cockburn (1991) suggests these strategies may, in fact, reinforce women's differences at work by highlighting their different relationship to production (Cockburn, 1991). The capacity to secure flexible arrangements is dependent on strategic alliances. Galea et al. (2018) found that an employee's relationship with their project manager informed their ability to pursue flexible working conditions, with temporary conditions suitable for a project preferred and long-term arrangements such as a staged return from maternity leave less acceptable. Offering recovery periods after critical deadlines may be a respite for workers and promote positive well-being (Lingard et al., 2010).

The construction industry's culture of long hours and an expectation of devotion to work adversely impact employees' physical and mental health. Experiencing anxiety, fatigue, and insomnia in a workplace adhering to values of presenteeism negatively impacts well-being and may result in workers suffering in silence (Powell et al., 2018). Workplace well-being is linked to productivity and benefits for the individual, including confidence and physical health (Kamardeen & Sunindijo, 2017; Bowen et al., 2014). Studies suggest that around 70% of construction workers experience mental health issues directly from the demands of working in the industry (Fenton et al., 2014; Doran et al., 2016). Moreover, Australian research has

identified workers in the construction industry to be at increased risk of suicide (Milner et al., 2017).

The reality that construction workers may be experiencing extreme mental health issues in a workplace environment that stigmatises asking for help suggests the industry may benefit from well-being policies (Powell et al., 2018). Lingard and Francis (2006) study demonstrated organisational support moderates the relationship between WFC and burnout. For construction professionals, this demonstrated the importance of supportive work environments to the success of interventions to alleviate or prevent employee burnout. Powell et al. (2018) observed the implementation of a well-being leave initiative at an Australian construction company, which involved the provision of three days of paid leave per year to be spent on physical and mental well-being. Despite the organisational intentions of this strategy, this study found that workers were reluctant to take the leave and moreover that individualised responses to workplace well-being holds employees responsible for improving their health and fails to address the workplace environment, which may be causing the health problems (Powell et al., 2018). The literature confirms that organisations must be responsible for creating a healthy work environment and supporting well-being, with well-being leave representing just one strategy to mitigate the impacts of rigid work practices (Powell et al., 2018; Watts 2009).

Research demonstrates that public and private construction settings report differing levels of work interference with family life and the capacity to support flexible working conditions. Francis et al. (2013) found that private sector employees reported working longer hours, more significant work-family conflict, and less work-related flexibility in the Australian construction industry than public sector employees. Public sector employees in this study followed 5-day weeks and had greater flexibility in where and when work hours were completed compared to their private sector counterparts. Because large public sector organisations receive more institutional scrutiny and public attention, it was argued that employees in these settings are not held to rigid standards of economic performance and are therefore more able to implement family-friendly policies (Francis et al., 2013; Wright & Conley, 2020).

Wright and Conley (2020) argued that public procurement is a means for the state to extend higher standards of equality usually found in the public sector to the private sector to address inequality in employment and culture (Wright & Conley, 2020). Because sub-contracting in the private construction sector is a challenge to effecting cultural change, the public sector can have a positive impact in this space. Public sector efforts can influence employment practices but must be coupled with measures to enforce contract compliance, including incentives, monitoring implementation, effective reporting mechanisms and sanctions for non-compliance (Wright & Conley, 2020). A successful example is the construction of London's Olympic Park, where requirements for explicit hiring targets for women, ethnic

minority groups, disabled and local people were written into bids and contracts (Clarke et al., 2015). The Women in Construction Olympic Park project successfully trained 455 women, placing 87 in work and 255 in employment (Clarke et al., 2015, p. 12). A crucial element of the success of this project was the provision of targets, which are widely considered to be a viable option for accelerating the employment of women and cultural change in the construction industry (Wright & Conley, 2020).

In the professional realm, management too has been found to be highly incompatible with part-time work (Watts, 2012). In a qualitative study of female civil engineers, Watts (2009) found that working part-time or taking extended leave was not a viable option for women, or men, with managerial aspirations in this industry (Watts, 2009). Part-time working conditions remain unpopular in on-site roles, despite a perception that part-time and flexible roles would increase women's retention. In a study of Australian female engineers, Bryce (2019) found that 90.5% of employers agreed that higher retention rates among female employees would be encouraged if part-time and flexible options were offered (Bryce, 2019).

Actively encouraging working days of a maximum of ten hours, providing remote access to a project's intranet and cloud-based systems to allow administrative work to be completed at home, offering well-being leave and part-time roles represent interventions to improve rigid workplace practices in the construction industry (Bryce, 2019). However, these still represent a work culture that encourages 'over work'. The National Association of Women in Construction (NAWIC, 2013) have suggested introducing key performance indicators based on productivity to combat the unofficial merit system, which is based upon presenteeism. This could support women and demonstrate that effective work can be done without long, highly structured work hours. The profound impact of rigid workplace structures on the well-being and retention of all workers within the industry requires a cultural shift towards restructuring and overhauling the formal and informal structures of the construction industry in pursuit of a more inclusive and supportive workplace culture.

### **Parenthood and work-life balance**

Despite changing family models and improved maternity leave practices, motherhood continues to have a significant impact on women's career trajectories in the labour market. A survey by the Australian Human Rights Commission found that one in two women experienced workplace discrimination during pregnancy, maternity leave and on return to work (AHRC, 2014). Pregnancy discrimination adversely affects women's promotion prospects (Watts, 2009; Greed, 1990; Fielden et al., 2000). The impact of motherhood on women's careers has been deemed a "motherhood penalty" associated with wage penalties and disadvantages over time due to discontinuity in experience (Kahn et al., 2014, p. 57). However, Kahn and colleagues (2014) found that the impact of motherhood is strongest when women are younger and may be eliminated by mid to late career, most reliably for women with less than three children. Cockburn (1991) suggested that the threat of

motherhood is experienced by all women in the workplace, effectively casting them in a less serious light when it comes to their careers. Often male managers assume women will take career breaks (Cockburn, 1991). Indeed, research has demonstrated that women managers are more likely to be single and/or childless than their male colleagues (Wajcman, 1998).

Parenthood is a complicated career stage for both women and men to navigate in male-dominated industries. Stress, work-family balance and negative perceptions towards women in construction were identified in a 2017 study as the three most significant challenges for women's career development in the Australian construction industry (Rosa, 2017). It has been argued that juggling the demands of paid and unpaid domestic work is "punished" in the workplace, with women unable to gain acceptance when they stray from the "masculinist vision" of a hard-working, agentic professional devoted to their work (Cockburn, 1991, p. 5). Research documents that women continue to have primary responsibility for children and household care. Even in dual-career partnerships, women spend more time on housework than their male partners, adversely affecting their work-life balance (Stratton, 2003; Lingard and Francis, 2009). Dainty and colleagues (2000) found that in UK construction companies, the majority of men had supportive non-working partners who shouldered the burden of domestic responsibilities. Just 7% of female professionals had supportive non-working partners to take on these duties, revealing a stark disparity in the equitable division of domestic labour (p. 246). Several theorists have argued that organisations are built on women's unpaid domestic labour (Hearn & Collinson, 2006; Mavins, 2001) and that having a wife is a career resource (Kirchmeyer, 1998).

Motherhood is an important intervention point at which to target the retention of female workers, as this is one of the main life stages where women leave male-dominated industries. Preston (2004) identified that work-life balance difficulties are one of the main reasons women leave engineering. Singh and colleagues (2018), in a study of 245 female engineers, found that stereotypes of women as nurturing, warm and helpful appear to clash with the agentic and serious nature of engineering work. The prevalence of gender schematic attitudes in male-dominated industries may result in women not accessing family-friendly policies so as not to appear less committed to work (Singh et al., 2018). Operating in an environment where negative gender stereotypes linger may compromise women's capacity to fulfil their work responsibilities and also negatively impact their commitment to an organisation and occupation (Singh et al., 2018). Indeed, work-family conflict has been empirically linked to psychiatric disorders, problem drinking, and lower positive well-being, suggesting the urgent need to address this endemic element of construction culture (Frone, 2000; Grzywacz & Marks, 2000; Grant-Vallone & Donaldson, 2001).

Poor parental leave practices compromise women's retention, particularly at the growth career stage, with women often left to negotiate and strategise their own departure and career return without adequate organisational support (Galea et al., 2020). Galea and



colleagues (2020) found that despite the presence of formal policies around parental leave, in practice, informal rules and norms reinforce women's role as the traditional career, individualise the issue, and attach a stigma to paid parental leave. Numerous studies confirm that parental leave policies in most industries, including construction, remain shaped around the primary carer and breadwinner model, fundamentally perpetuating the notion of women as carers and men as the primary breadwinner (Galea et al., 2018). In a study of 90 women working in the Australian civil construction industry, Bryce (2019) revealed that participants consistently expressed difficulties re-entering the workforce after taking maternity leave. In this study, 70.3% of respondents said taking maternity leave negatively impacted their career, and 21.3% reported they had been passed over for a promotion due to this career break (Bryce, 2019, p. 2). The provision of work-life policies has been found to improve work-life balance and is also associated with higher organisational commitment of construction employees (Oyewobi et al., 2020).

Organisational support theory is highly pertinent in discussions of work-life balance, as organisational efforts to create inclusive work environments are a frequently cited measure to support women workers' work-life balance (Francis, 2017; Lingard and Francis, 2009; Adkins et al., 2013; Galea et al., 2018). Perceived organisational support is said to be an important resource by widening one's pool of available resources, replacing resources that are lacking and reducing the adverse effects of demands (Singh et al., 2018). It is considered essential for work-life policies to be effective and has been associated with more inclusive work environments. (Francis & Michielsens, 2021). Organisational efforts that value women's contributions enhance women's sense of overall attachment to their field, reducing attrition (Singh et al., 2018). However, Singh and colleagues (2018) think that a supportive organisation might not be enough in and of itself to support women to stay in a male-dominated industry that maintains negative stereotypes about women workers.

Numerous studies have also documented that the parental role is an asset to the workplace and that managerial positions may be enhanced by the dual role (Watts, 2009; Lingard & Francis, 2009; Graves, 2007). Positive work-family interaction has been associated with many desirable outcomes for both employees and their companies (Lingard et al., 2010). The theory of work-family enrichment recognises the positive effects of combining work and family roles and argues that the two can, in fact, be "allies" (Greenhaus & Powell, 2006). Research by Lingard and colleagues (2010) suggests that construction jobs may be better designed to facilitate work-family enrichment, particularly by providing supervisor support, job flexibility, time adequacy for work and improved control over when and how work is carried out.

Personal life can clearly enhance professional life, and the work-family enrichment theory recognises that resources eventuating from parenthood, including skills, perspectives, psychological and social-capital resources, can improve occupational effectiveness

(Greenhaus & Powell, 2006). In their study of female managers, Ruderman et al. (2002) found that qualities including multitasking, interpersonal skills, and respect for difference, derived from their personal lives, enhanced their managerial effectiveness (Ruderman et al., 2002). This finding is consistent with Watts (2009), who found that the role of a parent is an image asset in the workplace, and Graves et al. (2007), who found parental skills can be directly transferrable to management roles (Watts, 2009; Graves et al., 2007). Greenhaus and Powell (2006) theorised that self-efficacy and confidence in one role could enhance performance in another by stimulating motivation, persistence, and goal setting (Greenhaus & Powell, 2006).

Thus, while the parenthood stage of career growth can be a complicated double bind for women in the construction industry, it is also a fruitful life stage that may lend itself to managerial roles and enhanced professional performance. At the critical parenthood stage, numerous recommendations have been made to support new mothers in both trade and professional roles. For instance, these could include improving maternity leave practices by introducing staged return to work options. Also reviewing how parental leave is managed and resourced and ensuring all impending parents and line managers know parental leave procedures (before and after they take it). Finally, salary reviews and bonuses should be passed on to those in caring roles to ensure pay equality (Galea et al., 2018).

### **Advancement**

Career success is inherently a subjective and objective concept that may be defined by career satisfaction, promotion, or self-employment. Women are consistently underrepresented in senior management positions across the labour market, and construction is no exception (Hickey & Cui, 2020). Additional stress comes from women's inability to progress and advance at the growth career stage, coupled with difficulties associated with work-life balance and re-entry after motherhood.

Women must prove excellence in their field and are frequently expected to take on more than what is required of their role in order to be considered for promotion (Galea et al., 2018). Gendered notions of 'leadership fit' exist and undermine women's progression in the construction industry, mirroring 'cultural fit' obstacles at the recruitment stage (Galea et al., 2018). Powell (1988) articulates that the managerial role has been defined as masculine, aggressive, competitive, unemotional, and self-confident (1988, p. 48). Following this, it has been argued that patriarchal structures render salary negotiation inappropriate for women since it contradicts normative expectations of women as caring, passive, and other-oriented (Davies et al., 2017; Bowles & Babcock, 2013). Indeed, women with managerial aspirations face the double bind that they are expected to assert themselves, like men, but they are penalised for being outspoken (Galea et al., 2018). Wells (2011) expressed the dilemma women managers face as a perception problem.

Therefore, women are caught between being insufficiently authoritative or too authoritarian and straying from patriarchal expectations of women's behaviour (Wells, 2011). In this gendered context, Bowles and Babcock (2013) found that both men and women on promotion committees were likely to penalise women who were too assertive. Watts (2007) observed that women in authority roles are perceived as interlopers in the field of engineering, representing a disruption to male power networks. Uncomfortable and hostile settings for women managers in construction may undermine their authority. As a highly visible other in the masculine arena of the construction site, women managers face open disregard and challenges to their capability (Watts, 2012). This is consistent with Oxenbridge et al. (2019) findings, who reported belittling and demeaning treatment of women working as pilots and automotive tradespeople, who are inherently in a position of authority in a male-dominated domain. The expression 'think manager, think man' neatly encompasses the sex-typing of the managerial role as male, a pervasive cultural mentality that militates against the female manager (Schien et al., 1996).

However, ascending to managerial roles is undoubtedly a signifier of success, and increased representation of women in these roles is expected to have positive impacts on gender diversity in the industry. Women are indeed progressing in the construction industry, but within the 2016 census data, only 11.3% of women were in managerial roles in construction compared to 37% average for all industries. Only 5.9% of construction managers were women. In Australia, the proportion of key management personnel and senior managers who are women in STEM fields has continuously increased to 23% in 2020 (STEM monitor, 2021).

So, are women simply not suited or don't desire management? Numerous studies document that female managers enhance their professional work with qualities derived from their personal lives, including interpersonal skills, multitasking and communication (Ruderman et al., 2001). It is pertinent to consider what factors support women's advancement in the construction industry at the growth career stage. In a study of nearly 500 professional and managerial women, Francis (2017) found that individual factors, including experience, work hours, tenure and education were predictors of women's career advancement in construction. Networking and mentoring were found to influence advancement, with women demonstrating a contest mobility pattern that differs from the sponsored mobility dominant amongst men Francis (2017).

Whitman (2005) found that reduced self-efficacy resulting from marginalisation within the industry was perceived as a barrier to advancement by architects, who cited their lack of confidence and doubt in their abilities as a mental hurdle (Whitman, 2005). Limited opportunities for exposure compound gender biases in promotional processes. Galea et al. (2018) found that while there remains a lack of transparency about promotion criteria in construction, career progression is linked to project management and proving your efficacy in delivering construction projects. Men were found to receive greater opportunities to

demonstrate their capabilities and impress leaders, while women experience diminishment and fatigue at having to constantly prove their worth, while male colleagues are assumed capable (Galea et al., 2018; Bryce, 2019; Powell et al. 2018). The significant obstacles faced by women pursuing career growth may lead other women to adopt a survival in the workplace approach rather than actively planning their careers. However, Francis (2017) demonstrated women do plan, but it does little to help their hierarchical advancement.

Construction should not be viewed as a career inherently lacking success, as many women may measure success more in terms of career satisfaction and capacity to balance work with personal life than hierarchical progression (Valcour & Ladge, 2008). Pride and satisfaction reported by tradeswomen have been documented in numerous studies and informs an understanding that construction is empowering and challenging work for many women, despite deficiencies in the industry (Ness, 2012; Marshall, 1989; Wright, 2014). Francis and Michielsens (2021) study of professional women in the built environment found that while feelings of inclusion were not associated with career advancement, they were associated with increased satisfaction and reduced turnover intent (Francis & Michielsens, 2021). This study demonstrated that exclusionary contexts may severely impact women's life satisfaction and that organisations have a prominent role to play in fostering inclusive environments (Francis & Michielsens, 2021).

Becoming self-employed or starting your own business is an avenue of career progression available to tradeswomen and some professionals seeking to open a small construction company that does not require significant capital. Research suggests that becoming self-employed can be a means to resist the construction industry's long hours culture. However, it may not be the panacea expected due to client demands for projects to be completed. This would be more significantly felt on larger projects, which may also be subject to unionisation and greater work hours demands within agreed work conditions.

Watts (2009), however, found that several women in a study of UK civil engineers had opted to become self-employed as a work-life balance strategy (Watts, 2009). Investigating the career types for women workers in the Spanish construction industry Ibanez (2017) found that small business owners and self-employed women perceived this type of employment as a "refuge" after difficulties with finding employment and negative experiences of the industry (Ibanez, 2017). Working for oneself actively lessens the barriers associated with the construction industry, including male-dominated culture and expectations of presenteeism (Ibanez, 2017; Watts, 2009). Additionally, Ibanez (2017) found that these women perceived their femininity to be a business asset in ensuring safety measures and equitable working conditions. The literature confirms that women bring unique characteristics to management and business ownership.

The desire for work-life balance can be one motivation to start a business due to the control and independence afforded to self-employed workers (Adkins et al., 2013). It has been

argued that female-owned organisations tend to develop more family-friendly policies and environments than traditionally masculine organisations that subscribe to the traditional, rigid separation of work and family (Bird & Brush, 2002). Women owners shape the culture and policies of organisations; Adkins et al. (2013) found that owners' motivations for starting a business and personal characteristics informed the positive work-family culture of women-owned businesses in the US<sup>13</sup>.

A study of women-owned construction enterprises in South Africa reported barriers to development, including unfairness in procurement procedures, lack of requisite technical and business management skills and access to financial capital (Haupt & Fester, 2012). Women Building Australia (2021) has developed a female-led business register that highlights women-owned and managed businesses in the Australian construction industry. The register enables consumers to support female-owned businesses, assists vulnerable women who prefer using the services of female tradespeople and provides mentoring and networking opportunities for women business owners (Women Building Australia, 2021). Business training and mentoring may represent one enabler for women considering owning their own business at the growth career stage.

### **Women's Support Networks and Sponsorship**

The advancement of women in the construction industry is compromised by a lack of strategic alliances and networks. As previously discussed, the lack of transparency around promotion processes enhances the need for employees to form strategic alliances and sponsorship relationships to progress within the construction industry (Galea et al., 2020). Support networks also provide emotional and social support to minority groups in male-dominated industries. A recent review of existing trades networks in Australia by Holdsworth and colleagues (2020) found they focussed on promoting, supporting and/or connecting women in the industry.

Social capital theory identifies social networks and other interpersonal relationships as resources for career advancement (Francis, 2017). It is widely documented that homosocial, heterosexual male groupings premised on solidarity and homophily exclude women in the work setting. A prominent example is sporting events and discussions wherein extracurricular socialising occurs between male employees (Davies et al., 2017). The exclusion of women from corporate hospitality events centred around sport is a well-documented phenomenon (Wright, 2016; Davies et al., 2017). Indeed, in a study of New Zealand-based female engineers, Davies et al. (2017) found that participants reported beliefs that lack of promotion was due primarily to exclusion from those very sites at which promotion takes place – sports events (Davies et al., 2017). One participant recounted her experience of exclusion from a

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<sup>13</sup> This study was conducted in a large southern state in the US and received 432 responses to a survey from women business owners.

golf tournament, perceived as a strategic event: “They have an annual golf competition, and I play golf. I always have done. I’m not bad at it either. And I asked if I could go in it and they said ‘Oh, im really sorry. You’re not, well, you’re not important enough to go.’ And I found out they sent a recent graduate, who was a guy who never plays golf” (Davies et al., 2017, p. 7). These findings are aligned with an ethnography of Wall Street conducted by Ho (2007), which demonstrated that men’s drinking sessions and golf outings are sites of career progression (Ho, 2009). Furthermore, Cohn (2000) found that in a boardroom setting, talk before the main business that may be centred on sports interests leaves women outside of social discourse, resulting in their isolation (Cohn, 2000). Tessa Wright (2016) found women felt events held by male-dominated networks were intimidating and difficult to infiltrate (Wright, 2016, p. 173). These findings support the findings of Dainty and Lingard (2006), who considered women’s inability to penetrate male networks as contributing to their marginalisation within the construction industry (Dainty & Lingard, 2006).

An extra layer of complexity is tradeswomen’s difficulty of workplace friendships with men due to their sexualised potential (Wright, 2016). A Tradeswomen of Australia study confirmed this experience; participants stated that men don’t want to be friends with women in trades because they “fear the perception other colleagues will have” and “feel they can’t have women as a friend” (Tradeswomen Australia, 2019, p. 11). That friendliness may be misinterpreted as sexual interests further preclude women’s capacity to actively participate in instrumental and strategic networks that may benefit their career (Wright, 2014). As previously discussed in the ‘Early experiences’ stage of this literature review, these networks disadvantage women at the recruitment stage but remain an impediment through to the growth stage of their careers.

Mentoring is commonly suggested as a strategy for women’s career development in the women in construction literature (Fielden et al., 2000, Galea et al., 2018; Clarke et al., 2015). Although mentoring has been linked to overcoming stereotypes and reduced organisational power, it has not been found to be associated with career advancement for women in male-dominated fields in empirical investigations (Francis, 2017). While being mentored was not associated with career advancement, it was important in terms of the retention of managerial and professional women in the construction industry (Francis, 2017). Mentoring may provide emotional and psychosocial support, which can improve feelings of confidence and self-efficacy (Tharenou, 2005).

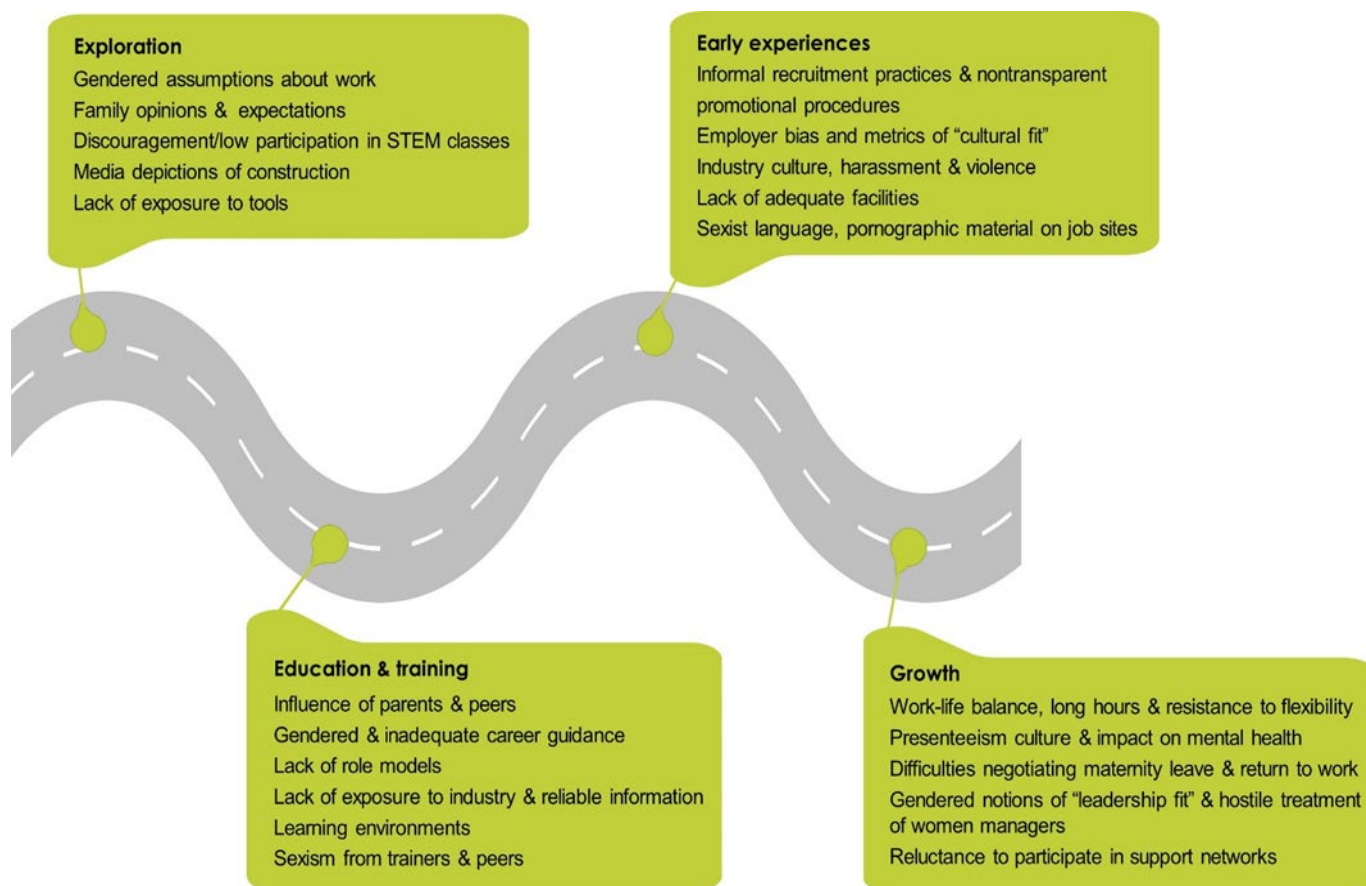
In the same study, Francis (2017) found that only instrumental networks, not expressive networks, correlated with career advancement; however, they were not a predictor of advancement. Ibarra (1993) distinguishes between instrumental and expressive networks, where instrumental networks support the individuals’ work role and provide job-related resources and sponsorship, expressive networks provide relationships built on trust and friendship (Ibarra, 1993). Research confirms that women are more likely to invest in

expressive networks, which can be detrimental to their careers (Ibarra, 1993; Bushell, 2020; Tharenou, 2005).

Women's professional networks aim to mitigate the difficulties of engaging with male networks by providing a different approach. Examples of successful industry networks include Industry Women Central, Supporting and Linking Tradeswomen (SALT), Tradeswomen of Australia (TWA), and the National Association of Women in Construction (NAWIC). These networks offer avenues for tradeswomen and professionals to meet, gain an apprenticeship or job opportunities, gain support, professionally network and advocate for diversity and change in the industry. The literature suggests that reticence to participate in women's support networks may be due to perceived hostility towards feminist identification and a sense that displaying active gender identities may compromise a woman's acceptance into workplace culture as "one of the boys" (Wright, 2016; Kanter, 1977). Moreover, Watts (2009) found that when striving to achieve work-life balance, professional and networking activities were not well supported by female engineers who felt these activities would have to be sacrificed to ensure a fruitful life outside of work (Watts, 2009). Additionally, the nature of LGBTQ+ network groups make it difficult for people who may not be open about their sexuality at work to attend (Wright, 2016). The practical work-related benefits and informal support offered by female colleagues in professional networks may be an important means to mitigate the isolation and frustration experienced by women in the construction industry in mid to late career, and moreover are a source of advice on career development (Kamardeen & Sunindijo, 2017).

## **2.7 Conclusions**

The existing literature presents a compelling picture of the challenges women face in male-dominated fields. In each stage of the career cycle, women confront the consequences of gender schematic notions formed in childhood. From the biases and expectations both parents and teachers impose upon school-aged female adolescents to the discrimination women in senior leadership roles face when juggling work and family, gendered attitudes remain pervasive throughout the lifecycle. The literature assisted in identifying the typical roadblocks that exist at every career stage, and these are summarised in Figure 3.



**Figure 3. Career roadblocks identified in the literature**

Whilst theorists diverge on the extent to which advertising and media depictions of the construction industry inform the formation of vocational aspirations (e.g., Dabke et al., 2008 or Bigelow et al., 2018), improving the public perception of this field remains one of the key insights from the literature. Indeed, recent events involving members of the construction industry dominating anti-lockdown protests in Melbourne have done little to combat the stigma around this diverse and complex industry. In addition, promoting STEM classes to young women (Jones et al., 2017) and providing opportunities to familiarise oneself with tools and technology in childhood (Shrewing, 2009a) are two crucial interventions from the literature that can promote young women’s self-efficacy and confidence to pursue the built environment.

The education and training stage of the career lifecycle was the one at which the literature was most lacking. If women leave TAFE or university courses before the census date for data collection, they are not included in non-retention data. This may therefore contribute to an inaccurate picture of attrition rates, thereby minimising the issues at this stage and the need for greater investigation. The literature confirms that education forms the interface between career interest and working in the industry and that the experience of being in the minority gender for the first time post-secondary school can be destabilising (Tradeswomen Australia Foundation, 2019). A key takeaway from studies focused on the education and training stage



was that a significant disparity exists between expectations and the reality of the construction work environment. This means that the tertiary and TAFE environments may not adequately equip women to enter an industry that does not yet accommodate gender diversity (Oo et al., 2020; Ling & Poh, 2004). Ensuring that parents and careers counsellors possess positive but accurate and current information about trades and professional roles in construction for young women making their post-secondary school decisions will be helpful. This should include the advantages, career pathways, and remuneration on offer that is necessary to promote this industry (Francis & Prosser, 2013; Jones et al., 2017). The literature confirms that a lack of reliable information and prominent misconceptions about the industry remains the key obstacle for young women pursuing trades, resulting in many women taking a circuitous route to the industry, arriving later in life or after having studied or worked in other fields. Seeing examples of women succeeding and getting hands-on experience with construction tools can also help improve self-efficacy and improve confidence.

As the most well-documented stage of the career, the literature on the early experiences phase offered a substantial understanding of the problems specific to commencing a career in construction. Beginning with hiring practices where women are sometimes said to have an advantage due to diversity quotas and targets, entering the industry as a tokenised female can present challenges with social integration (Wright, 2016; Kanter, 1977). The use of a metric of “cultural fit” at the recruitment stage advantages the traditional incumbent, young men, and operates to maintain a monoculture, particularly in the trades (Galea & Powell, 2018; Kamardeen & Sunindijo, 2017). Early encounters with the masculine culture of the industry may be marked by sexual harassment, social exclusion, and a lack of adequate facilities. In this review, several scholars have argued that when faced with this culture, women face a choice in their early career of becoming “one of the boys” or actively disconfirming inappropriate behaviour and risk further marginalisation (Foley et al., 2020; Oxenbridge et al., 2019; Wright, 2016). Unconscious bias training and increased transparency in hiring practices are strategies repeatedly raised in the literature to overcome early career challenges for women in construction and ensure their longevity in the industry (AHRC, 2013).

Harassment, sexual harassment, bullying and sexual violence are an unfortunate reality for many women in the workforce. Both direct and indirect harassment can take a severe negative toll, compromising women’s retention and advancement within the construction industry and contributing to a hostile culture. The literature confirms that victims of harassment at work suffer higher rates of anxiety and depression (Kamardeen & Sunindijo, 2017) and this behaviour results in reduced productivity and higher turnover intentions (Watts, 2007; Foley et al., 2020). Evidently, this is a major issue facing the industry. A key takeaway from the literature is that combatting harassment is in the best interest of the industry, tokenistic policies that lack enforcement and sanctions do little to combat the

problem. Indeed, robust and revisable policies (Galea et al., 2015) that are backed by top-down leadership and enforcement are the most critical approach to ensure early career women are supported and retained.

Finally, the growth stage of the career presents numerous distinct obstacles that render career advancement and work-life balance a constant challenge for both professionals and tradeswomen. A resistance to flexible working conditions, including part-time and job-sharing, is largely attributed to the high-intensity, project-based nature of the work that is driven by client expectations and beholden to strict deadlines. The literature advocates for well-being leave (Powell et al., 2018), accommodating part-time roles (Watts, 2009) and encouraging workdays of a maximum of ten hours (Bryce, 2019) as strategies to overcome rigid workplace structures and promote a healthier work culture. The complexity of navigating these industry rigidities is further exacerbated by taking a career break to have a child. Pregnancy discrimination continues to impact women in the Australian workforce, where assumptions about future maternity leave can adversely affect promotion prospects (AHRC, 2014). Indeed, after returning from maternity leave, women report being looked over for promotion, faced difficulties attaining leadership roles, and struggled with balancing family with the overwhelming demands of work (Rosa, 2017; Watts, 2009; Cockburn, 1991).

Parenthood may be the most important stage of the career cycle at which attention must be paid to supporting and advocating for women professionals and tradespeople. Perceived organisational support is crucial at this stage, where women are often left to strategise their own departure and return to the industry without clear guidance or support (Galea et al., 2020; Bryce, 2019). Support networks, mentoring, and formal sponsorship are raised in the literature as enablers for women at the growth stage to advance in their careers, although these strategies may provide social and psychological support rather than strategic assistance (Galea et al., 2020; Francis, 2017). Numerous studies confirm that having women in leadership positions has a positive flow-on effect for industry culture and women employees' work experiences (Adkins et al., 2013; Cohen & Huffman, 2007). From the small business environment where women owners are found to promote equitable working conditions and develop more family-friendly policies (Bird & Brush, 2002; Adkins et al., 2013) to the professional construction sphere where women managers enhance their professional work with qualities from their personal lives including interpersonal skills (Ruderman et al., 2002), the advantages of promoting women to positions of seniority are profound.

### 3. PROGRESSING WOMEN IN CONSTRUCTION: A REVIEW OF EXISTING PROGRAMS

#### 3.1 Overview

The program review was conducted to ascertain current and recent practices in increasing women in construction and other male-dominated industries. A review of secondary data, particularly that of programs and policies, is a common tool for canvassing a broad array of approaches to social issues. The following sections outline the methodology adopted and the review findings. The use of keyword searches guided the identification of programs. The collection of program data was guided by literature on program theory and career stages to allow for program comprehension and selection (Chen, 2005; Super, 1957; Smart, 1998). Further information on program theory and the methodology adopted in this review can be found in Appendix B.

Secondary website data were used to garner information on a range of programs. Programs were sourced both nationally and internationally, allowing for a rigorous overview of recent and current programs working to achieve gender parity. The included programs focused on increasing women's involvement in the construction industry and other male-dominated industries, such as engineering and mining, and those focused on increasing other under-represented groups, such as young people. The programs' size varied, with both large and small included, and implementers and other stakeholders from government, non-government organisations, and the private sector. A review of existing programs is critical so as to recognise successful interventions and develop a picture of gaps in the current pool of programs.

In total, 365 programs were identified, which met the selection criteria and included 249 international programs and 116 local programs. These are summarised in Table 1.

**Table 1. Number of programs by location and career stage**

Career Stage	Programs	
	National	International
Exploration	46	102
Education & training	31	84
Early experiences	45	86
Growth	40	55

International programs were located predominantly in the US, Canada, and the UK, with other programs also found across Europe. Similarity with the Australian construction and social context was also a consideration.

In conjunction with program theory, literature on career stages was also used to guide program interpretation. As was outlined in Section 2, a model of career stages using Exploration, Education and training, Early experiences and Growth (EEEG) was developed. Like the literature review, it will also be used to structure the analysis.

The programs spanned all four career stages: exploration, education and training, and early experiences and growth. They were analysed thematically using program theory and structured by their career stage. Some programs impact multiple career stages or have multiple activities which can be classified into different career stages. The programs are listed in Appendix C.

### 3.2 Exploration career stage

Four key themes emerged from the analysis of the interventions undertaken in programs that related to the exploration stage. These included:

- Awareness
- Exposure
- Exploring
- Resource Development

Some programs had multiple themes within this career stage. The activity types allowed for insight and hands-on experience to be gained. These are summarised in Table 2.

**Table 2. Exploration career stage intervention themes and programs**

Intervention Themes	Examples	Programs	
		National	International
Awareness	Advocacy campaigns, ambassadors	5	19
Exposure	Career sessions, careers fairs, industry panels & events, expos, open days/site tours	18	55
Exploring	Hands-on workshops, competitions	28	40
Resource development	Websites and toolkits on career pathways, employment & training.	4	21

## Awareness

Several programs centred their activities around building awareness. To do so, advocacy campaigns were often implemented. Many of these campaigns were aimed at promoting the construction industry to young people or those considering a career change into the construction industry. French campaigns ‘Construction: tomorrow is invented with us’<sup>14</sup> and ‘Time to Build’<sup>15</sup> sought to present the diversity of construction trades to young people via the internet and social media and included videos to inspire them. In the Netherlands, Bouwend Nederland’s ‘Inflow campaign’<sup>16</sup> is aimed at engaging new people in the construction sector through reskilling. The initiative includes using success stories by young people who have pursued careers in construction to improve the image of the industry. These role models expose people to reskilling opportunities and new careers. A common theme among many of these advocacy campaigns was to improve the image of the industry while raising awareness about its possibilities. To do so, the Swiss initiative, ‘Build Your Future’ included a docusoap titled ‘The Construction Heroes’<sup>17</sup>. The show gives an insight into life on the building site, with the content intent is to improve the image of the industry. Other programs included advocacy campaigns to attract both women and young people to the industry. Programs such as the Erasmus+ project’s ‘Icaro program’<sup>18</sup> used social media and video resources to promote the industry to a new generation. Another like the EBC campaign ‘Involving women and young people for more inclusive construction SMEs’<sup>19</sup>, which included a photo exhibition to promote the industry. Advocacy campaigns were also used

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<sup>14</sup> The campaign “Construction: tomorrow is invented with us” is run by CCCA-BTP. The campaign included several communication materials, such as movies, a social media campaign, a website, and partnerships with youtubers, to enable young people to discover training and job opportunities, as well as testimonies from professionals in the industry. <https://laconstruction.fr/>

<sup>15</sup> Time to Build was launched in March 2020 and involves an awareness campaign on career paths in construction and includes local ambassadors and influencers to promote the campaign on social media. <https://timetobuild.fr>

<sup>16</sup> Bowend Nederland’s ‘Inflow Campaign’ has aimed to attract young people, people seeking career changes, jobseekers and foreign workers to careers in the construction industry. It includes success stories of careers in construction and hopes to reinvent the image of the industry. <https://ec.europa.eu/docsroom/documents/44165>

<sup>17</sup> ‘Build Your Future’ was developed by the Swiss Master Builders’ Association. It sought to improve the image of the construction industry and thereby attract young people. <https://bauhelden.ch/de/#die-story>

<sup>18</sup> The Icaro program is a part of the Erasmus+ project, which seeks to train a new generation of in the construction industry. The program involves an awareness campaign (website, social media) to attract more women and young people to the industry. A series of interviews with professionals, trainers and students in the industry also took place. The program culminated in a video resource being developed to promote the industry. <http://www.icaroproject.eu>

<sup>19</sup> EBC ran a photographic campaign focused on the inclusion of women and young people with the aim of making SMEs more inclusive. The portraits used showed the stories of women and young people working in the construction industry, including how they got to where they are and their outlook on the future. <https://constructionblueprint.eu/2021/08/25/eu-ebc-campaign-involving-women-and-young-people-for-more-inclusive-construction-smes/>

solely to attract women and girls to the industry with a focus on changing the image of what someone in the industry looks like. This was seen in campaigns like FFB Nouvelle-Aquitaine's 'Bâti Femina'<sup>20</sup> and in the media campaigns by the Boss Ladies Project<sup>21</sup> in Denmark. Others sought to attract women to the industry by increasing the visibility of those in the industry and sharing their stories, such as in Ireland's #BuildingEquality<sup>22</sup> campaign.

In Australia, Science and Technology Australia's (STA) 'Superstars of STEM' is an advocacy campaign designed to challenge society's gendered assumptions about scientists and increase the visibility of women in STEM professions. Through increased visibility of "celebrity" Australian female scientists and technologists, STA promotes these women as role models for younger women and presents a more equal representation of women in STEM in the media.

## Exposure

A significant number of the programs focussed on the period of childhood and adolescence, with many exposing and engaging young people in careers in the construction industry. Many of these types of interventions focused on engaging both boys and girls through careers fairs and site tours. Open days and site tours such as those offered by 'Les Coulisses du Bâtiment'<sup>23</sup> in France, 'Building Heroes'<sup>24</sup> in Belgium and 'Azubi am Bau'<sup>25</sup> (apprentice in the building sector) in Germany introduce young people to the industry, showcase the diversity in construction roles and debunk clichés. Similarly, careers fairs, sessions, and expos, such as those offered by 'Z wie Zimmerer'<sup>26</sup> (Z Like Carpenter) in Germany, offer young people insights into career pathways within the construction industry. While a significant number of exposure activities were directed towards all children, there were also some that focused specifically on engaging girls. Careers fairs are offered by organisations such as Tradeswomen

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<sup>20</sup> Launched in 2021, the FFB Nouvelle-Aquitaine launched the Bâti Femina campaign focused on women in the construction industry. The campaign included a film, video, and photo portraits, all of which were posted online and on social media. <https://constructionblueprint.eu/2021/07/16/france-bati-femina-ffb-nouvelle-aquitaine/>

<sup>21</sup> Boss Ladies Project, Denmark, utilise the media to change the image of what someone in the building and construction industry looks like. <https://www.boss-ladies.dk/new-page-78>

<sup>22</sup> A campaign to increase the visibility of women in the construction industry. In the #BuildingEquality campaign, women shared their stories and billboards were used to increase visibility. Ireland. <https://cif.ie/building-equality/>

<sup>23</sup> Les Coulisses du Bâtiment was launched in 2003 and runs open day events for member of the public and guided tours for students. This initiative has reached over 1 million people on approx.3,500 building sites. [www.coulisses.ffbatiment.fr](http://www.coulisses.ffbatiment.fr)

<sup>24</sup> The Building Heroes program, organised by Constructiv, raises young people's awareness of careers in construction. 2,000 children and parents/guardians were invited to the event. The event includes a craft village, an interactive game, and a site visit. <https://www.facebook.com/buildingheroeswallonie/>

<sup>25</sup> Azubi am Bau (Apprentice in the building sector) was launched in 2013 and targets young people who have left school and unemployed people with an interest in the building industry. <http://www.construction-for-youth.eu/en/initiatives/de---azubi-am-bau.aspx>

<sup>26</sup> The Z wie Zimmer (Z like Carpenter) campaign targets students to raise awareness about carpentry apprenticeships. They created a website which provides apprenticeship information and opportunities and ran a trade-fair stand. [www.holzbau-online.de](http://www.holzbau-online.de)

Inc.<sup>27</sup> in the US that presented young girls with opportunities to engage in non-traditional careers information and activities.

Seeking to address the low numbers of women, as well as other marginalised groups enrolling in construction-related courses at the university level, the ‘Building Routes into Degrees with Greater Equality’ (BRIDGE) project incorporated school assembly sessions and pop-up shops as a means of construction careers to girls. In the UK, the WISE Campaign developed ‘People Like Me’<sup>28</sup> – a resource and outreach program. It was developed following the report, ‘*Not for people like me*’ (MacDonald, 2015), which drew on prior research on women’s representation in STEM professions and advocated for the use of a personality trait-based career education model. These materials developed were used in workshops in schools delivered by STEM professionals.

Outreach activities with schools were also common, where programs ran careers sessions and industry panels in schools to engage young people in construction. In Australia, programs like ‘Skillset TradeUp’<sup>29</sup> include activities like school visits and careers expos to showcase construction career options to high school students. Other initiatives like ‘BAU Dein Ding (Construction – your thing)’<sup>30</sup> in Germany have combined school visits with a construction-related game experience. The initiative includes the ‘BauSimulator’ – a game that mimics the movements of a machine on a construction site. This provides a hands-on exposure along with a traditional information session.

Some of the programs have also specifically sought to engage school-aged girls, such as ‘Women Build Nevada’<sup>31</sup> in the US, who conduct outreach activities with schools to expose girls to the career possibilities in the construction industry. In Australia, ‘The Lady Tradies’<sup>32</sup>

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<sup>27</sup> Tradeswomen Inc. work with women and girls to help expose them to and engage them in non-traditional careers. Their programs include training in a range of trades, apprenticeship intro workshop, careers fair. <https://tradeswomen.org/programs/>

<sup>28</sup> The program also ran workshops with industry and with parents to support the success of the initiative. An evaluation of the program lauded it as a huge success (MacDonald, 2015). Based on the evaluation, WISE have developed an online version of this to replace their existing People Like Me resources. The new digital platform was launched in 2019 and aims to engage 11–19-year-old girls in STEM careers possibilities, with the goal of reaching 200,000 girls. <https://www.wisecampaign.org.uk/how-to-get-involved/my-skills-my-life/>

<sup>29</sup> Skillset TradeUP is a trade careers program engaging high school students in Orange and Dubbo NSW, Australia. The program includes school visits, careers expos, employment skills sessions, mentoring, and work experience support. <https://skillset.com.au/employment-career-development/tradeup/>

<sup>30</sup> The ‘Bau Dein Ding’ initiative works to promote the construction industry as a future career option for young people. They do this through school visits and include the use of the ‘BauBus’ (Construction Bus) as well as the ‘BauSimulator’ game. <https://www.bau-dein-ding.de/bundesweit-de>

<sup>31</sup> ‘Women Build Nevada’ is a part of the Northern Nevada Apprenticeship Coordinators’ initiative which aims to increase awareness among women of all ages about the career opportunities in the construction industry and increase their involvement. ‘Women Build Nevada’ run exposure activities with women as well, and also provide mentoring, networking and leadership sessions. <https://www.buildingtradejobs.org/women-build-nevada>

<sup>32</sup> The Lady Tradies run outreach with schools to engage young girls in careers in construction, as well as provide support with recruitment and offer networking for women in the industry. [www.theladytradies.com.au](http://www.theladytradies.com.au)

and the 'Tradeswomen Australia Community Foundation Schools Program'<sup>33</sup> visit schools across Victoria and gives presentations and run activities with girls to highlight the range of career options in the trades. In Queensland, a unique take on this kind of activity was seen in the 'STEM Choice in Female High-School Students: In-School Experience Outreach Initiative'<sup>34</sup>. The program works to engage female high school students, especially those in regional areas. They highlight career options available via panel discussions with industry professionals and give students hands-on experience to develop their understanding of careers in construction and engineering. During this program, 'the Virtual Construction Site Tour project'<sup>35</sup> was piloted. The virtual experience is said to mimic a real construction site and provides students with an insight into the variety of on-site roles. This, coupled with the in-school careers sessions and exposure to a real construction site, give students a unique insight into the industry.

Similar types of activities are also directed at women seeking a new career path. An example of this is 'Build Together's Women of the Building Trades'<sup>36</sup> program, which exposes women to careers in construction through tradeshows and careers fairs. Likewise, the National Association of Black Women in Construction Inc.<sup>37</sup> runs several programs in the US, including careers sessions and industry days, catering specifically to women of colour.

## Exploring

Many programs include elements that allow women to explore construction in more detail, such as hands-on workshops and competitions. Like the exposure activities, many of these types of interventions sought to engage children and young people in general. Engaging children at an early age, 'Baumeister Gesucht' (Builders Wanted)<sup>38</sup> offers kindergarten-aged children practical experience in the construction trades. In workshops, boys and girls get to experience the construction of timber and stone objects, which allows construction to be explored in a playful way and the industry to be normalised as a potential future for all children. Some programs included competition activities for young people, such as the Polish

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<sup>33</sup> The Tradeswomen Australia Community Foundation is a community-based, charity arm of Tradeswomen Australia. This program receives support from Lord Mayor's Charitable Foundation, the City of Wyndham, and Victoria University. <https://www.twacf.org/school-programs/>

<sup>34</sup> The 'STEM Choice in Female High-School Students: In-School Experience Outreach Initiative' was run by the National Association of Women in Construction (NAWIC) Queensland, in partnership with the Queensland University of Technology (QUT). [https://www.nawic.com.au/Web/Chapters/QLD/QLD\\_Schools.aspx](https://www.nawic.com.au/Web/Chapters/QLD/QLD_Schools.aspx)

<sup>35</sup> The 'Virtual Construction Site Tour project' was developed by Dr Fiona Lamari, who was the recipient of a NAWIC IWD scholarship.

[https://www.dropbox.com/s/165llbr14r4yux/NAWIC\\_VCSReport\\_FionaLamari\\_R3.pdf?dl=0](https://www.dropbox.com/s/165llbr14r4yux/NAWIC_VCSReport_FionaLamari_R3.pdf?dl=0)

<sup>36</sup> Women of the Building Trades aims to challenge myths and stereotypes and facilitate discussion about means of engaging women in the industry. As a part of the program, tradeswomen have attended tradeshows, career fairs, schools, mentorship events, and networking functions across Canada. <http://buildtogether.ca/about/>

<sup>37</sup> the National Association of Black Women in Construction Inc. (NABIC) works to address the unique challenges encountered by women of colour in the construction industry. <https://nabwic.org>

<sup>38</sup> The Baumeister Gesucht program is offered by Hauptverband der Deutschen Bauindustrie in Germany. <http://www.construction-for-youth.eu/en/initiatives/de---builders-wanted-baumeister-gesucht.aspx>



program, 'Súťažná prehliadka stavebných remesiel'<sup>39</sup>, the 'Best Young Builder Competition'<sup>40</sup> in Bulgaria and the 'EuroSkills campaign'<sup>41</sup>, which takes place across Europe. These competitions can actively engage young people.

While many programs concentrated on young people, a significant number were found that focus solely on enabling young girls to explore the trades. Girls were able to gain hands-on experience through workshops in programs such as Vermont Works for Women's 'Rosie's Girls Afterschool'<sup>42</sup>, Miron's 'Build Like a Girl'<sup>43</sup> and 'Tools & Tiaras's'<sup>44</sup> monthly workshops. These are all based in the US, which numerically and proportionally has more women in the trades compared to countries like Australia.

Workshops have also been used to engage girls in other non-traditional careers, such as the Girls Experiencing Engineering (GER) in the US, aiming to increase female middle school and high school students' interest in STEM. These types of activities can contribute to greater numbers of women seeking professional roles in construction as well as other industries. Another common activity to engage young girls was the use of camps. Again these were more common in the US, where the notion of summer camps is widespread. Organisations such as Vermont Works for Women<sup>45</sup> and Tools & Tiaras<sup>46</sup> also offer some summer camps, as well as various chapters of the U.S National Association of Women in Construction (NAWIC). The camps are conducted across the US. Similarly, 'Mentoring a Girl in Construction (MAGIC)'<sup>47</sup> in the US offers a week-long camp for high school-aged girls to show them the possibilities that exist in the construction industry. 'MAGIC' offers girls insight into the

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<sup>39</sup> Súťažná prehliadka stavebných remesiel allows students to gain hands-on experience in a variety of trades, like masonry, joinery, carpentry, bricklaying, and floor fitting in the yearly competition of construction crafts. [https://www.sosos--trnava-sk.translate.google.com/galerie/odborne-sutaze/sutazna-prehliadka-stavebnych-remesiel-suso-2019-381sk.html?x\\_tr\\_sl=sk&x\\_tr\\_tl=en&x\\_tr\\_hl=en&x\\_tr\\_pto=nui,sc](https://www.sosos--trnava-sk.translate.google.com/galerie/odborne-sutaze/sutazna-prehliadka-stavebnych-remesiel-suso-2019-381sk.html?x_tr_sl=sk&x_tr_tl=en&x_tr_hl=en&x_tr_pto=nui,sc)

<sup>40</sup> This program involves a competition for students from VET schools to demonstrate theoretical knowledge and practical skills in construction. They're also able to demonstrate their soft skills. This allows students an opportunity to apply their knowledge and develop their creativity. <http://www.construction-for-youth.eu/en/initiatives/bg---the-best-young-builder-competition.aspx>

<sup>41</sup> EuroSkills campaign bring young people together from across Europe, where they then compete for the European title in vocational skills. The campaign seeks to increase young people's interest in vocational career pathways and promote VET courses. <https://euroskills2021.com/en/communication-campaign-launched-with-great-success/>

<sup>42</sup> This afterschool program an adaptation of their highly successful summer camp curriculum, exposing middle school girls and gender non-conforming youth to trades and career exploration opportunities. They piloted this new program in the 2019/2020 school year with 6 schools. <https://www.vtworksforwomen.org/programs>

<sup>43</sup> Miron's Build Like a Girl provides a hands-on workshop experience for girls in 10<sup>th</sup> grade. <https://mironbuildlikeagirl.com>

<sup>44</sup> Tools & Tiaras offer monthly workshops for women and girls and summer camps for girls. <https://www.toolsandtiaras.org/programs>

<sup>45</sup> Vermont Works for Women offer a summer camp program called 'Rosie's Girls Camp', to allow middle school girls and gender non-conforming youth to explore careers in the construction industry. <https://www.vtworksforwomen.org/programs/youth/rosies-girls>

<sup>46</sup> Tools & Tiaras offer summer camps for girls to allow them to gain hands-on experience with tools and insight into the construction industry. <https://www.toolsandtiaras.org/programs>

<sup>47</sup> Based in the US, MAGIC is sponsored by a range of industry bodies to enable them to introduce girls to the construction industry. <https://mentoringagirlinconstruction.org>

industry and allows them to engage with it via hands-on training in basic construction skills. Offering a similar program style, Stemettes in the UK offer girls an intensive course over the summer holidays to give them hands-on experience in STEM, called ‘The Outbox Programme’<sup>48</sup>. Beyond allowing for exposure and experience, the programs focus on young girls to break down the barriers and stereotypes that prevent them from considering a career in a male-dominated industry.

Across Germany, programs such as ‘Girls’ Day’<sup>49</sup>, ‘Boys’ Day’<sup>50</sup> operate with the aim to debunk the idea of gendered professions. In these programs, both girls and boys are introduced to non-traditional career options, with girls introduced to careers in IT, skilled trades, science and technology, and boys given insight into careers in social, educational, and caring professions.

In Australia, Supporting and Linking Tradeswomen (SALT)<sup>51</sup> is well known for offering workshops to school-aged girls (and women), allowing them to explore the type of activities involved in a trade role. These have been conducted as early as kindergarten but are more commonly held for high school girls. In SALT’s workshops, participants can gain familiarity with tools and apply their newfound skills using small projects. Another program in Australia is ‘Women Who Weld’<sup>52</sup>, run by Queensland Manufacturing Institute, which offer year 10 girls hands-on experience in welding. They have subsequently reported a twenty per cent increase in careers in welding as a result of the program. In partnership with TAFE Queensland, Awesome Women in Construction (AWIC) have run the ‘Scaffolding the Future for Women in Construction’<sup>53</sup> program, aimed at giving girls an insight into the industry and hands-on experience.

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<sup>48</sup> Stemettes are a social enterprise who engage girls, women and young non-binary people to encourage them pursue careers in STEM. The Outbox programme was launched in 2013 and is an intensive residential course for girls under 22. The program is delivered over the course of 6 weeks during the summer holidays.

<https://stemettes.org/?s=outbox>

<sup>49</sup> German program ‘Girls’ Day’ consists of day workshops where girls are introduced to non-traditional career options. The evaluation of which highlighted that participants felt that had more career options than they previously thought. The program is funded by the German Federal Ministry for Family Affairs, Senior Citizens, Women and Youth and the German Federal Ministry of Education and Research and supported by a range of industry bodies.

<https://www.girls-day.de/fakten-zum-girls-day/das-ist-der-girls-day/ein-zukunftstag-fuer-maedchen/english>

<sup>50</sup> ‘Boys’ Day’ is the counterpart to ‘Girls’ Day’ for boys. <https://www.boys-day.de/footer/english-information>

<sup>51</sup> SALT runs ‘SkillWomen Workshops’ with girls in high schools across Australia, and also partners with community groups to run workshops with women. <https://saltaustralia.org.au>

<sup>52</sup> The ‘Women Who Weld’ program seeks to expose girls to careers in male-dominated industries. The program participants were grade 10 students from schools participating in the ‘Gateway to Industry Program (GISP)’ in the Surat Basin. The program is run by the Queensland Manufacturing Institute.

<https://www.qldmanufacturinginstitute.org.au/news/qmis-women-who-weld-program-increase-participation-in-trades>

<sup>53</sup> AWIC partner with industry to provide educational programs as well as offer networking opportunities for their of members. <https://awic.org.au/tafe-workshops/>

There are also a number of programs targeting young girls in other male-dominated areas in Australia, with examples such as ‘Robogals’<sup>54</sup> engaging girls in engineering and Girl Geek Academy<sup>55</sup> on technology, which both provide workshops for girls. Seeking to engage female high school students in aviation, the Air Force provides camps for girls in Queensland, New South Wales, and the ACT<sup>56</sup>. As a result of exploring aviation career pathways, the Air Force hopes to increase the number of women recruited into these roles.

## Resource development

A core component of many programs was the development of resources. These were sometimes used to complement other program activities or were the sole focus of some programs. Resources such as websites were developed by many programs to increase people’s knowledge and awareness about the opportunities that exist in the construction industry with the purpose of opening up these areas as potential career options. Initiatives like the Finnish MESTA.net<sup>57</sup> created a website to offer advice and information on training and careers in construction, real estate, and design. Similarly, ‘Deine Baustelle’ (Your Building Site)<sup>58</sup>, launched by the Bavarian Construction Industry Association, is a campaign to increase the number of young people entering the construction industry, with the program's centrepiece being a training course finder which assists potential trainees in applying to companies. The website also includes guidance on applying, examples of construction projects, and stories from those in the industry. Some of these types of interventions focus solely on engaging women. An example of this is ‘Femmes de metier’<sup>59</sup>, a Belgian initiative that provides an online portal specific to young women in the construction sector and offers information on training opportunities available.

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<sup>54</sup> Robogals run a range of programs to engage girls in engineering. Robogals run outreach and the educational workshops and initiatives for children in Australia and overseas. <https://robogals.org>

<sup>55</sup> Based in Melbourne, Girl geek academy run programs on games, startups, 3D printing, making, design, tech, drones, space and aviation. <https://girlgeekacademy.com/about/>

<sup>56</sup> This is an initiative aiming to increase women's recruitment and promote Air Force jobs to female students in years 10, 11 and 12 via experiential Flight Camps and Technical Camps. Girls are exposed to military aviation operations as well as the day-to-day routine of Air Force bases. <https://www.airforce.gov.au/our-people/our-culture/women-air-force>

<sup>57</sup> MESTA.net is run by the Confederation of Finnish Construction Industries (RT), the Finnish Construction Managers and Engineers (RKL) and the Finnish Association of Architects and offers career counselling in addition to online information on possible careers in construction, real estate and design, training options in the sector. <http://mesta.net>

<sup>58</sup> The Bavarian Construction Industry Association launched ‘Deine Baustelle’ in 2012. The main aspect of the campaign is the "training course finder", which is an online tool to help future trainees search for companies and get in contact with them. Training opportunities, application guidance, examples of stand-out construction projects, stories, and portraits working in the industry are featured on the website. [www.darauf-kannst-du-bauen.de](http://www.darauf-kannst-du-bauen.de)

<sup>59</sup> Funded by government and industry bodies, ‘Femmes de metier’ provides information to attract women to the construction industry. [https://www.femmesdemetier-be.translate.google.fr/?x\\_tr\\_sl=fr&x\\_tr\\_tl=en&x\\_tr hl=en&x\\_tr\\_pto=nui,sc&x\\_tr\\_sch=http](https://www.femmesdemetier-be.translate.google.fr/?x_tr_sl=fr&x_tr_tl=en&x_tr hl=en&x_tr_pto=nui,sc&x_tr_sch=http)

Website resources have also been developed to highlight best practices involving women, young people, and other underrepresented groups in the construction industry. For example, 'Construction for Youth'<sup>60</sup> showcases national best practice initiatives in the construction industry across Europe in a bid to aid others in attracting young people to the industry. In Australia, resource development activities have also been used to attract girls and young women to the construction industry. The 'Building Futures'<sup>61</sup> website, developed as a part of the Victorian Government's Women in Construction Strategy, aims to attract young women into construction site roles by providing information on the industry and on training and employment pathways. The information provided caters to the school-aged girls, their parents/guardians, teachers/careers counsellors, and employers.

Finally, resources in the form of toolkits were also another common resource developed to facilitate education on the construction industry. For example, 'Kit Découverte'<sup>62</sup> (Discovery Kit) was developed by Fédération Nationale des Travaux Publics (FNTP) in France to aid teachers in teaching children vocational subject matter. The kit includes a set of educational resources about the trades.

### 3.3 Education and training career stage

Four themes emerged from the analysis of the program activities related to the education and training stage. These included:

- Experience
- Skills Development
- Support and Guidance
- Stakeholder Engagement

Two of these related to the development of the skills and experience needed to transition into employment, while other activities worked to complement these, with both individual support and interventions to enable change at the industry level. These are summarised in Table 3.

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<sup>60</sup> The objective of this project was to develop a joint FIEC-EFBWW website, showcase national best practices initiatives focused on youth employment in the construction industry. They believe that the exchange of best practices is highly beneficial in the development of new initiatives - Showing how others have addressed similar issues. <http://www.construction-for-youth.eu/en/about-us-1966.aspx>

<sup>61</sup> To increase the number of women in the construction industry in Victoria, the Victorian Government has funded the 'Building Gender Equality: Victoria's Women in Construction Strategy 2019-2022'. <https://womeninconstruction.com.au>

<sup>62</sup> Kit Découverte is run by Fédération Nationale des Travaux Publics. <http://www.construction-for-youth.eu/en/initiatives/fr---kit-decouverte-discovery-kit.aspx>

Table 3. Education and Training career stage intervention themes and programs

Intervention Themes	Examples	Programs	
		National	International
Experience	Work placements, internships.	8	17
Skills Development	Vocational training, employability skills activities.	19	69
Support and Guidance	Employment support, financial support, emotional support, mentoring.	16	22
Stakeholder Engagement	Research, engagement & training with industry.	5	9

## Experience

A key theme in the Education and training career stage was the development of experiences for women. These included activities such as internships and work experience. As an example, the 'Get into Construction' program, run by the Princes' Trust in the UK, offers work experience placements. This is offered to 16–25-year-olds who are unemployed. The work experience is paid, lasts for 12 weeks, and allows participants to transition into further college-level training or work on-site. Targeting participants of a similar age, 'Berufstart Bau'<sup>63</sup> (Career Start in Construction) in Germany offers internships to young people who have finished school but have not been offered an apprenticeship. The program lasts between 6 to 12 months and offers participants the opportunity to gain experience in a company. Interns can improve their professional knowledge and skills and receive individualised support. Participants are then guaranteed the opportunity to undertake a training course.

Expanding upon internship opportunities to women looking to re-enter the industry, a number of companies have offered 'returnships'. These have facilitated women's re-entry to the construction industry through paid internships, which enabled them to transition back into work. As an example of this, Thames Tideway Tunnel and Women Returners partnered to offer a sector returnship program<sup>64</sup>. Women complete a 12-week internship in a variety of placements across the project, including construction, innovation, quality commercial departments.

<sup>63</sup> The Schweizerischer Baumeisterverband (SBV) have developed a website to raise awareness about careers in the construction trades to students and showcases professional profiles to inspire young people to pursue a career in the industry. <http://www.construction-for-youth.eu/en/initiatives/de---career-start-construction-berufstart-bau.aspx>

<sup>64</sup> Thames Tideway Tunnel and Women Returners partnered to offer a sector returnship program. All 7 participants were then offered positions afterwards. <https://tideway.london/news/site-news/2016/april/tideway-welcomes-new-returners-during-responsible-business-week/>

## Skills Development

Among the most common themes uncovered in this analysis were training-focused programs. Training was a core component of many programs seeking to engage women and men in the industry and equip them with the skills and experience needed to transition into a career. This activity theme involved qualification training - often a pre-apprenticeship program. These programs were often coupled with education and employability training to improve participants' numeracy skills and soft skills. An Austrian program, 'Fit for construction/Talent Austria'<sup>65</sup> also included cultural education to support refugee participants transition smoothly into local apprenticeships.

Some of these types of programs operated as a part of large-scale infrastructure projects, such as New Zealand's 'Progressive Employment Program'<sup>66</sup>. As a part of the City Rail Link project, the largest transport infrastructure project in New Zealand, the Progressive Employment Program engaged "Rangatahi" (young people) Māori and Pasifika backgrounds. They were trained with the skills needed to become "work-ready". Programs with training activities often were used to entice people to the industry and then give them a pathway into a career.

Other training activities offered were designed to expand participants' skill sets. These programs are geared towards students already involved in a VET course to upskill them to enter "in-demand" industries. Examples include 'Build Up Your Future'<sup>67</sup>, a European mobility program for VET students in sustainable energy areas and retrofitting. It was designed to bolster European cooperation and integration and aid the development and improvement of VET in the construction industry. The program's focus is on the need for the construction industry to adapt and for students to develop "green skills". A two-week training for students takes place in Italy and France in energy efficiency and renovation. A one-week workshop for managers takes place in Belgium on best practice and mutual learning on the topic of energy efficiency and Dual Vocational Training. Similarly, 'Mobilité + BTP'<sup>68</sup> also focuses on European

<sup>65</sup> <https://ec.europa.eu/docsroom/documents/35982?locale=fr>

<sup>66</sup> The 'Progressive Employment Program' is an 18-week program to engage "rangatahi" (young people) in the transport infrastructure sector, get on the job training and become work ready. It is run by City Rail Link, Accord and Beacon, in partnership with Lifewise, Te Ara Rangatahi and the Rising Foundation. <https://www.constructionaccord.nz/good-practice/beacon-projects/city-rail-link-progressive-employment-programme/>

<sup>67</sup> The 18-month 'Build Up Your Future' program is implemented by Fundación Laboral de la Construcción (Spain), in partnership with Scuola Costruzioni Vicenza Andrea Palladio (Italy), Comité de Concertation et de Coordination de l'Apprentissage du Batiment et des Travaux Publics –CCCA-BTP– (France) and Centre IFAPME Liege-Huy-Verviers ASBL (Belgium). <https://www.fundacionlaboral.org/en/projects/training/exchange-programs/build-your-future-2020-2020-2021-erasmus-programme>

<sup>68</sup> The BTP Mobilité + project includes two training periods of approx. two weeks each in different European country, over a course of two years. The program focuses on dual training in the construction sector and public works and fosters European mobility. Greater European mobility is seen to significantly increase employment prospects. <https://www.reforme.org/projects/btp-mobilite/>, <https://www-ccca--btp-fr.translate.goog/projet-btp-mobilite-la-dynamique-du-ccca-btp-en-faveur-de-la-mobilite-europeenne-renforcee? x tr sl=fr& x tr tl=en& x tr hl=en& x tr pto=nui,sc>

mobility and dual training. These shorter training courses work to increase the knowledge required for needed change in the sector. Therefore, this not only enhances students' employability but also improve the skills and capacity of the industry more broadly.

Many of the programs had training activities focused specifically on engaging women. A significant number of not-for-profit organisations ran programs that focused on providing pre-apprenticeship level training to women. Non-Traditional Employment for Women (NEW)<sup>69</sup> in the US is a good example of this. NEW focuses on providing training for women in disadvantaged communities and from underrepresented backgrounds. Participants include women on low incomes, trans women, and non-binary individuals to facilitate their entry into the building and construction industry in New York. By offering programs such as 'Blue Collar Prep', 'New at Night' and 'Boot Camp', which run from two to nine weeks, NEW prepares women with the skills and experience needed to transition into apprenticeships.

Both research and this thematic analysis have demonstrated the leverage megaprojects can have for improving gender parity in construction. The size of these projects often means that there is greater oversight and regulation, creating the potential for more inclusive and diverse employment policies (Clarke et al., 2015). This trend has also been demonstrated in programs such as the Vancouver Island Highway Project in Canada, the Heathrow Terminal 5, the Olympic Park and Crossrail in the UK and the Los Angeles Century Freeway project in the US (Wright, 2016; Clarke et al., 2015; Griffin Cohen & Braid, 2000). The Vancouver Island Highway Project's equity program has been lauded as "unique and stunningly successful" (Griffin Cohen & Baird, 2000, p. 70). The project included equity hires for women, First Nations people and people with disabilities, which resulted in these groups constituting more than 20 per cent of the workforce (Griffin Cohen & Baird, 2000). A training site where these groups built a highway section was part of the training (Griffin Cohen & Baird, 2000). The highly successful Women into Construction project was launched in 2008 to support contractors in meeting gender equality targets for the London Olympic Park project (Wright, 2016). Over the three years that the Women into Construction project operated at the Olympic Park, it was able to more than double the number of women employed on the site (Wright, 2014).

In the US, major projects have also been used to influence the increased representation of women in construction. Many have included major road construction projects (Hegewisch et al., 2014; Kelly & Wilkinson, 2020; Price, 2004; Wright, 2016). These large-scale construction projects have presented a prime opportunity to advance the representation of women as federal and state authorities impose requirements upon contractors to provide training or apprenticeship programs to women and minority groups (Hegewisch et al., 2014). During the

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<sup>69</sup> Non-Traditional Employment for Women (NEW) are based in New York and offer a range of training programs for women. <https://www.new-nyc.org/programs>

construction of the Los Angeles Century Freeway, the implementation of their Women’s Employment Program (WEP) worked to significantly increase the number of women working on the project (Price, 2004; Wright, 2016). Another example of success in the implementation of this style of project was the Highway Construction Workforce Development Program in Oregon (Hegewisch et al., 2014; Kelly & Wilkinson, 2020). An evaluation of this program found the training and support services provided resulted in increased recruitment and retention of women and people of colour (Kelly & Wilkinson, 2020). Large-scale government projects such as these have proven to be instrumental in attracting and recruiting women into construction roles. This bodes well for the Victorian Building Equality Policy being implemented on large government projects from 2022.

As referred to earlier, the Women into Construction project<sup>70</sup> has successfully attracted a large number of women to construction and has gone on to implement many programs, often in partnership with large construction contractors. Their broad focus is on attracting women into the industry through training, work experience and employment support activities. The training involves areas such as health and safety, working at heights, manual handling, and first aid, and participants receive certifications such as a Construction Skills Certification Scheme (CSCS) card and PASMA and IPAF cards (Wright, 2014).

Training activities allow women to gain experience in the construction industry and have taken place across multiple countries. Women Can Build<sup>71</sup> is an example of one such program. It is a multi-country program that sought to increase the number of women in the European construction sector. It had activities and programs in Spain, France, Belgium, Portugal, Germany, and Italy. Reflecting on the program's impact, those implementing it described it as an “innovative and transgressive project in the field of gender equality” (Women Can Build, 2020), and the 38-month program has been lauded as an example of this best practice in the sector.

Training has also been a key component of a number of Australian programs. In the ACT, the National Association of Women in Construction (NAWIC) offered Year 10 and 11 girls the opportunity to gain skills and experience in the construction industry through a school-based apprenticeships program titled ‘Women in Construction Pathways Program’<sup>72</sup>. The 18-month program allows girls to rotate across a variety of trades every 10-12 weeks. This hands-on

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<sup>70</sup> Women into Construction run partner with large construction contractors to run many programs for women. Their broad focus is on attracting women into the industry through training, work experience and employment support activities. <https://www.women-into-construction.org/programmes/>

<sup>71</sup> ‘Women Can Build’ has been implemented by Fundación Laboral de la Construcción (Spain), in partnership with Agencia para el Empleo de Madrid del Ayuntamiento de Madrid (Spain), Formedil (Italy), Fondazione ECIPA (Italy), Cenfic (Portugal), Bildungszentren des Baugewerbes eV (BZB) (Germany), Centre IFAPME Liège-Huy-Verviers (Belgium) and CCCA-BTP (France). [https://www.womencanbuild.eu/en/the\\_project/](https://www.womencanbuild.eu/en/the_project/)

<sup>72</sup> [https://www.linkedin.com/posts/nawic---national-association-of-women-in-construction-australia-national-nawic-in-conjunction-with-the-australian-activity-6737132387593003008-fWu0/?fbclid=IwAR2FNnN71ypnXvimOod9yfYRF\\_TMSeht0WjcxexkQU5CVu8TmbXNNjXRqbY](https://www.linkedin.com/posts/nawic---national-association-of-women-in-construction-australia-national-nawic-in-conjunction-with-the-australian-activity-6737132387593003008-fWu0/?fbclid=IwAR2FNnN71ypnXvimOod9yfYRF_TMSeht0WjcxexkQU5CVu8TmbXNNjXRqbY)



exploration was coupled with the opportunity of mentoring from established mentors and NAWIC members. Also, in the ACT, the Master Builders Association and SPARK Ginderry offer 'Women in Civil Construction'<sup>73</sup>, a program that has been run for the past three years. It has helped women gain the hands-on experience and industry knowledge needed to transition into work in the industry. The program was successful, having seen 70 per cent of participants gain employment after completion (MBA ACT, 2021). The same partners also offer a 'JobTrainer Women in Trades'<sup>74</sup> program, which provides women with certificate-level training in several trades.

Training has also been a means of attracting women to other male-dominated industries in Australia. This has been seen in programs such as 'Women in Solar'<sup>75</sup>, which sought to increase the participation of women in the male-dominated solar industry. The participants included individuals who identified as Aboriginal or Torres Strait Islanders or were single mothers or long-term unemployed. Looking to remedy the underrepresentation of women in STEM, programs such as MYOB's 'DevelopHer'<sup>76</sup> cater to women changing careers or wanting to re-enter the workforce and provide training to transition into a career in software engineering.

## Support and guidance

Many programs offered support and guidance activities. These were mostly focused on encouraging the retention of participants in training type programs. These types of activities complement and reinforce the training activities and help participants transition into work in the industry. Activities have come in the form of mental and physical health, financial management and social support. Beyond this, in some programs, employment support, career guidance, and mentoring activities are used to help retain women in training and enable them to secure employment. These types of activities appear to be of extra importance when applied to women in male-dominated industries. Not only is entry into these careers difficult due to gendered stereotypes and bias, but women often have the added factor of caring responsibilities, which place a limitation on their involvement. In

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<sup>73</sup> 'Women in Civil Construction' runs for 9 weeks. It has been described as an "innovative program" which has seen over 70% of participants transition into full-time employment after completing the program. <https://mba.org.au/mbas-women-in-civil-program-creating-a-diverse-workforce-in-the-civil-construction-industry/>

<sup>74</sup> This program was launched in April 2021 and is jointly funded initiative of the ACT and Australian Government. It is run by Master Builders ACT and SPARK Ginderry. <https://mba.org.au/master-builders-act-and-spark-ginninderry-women-in-trades-program/>

<sup>75</sup> 'Women in Solar' allowed all participants to achieve TAFE accreditation and all secured jobs with Beon Energy. <https://www.chandlermacleod.com/blog/2019/11/women-in-solar-program-offers-pathways-into-the-booming-solar-industry>

<sup>76</sup> The DevelopHer program specifically caters to women who are changing careers or wanting to re-enter the workforce. It seeks to address the gender imbalance in STEM. Has been operating for 4 years now. <https://www.myob.com/au/careers/graduate-program>

particular, these kinds of activities also function to support women from disadvantaged and marginalised backgrounds.

In Australia, the ‘Building Women for Construction’<sup>77</sup> program offered by Quality Training in Construction in the ACT provides training for women resulting in a Certificate II in Construction. To support their participation in the program, mentoring is also provided, and women are offered physical and mental health sessions to prepare them for the demands of the industry. In a similar vein, financial support is also offered to assist women in completing training. In New Zealand, Māori and Pasifika Trades Training Auckland<sup>78</sup> is a group of industry and training bodies working together to increase the number of Māori and Pasifika people in the trades. They offer a training program dedicated to women and offer participants one-on-one mentoring and financial support in the form of a scholarship to assist their participation in the program. Similar activities are also included in the Australian ‘Women on Site’<sup>79</sup> program run by the Victorian Trades Hall Council. To enable women to remain in pre-apprenticeship training, they offer financial and enable access to cultural support. This can also include financial support to purchase tools needed for their jobs.

In the US, the ‘Encouraging Full Female Engagement in Construction Training (EFFECT)’<sup>80</sup> program also provides additional support for participants alongside their skills training in construction. The program supports women by offering on-site childcare, along with other employment support activities. Childcare is also offered to support women in ‘Women into Construction with West London College’<sup>81</sup> in the UK. The program, centred around pre-apprenticeship training, works to engage unemployed women specifically. Often many of the women are single mothers, so childcare support is a key enabler for many of these women’s involvement in the program. Canada’s ‘Women Building Futures’<sup>82</sup> adopts a similar focus in their programs. They work to engage unemployed and underemployed women specifically to

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<sup>77</sup> The program has been run with a grant as a part of the 2018 Women in Trades grant program run but the ACT Government within the Skilled Capital Initiative. This initiative is funded by the Australian Government’s Skilling Australians Fund. <https://www.qualitytraininginconstruction.com.au/building-women-for-construction-program/>

<sup>78</sup> This training program is funded by the New Zealand Government’s Tertiary Education Commission to assist young Māori and Pasifika pursue careers in the trades. <https://www.maoripasifikatrades.co.nz/women-in-trades/>

<sup>79</sup> ‘Women OnSite’ is implemented by the Victorian Trades Hall Council to increase the number of women in historically male-dominated industries. The program uses outreach workshops and advocacy to engage women, which is followed by pre-apprenticeship training. <https://www.womenonsite.org.au/about-women-onsite/>

<sup>80</sup> EFFECT, which is funded by the US Department of Labor’s Employment and Training Administration, is run by Gang Alternatives Inc. The program provides women with skills training in the construction and building trades to prepare them for apprenticeships. This training is coupled with on-site childcare, employability activities and support in finding employment. <https://myga.org/workforce-development/effect/>

<sup>81</sup> This program includes training, 2-week work placements, CV writing and interview tips, job application support and childcare. <https://www.women-into-construction.org/programmes/>

<sup>82</sup> Women Building Futures’ mission is to enable women’s economic prosperity by removing the barriers they face and providing training in construction trades, maintenance, and transportation industries. Their programs focus on awareness and engagement, skills training, coaching and career support. <https://womenbuildingfutures.ca/about/>

facilitate their entry into careers and provide a liveable wage to support them and, often, their children (Women Building Futures, 2021). Their training-focused programs adopt a holistic view and aim to remove the barriers present to women. They provide additional support such as access to affordable childcare and housing.

Many programs were also found to have offered employment support alongside training. Employment supports are activities to assist participants in the job-seeking process, such as CV writing skills, application support, and interview skills. This support is often offered in conjunction with career mentoring and aids participants' transition into work. Many such programs have had documented success, as the inclusion of employment support and guidance in addition to training helps to ensure the sustainability of the skills gained. Several of the programs run by the 'Women into Construction project', such as 'Women into Construction with Willmott Dixon'<sup>83</sup> and 'WiC Employment Programme – Cambridgeshire'<sup>84</sup>, include such components. Other examples include Lend Lease's 'Be OnSite' program, which specifically targets individuals from BAME<sup>85</sup> backgrounds, people with disabilities, long-term unemployed, homeless, ex-offenders, or current prisoners (Lowman, 2017). 'Be OnSite' involves a pre-employment program, including employability training, health and safety and industry-specific education, followed by on-the-job training. After this, 'Be OnSite' employs participants and provides emotional and social support, including housing, probation support, and other social services (Lowman, 2017). A similar program is run in Sydney, with a focus on improved employment of ex-offenders and other disadvantaged groups (Loosemore et al., 2020).

While many programs focus on a wider range of disadvantaged individuals, the Vermont Works for Women's 'Justice-Involved Women Program' specifically offers women training to develop the skills needed for employment and education to aid their successful re-entry into the community. Other similar programs which provide support are the 'BC Centre for Women in the Trades'(BCCWITT), the 'Career Development' program and Manpower Alberta's 'emPOWER Women in Trades', which are based in Canada. Meanwhile, programs such as Women in Skilled Trades' (WIST) 'Apprenticeship Readiness Program' guarantee their graduates an interview with a building trades union that sponsors the program after completion.

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<sup>83</sup> This program is sponsored by Willmott Dixon. It is a 6-week program which seeks to engage unemployed women wanting to work in trade and site-based positions. The program includes work placements, employability training (CV writing & interview tips), qualification training, career guidance and job application support. <https://www.women-into-construction.org/programmes/>

<sup>84</sup> Women into Construction has partnered with Hill Group UK to implement this program. It offers women career guidance, qualification training, in-person and remote work experience placements, remote mentoring, employment training/support (CV writing, application and interview tips, and employment negotiations). <https://www.women-into-construction.org/programmes/>

<sup>85</sup> BAME is an acronym used in the UK to encompass Black, Asian, and Minority Ethnic people. The Australian equivalent is CALD (Culturally and linguistically diverse communities).

In the Australian context, programs like Tradeswomen Australia Community Foundation’s ‘Building Futures: Pathways to Trades’<sup>86</sup> offer employment connection upon completing their four workshops to aid women in transitioning to training and employment. Other organisations have run these types of activities in a virtual capacity to cater to the COVID-19 pandemic, such as Tradeswomen Australia’s ‘Operation Protect and Preserve’<sup>87</sup>. ‘Operation Protect and Preserve’ offered female apprentices online careers support sessions to help guide them. With careers sessions run by construction companies, participants are offered firsthand insight into potential employers, what these employers look for and interview tips.

While many of these activities occurred alongside vocational training, similar activities were also implemented in programs focused on university-level study. Typically, the focus of these programs was to help women study male-dominated courses to enable them to transition into careers. For example, a major construction company, Balfour Beatty, offers a ‘Civil Engineering Mentoring Programme’<sup>88</sup> in partnership with the University of Dundee. The program pairs female engineering students with female professionals working in the industry to support and inspire them in their journey through university and their career transition. A less construction like example is that of ‘The Women’s Legal Mentorship Program’ (WLMP)<sup>89</sup>, which was established to support female law students in Canada. This nationwide program equips women with a support network not only during their studies and one they can tap into during their legal careers. Describing itself as “integrative intersectional feminist mentorship programming” (WLMP, 2021), WLMP offers both peer mentoring and lawyer-student mentoring. This is used to develop women’s confidence and connections in a male-dominated space. Creating a network of peers and industry mentors to support female students is also central to FeSTEM<sup>90</sup>, which supports female higher education students in STEM. Similarly, some universities offer scholarship programs to support women’s completion of study in traditionally male-dominated industries. An example of this is the ‘IGNITED Scholarship’<sup>91</sup> program offered by Deakin University in Australia, which covers the cost of tertiary studies in engineering, information technology, and construction management, as well as providing mentoring to participants.

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<sup>86</sup> Launched in April 2021, the ‘Building Futures: Pathways to Trades’ has been designed to support women who have experienced challenges and are looking for greater financial stability by helping them enter a career in the trades. <https://www.twacf.org/projects/>

<sup>87</sup> Tradeswomen Australia works to attract, recruit and retain women in the male-dominated skilled trades. They work with industries to capitalise the untapped potential of greater numbers of women in the workforce and aim to encourage culture change in the industry. ‘Operation Protect and Serve’ was launched in 2020. <https://tradeswomenustralia.com.au/operation-protect-and-preserve/>

<sup>88</sup> ‘Civil Engineering Mentoring Programme’ was launched in 2020 on the International Women in Engineering Day. <https://blog.dundee.ac.uk/one-dundee/new-mentoring-scheme-helps-female-students-unlock-their-potential-in-engineering/>

<sup>89</sup> <https://wlm-pmfd.ca>

<sup>90</sup> <https://festemproject.eu/the-project/>

<sup>91</sup> <https://www.deakin.edu.au/study/fees-and-scholarships/scholarships/find-a-scholarship/ignited-scholarship-igniting-female-interest-in-engineering-information-technology-and-construction-management>

## Stakeholder engagement

While many programs target individuals themselves, particularly women, to give them the skills and support needed to enter a career in a male-dominated industry, for other programs, the audiences are employers and industry stakeholders. The European program, ‘Women Can Build’, which was highlighted earlier, included training with VET trainers as a core part of their program to transform Vocational Education Training and make it more inclusive of women. This period was seen as one in which women drop out, so the role of the VET trainer is crucial to retention. This training was complemented with resources developed for both the VET industry and construction companies regarding gender. Programs such as ‘Empowering Female Entrepreneurs in Engineering (EMERGE)’<sup>92</sup> and WISE (Women entrepreneurs in STEM)<sup>93</sup> operating across Europe engage with VET institutions to foster an environment for facilitating a more significant number of female entrepreneurs in engineering and in STEM more broadly.

### 3.4 Early experiences career stage

Four key themes emerged from the analysis of the interventions undertaken within programs that relate to the early experiences career stage. These include:

- Recruitment practices
- Resource development
- Support and guidance
- Cultural change

The early experiences career stage encompasses women’s entry process into an industry as well as their early career experiences. Reoccurring activities in programs targeting this stage can be broadly divided into recruitment and respectful workplaces, including the need for support and cultural change. These are summarised in Table 4.

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<sup>92</sup> EMERGE engages with VET institutions to modify service provision to enable an engineering entrepreneurship environment which is more inclusive of women. <https://www.emergeengineers.eu/project-partners/>

<sup>93</sup> The WISE project engages VET institutions, business and female students in order to transform STEM entrepreneurship education taught at VET institutions. <https://stementrepreneurs.eu>

Table 4. Early experiences career stage intervention themes and programs

Intervention Themes	Examples	Programs	
		National	International
Recruitment practices	Procurement, Diversity & inclusion/unconscious bias training for recruitment, recruitment campaigns.	5	10
Resource development	Employment portal websites, websites & toolkits for recruitment support, websites & toolkits on respectful workplaces.	9	27
Support and guidance	Employment support, mentoring, harassment & discrimination support.	36	69
Cultural change	Workplace training, forums and industry events, workplace pledge/accreditation processes.	19	27

### Recruitment practices

Some program activities within the early career stage have focused explicitly on altering existing recruitment practices. Activities in programs included recruitment support for employers' unconscious bias training for recruitment and recruitment campaigns. It also included procurement-focused initiatives within major infrastructure projects, for example, which set a target of women in projects and engaged in awareness-raising activities to recruit these women.

As referred to earlier, procurement has been leveraged on major projects to recruit a greater number of women. The Canadian 'Programme d'accès à l'égalité des femmes dans l'industrie de la construction'<sup>94</sup> (PAEF) (Equal Access Program for Women in the Construction Industry) executed by the Commission de la construction du Québec (Quebec Construction Commission), has implemented a range of measures with the goal of increasing the number of women in construction. The program has been endorsed by government departments, public agencies, VET centres, and the industry body for occupational health and safety (ASP Construction), committing to undertaking measures to increase the presence of women on construction sites. PEAF's "first action plan" sought to reach 3% of women working on construction sites by 2018. In Australia, government procurement was leveraged to boost the

<sup>94</sup> <https://www.ccg.org/en/qualification-acces-industrie/femmes/PAEF>

number of female apprentices, tradeswomen, and professionals hired on social housing projects via the 'Qbuild Cannon Hill Social Housing Pilot Project'<sup>95</sup>.

Engaging employers to alter recruitment practices has also been the feature of several programs to engage women more effectively. In Denmark, the Boss Ladies Project include 'reversed recruitment'<sup>96</sup> as one of their key program activities. This involves requiring employers to make their businesses more attractive to young women. To do so, they collaborate with vocational schools to run events with employers and young female apprentices to facilitate networking and allow women to secure an apprenticeship. Similarly, programs like Equate Scotland<sup>97</sup> provide recruitment support for employers to assist them in recruiting a greater number of women into STEM jobs. Equate offers training and resources to employers and universities to help recruit, retain, and advance women. In doing so, they incorporate cultural change into employers' recruitment approach and help them attract female talent to their universities and workplaces.

In Australia, the mining company, St Barbara<sup>98</sup>, has sought to improve women's recruitment, retention, and advancement in the resources sector. Key components included a recruitment campaign and the elimination of bias in recruitment processes. Campaigns focused on recruiting women to areas in which they are typically underrepresented, such as in trades and technical positions. In this recruitment process, an emphasis was also placed on removing gender-specific language from job descriptions. A focus on unconscious bias training across the company with regard to recruitment meant that recruitment panels and shortlists were to consist of female and male candidates. The Victorian State government has also worked to improve recruitment practices in construction as well as other industries (Francis et al., 2021). Recruit Smarter<sup>99</sup>, was a project to develop inclusive recruitment practices and address unconscious bias in recruitment. The program included 46 partners and was run over two years. It included trialling new approaches, designing best practice and sharing knowledge. New recruitment standards for construction were developed as part of

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<sup>95</sup> Announced in 2019, the QBuild Cannon Hill pilot project hopes to recruit and retain a greater number of women in the construction industry. Supported by the Department of Housing and Public Works, the project aimed to increase the number of women on-site from 2% to potentially 30%. They hope that the lessons learnt from this pilot project will inform initiatives by the Queensland Government in the future.

[https://www.epw.qld.gov.au/about/initiatives/women-in-construction?fbclid=IwAR3eBh9KA7HxqZMIVjE26AfB1NnE\\_2R44uTS1nC1aCgI8GoYJwkJrsR\\_Les](https://www.epw.qld.gov.au/about/initiatives/women-in-construction?fbclid=IwAR3eBh9KA7HxqZMIVjE26AfB1NnE_2R44uTS1nC1aCgI8GoYJwkJrsR_Les)

<sup>96</sup> <https://www.boss-ladies.dk/new-page-78>

<sup>97</sup> Equate offers training programs for young women and employers, facilitate networking and offer an award, "The Equate STEMinist Awards", to address the stereotypes about women in STEM.

<https://equatescotland.org.uk>

<sup>98</sup> St Barbara is a mining company operating in Australia. They have sought to improve the recruitment, retention, and advancement of women in the resources sector. This included recruitment campaigns, mentoring and networking. <https://stbarbara.com.au>

<sup>99</sup> Recruit smarter used research from across the world. Information can be found at <https://www.vic.gov.au/recruit-smarter>

the Women in Construction Strategy (Francis et al., 2021) and are currently being trialled and revised

## Resource development

A common theme in many programs were resource development activities to aid employment. This often came in the form of informational websites, recruitment guidance for employment and training portals (with links to opportunities for job seekers to apply to directly). ‘Amico Lavoro’ (Job My Friend)<sup>100</sup>, the Italian Federation of Construction and Related Workers, offers advice to individuals looking for training and employment opportunities, with tips on CVs and preparation for the application process. Beyond this, it also offers a portal to link the supply and demand needs in the construction industry. Focusing solely on the employment process, the Spanish initiative ‘El Portal De Empleo’ (Employment Portal)<sup>101</sup> is a tool for job seekers and employers. Job seekers can register their CVs and apply for industry jobs, and employers can efficiently find employees.

Focused on facilitating women’s entry into the construction industry, New Zealand-based initiative, ‘TradeCareers’<sup>102</sup> provides resources to aid recruitment. Based on research conducted with female job seekers and construction industry employers, ‘TradeCareers’ developed online toolkits for both groups. For women, the toolkits focus on how to get a foot in the door, transferable skills, and employment information. For employers, the toolkits look at changing workplace culture, flexible work provisions and amenities to assist in the greater hiring of women. Also taking place in New Zealand is the ‘Women in Trades’<sup>103</sup> project. This 3-year project is working to increase the involvement of women in construction and engineering-related trades. Collaborating with industry, the project is researching the barriers present to women and strategies to address these. This has involved the development of resources of employers and decision-makers on tools and ideas to support women’s entry and participation in the industry, as well as resources for women.

Resource development activities have also been incorporated in some programs to encourage workplace cultural change or provide advice to women in the industry. The Construction Owners Association of Alberta in Canada developed a ‘Workplace Respect

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<sup>100</sup> Job my friend (Amico Lavoro) was launched by the Italian Federation of Construction and Related Workers to meet the supply and demand needs of the construction industry. <http://www.amicolavoro.it/filca/chi-siamo/>

<sup>101</sup> [www.construyendoempleo.com](http://www.construyendoempleo.com)

<sup>102</sup> TradesCareers has been established by the Women in Trades Collective (WITC). Their focus is on drastically increasing the number of women, particularly those whose employment has been impacted by COVID-19 and especially Māori and Pasifika women. The program has developed toolkits of resources to support both women and employers. <https://tradecareers.co/for-employers/>

<sup>103</sup> This project has been jointly commissioned by the Ministry for Women and Ako Aotearoa and involves a collaboration between industry training organisations, industry bodies, educational organisations and secondary schools. <https://ako.ac.nz/knowledge-centre/what-are-the-characteristics-of-an-effective-learning-journey-for-women-entering-trades/>



Handbook'<sup>104</sup> for construction industry employers to aid the retention of women and maintain a respectful workplace. In the same vein, CBI<sup>105</sup> in the UK has developed resources to advocate for and support diversity and inclusion actions in construction workplaces. In a slightly different approach, a contractor in the UK has created conversation cards<sup>106</sup> for employees to encourage discussion on safety, diversity, and gender-based violence in the workplace. This initiative aimed to raise awareness among staff and encourage reflection on their behaviours, conduct, body language, and barriers women face in the workplace.

## Support and guidance

Similar to the activity theme identified in the Education and training career stage, support activities also focused on assisting women to enter and remain in male-dominated industries. To keep women in the construction industry, and other male-dominated industries, many initiatives focused on providing support for women. Women face unique barriers in these industries, from additional external barriers to internal barriers such as toxic and sexist workplace cultures. Many support activities were designed to address these, as well as many offering mentoring and networking to guide women.

Some programs have focused solely on assisting women's entry into the industry via employment support and guidance. Such programs have provided support and coaching to women who have experienced significant barriers, such as intergenerational poverty, substance abuse issues, incarceration, and women looking to change careers or advance in their careers. Unlike similar employment support offered in the previous stage, these activities were also found independent of training or education programs and aimed to help women establish careers or transition back into work. Examples of these include Vermont Works for Women's 'Employment and Career Services'<sup>107</sup>. The Northeast Center for Tradeswomen's Equity's (NCTE) 'Build a Life That Works' focuses on helping women find careers in construction. In particular, they place added focus on assisting women of colour to gain employment in the industry and develop within the industry.

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<sup>104</sup> <https://www.coaa.ab.ca/COAA-Library/WFD-WRS-PRC-01-2011-v1%20Workplace%20Respect%20Handbook.pdf>

<sup>105</sup> The Confederation of British Industry (CBI) provide resources for employers on workplace sexual harassment, gender and ethnicity pay gaps, health and well-being, and the business case for workplace diversity. This is coupled with engagement and consultations with industry bodies on these topics as well.

<https://www.cbi.org.uk/our-campaigns/unlock-employee-potential-through-inclusion-in-times-of-change/>

<sup>106</sup> This initiative was developed by UK contractor, BAM, in the wake of a tragic, highly publicised incident of gender-based violence and the huge public response to this. <https://ccsbestpractice.org.uk/entries/personal-safety-conversation-cards/>

<sup>107</sup> Vermont Works for Women offer programs for women and girls at all stages of their career journeys. Importantly, Vermont Works for Women highlight the availability of their programs to non-binary, gender non-conforming, and gender-questioning individuals. 'Employment and Career Services' works to help women develop employability skills that can assist them in finding meaningful work and economic stability.

<https://www.vtworksforwomen.org/programs>

Employment support and guidance activities have also been a core component of programs seeking to engage young people in general into the construction industry. An example of this is the HOY campaign<sup>108</sup>, implemented by Fundación Laboral de la Construcción in Spain. The program focuses on developing the skills and abilities of young people to assist their entry into the construction industry. Participants learned CV writing and interview skills in the program, among other job-ready skills. The program included personalised sessions for the students to cater to their individual situations and develop a tailored plan. This was also coupled with individualised socio-educational support, collaborative group networking activities, employment workshops, visits to companies and coaching sessions. In the Australian context, organisations like Supporting and Linking Tradeswomen (SALT) also provide employment support and guidance to women looking for work in the trades. In doing so, they review their CVs and offer advice on applying for apprenticeships and paid work. Another example is the Incolink program<sup>109</sup> in Australia, which provides career advice for women wanting to get a job in construction site roles. Employment support and guidance are also offered across most states by the National Association of Women in Construction (NAWIC)<sup>110</sup>. NAWIC operates in state-based chapters and offers a mentoring program in most Australian states. These programs are available to women at any point in their construction careers and connect students, tradespeople, graduates, and professionals with one another for industry support and advice.

Many mentoring-focused programs were found to target this period of early career specifically. Some programs offer this support to women as they begin their careers, such as 'WEMADEIT'<sup>111</sup> in Canada, which provides mentoring and networking for women engineering graduates as they enter the workforce. For women looking for work in the construction industry, Vermont Works for Women's 'Career Mentoring Network'<sup>112</sup> connects them with other women in the industry and provides them guidance on job seeking. Another program, 'Women Go Tech'<sup>113</sup>, is the first and only Lithuanian mentoring program working to assist women to begin and build careers in the technology industry. Others such as the 'Mentorship

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<sup>108</sup> <https://constructionblueprint.eu/2020/01/31/spain-fundacion-laboral-de-la-construccion-helps-youth-to-integrate-into-the-labour-market-with-the-hoy-campaign/>

<sup>109</sup> This was part of the women in construction strategy. More information can be found at <https://www.vic.gov.au/victorias-women-construction-strategy>

<sup>110</sup> <https://www.nawic.com.au>

<sup>111</sup> WEMADEIT is a Canadian initiative to engage girls and young women in engineering. It is implemented between a partnership of 5 university engineering faculties. It includes outreach activities to engage girls in higher education in engineering, support while at university and continued mentoring and networking as women enter the industry. <https://www.wemadeit.ca/about/>

<sup>112</sup> The 'Career Mentoring Network' works to connect women in the construction industry. Volunteer mentors from a range of backgrounds are paired with women looking for work and/or career advice. <https://www.vtworksforwomen.org/programs>

<sup>113</sup> Women Go Tech was established in 2016 by the INFOBALT association and the World Economic Forum Initiative Global Shapers Vilnius. They are supported by major tech organisation and start-ups in Lithuania. <https://womengotech.com/about-the-program/>

for Women in Architecture'<sup>114</sup> program tailor their support specifically to women who are impending graduates or who have graduated within the last five years. Similarly, in the electricity sector, Canada's 'Connected Women'<sup>115</sup> is a nationwide mentorship program offered to those who are entering the industry or are already in it.

Other mentoring programs target women across various different career stages. Examples include the mentoring programs<sup>116</sup> operating across many state chapters of NAWIC in Australia. The programs are offered to women in all stages of their built environment careers. They are a means to connect students and professionals with NAWIC members offering their specialised advice and support.

'Sisters in the Building Trades'<sup>117</sup> also use mentoring and networking as key forms of community, both in the US and through global outreach in the Philippines, Australia and Papua New Guinea. Their mentoring activities match new tradeswomen with experienced mentors, and their networking activities allow women to share their experiences of the industry. In doing so, they aim to support and retain women, particularly those who are disadvantaged. Likewise, Canada's 'Build Together, Women in the Building Trades'<sup>118</sup> works to support tradeswomen via mentoring and networking activities, which not only guides them but also reduces their sense of isolation in the industry.

Some programs offer internal mentoring within companies. An example of this is 'Affinity Networks'<sup>119</sup> designed to support women's development at Balfour Beatty, a major international construction company. They run 'Affinity Networks' for various marginalised groups within the company, including ones focused on women, LGBTQI+, people from

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<sup>114</sup> Mentorship for Women in Architecture is based in the US and works to connect female newcomers to the industry with experienced female professionals, who can guide them on how they have managed career hurdles. <https://www.womeninarchitecture.net>

<sup>115</sup> Recognising that women make up less than a quarter of the electricity workforce and only 7% of trades roles in the area, Electricity Human Resources Canada's (EHRC) established 'Connected Women' to remedy this imbalance. <https://electricityhr.ca/resources/connected-women-mentorship-program/>

<sup>116</sup> NAWIC in New South Wales, Queensland, the Australian Capital Territory, Victoria, South Australia and Western Australia offer mentoring programs for female members to support and guide their careers in the construction industry. The programs generally last between 9-12 months and involve approximately 1-2 hours of face-to-face/online meetings each month. <https://nawic.com.au>

<sup>117</sup> Sisters in the building trades also aim to increase awareness about career options via speaking events, careers fairs, outreach activities, and by supporting efforts to recruit women into apprenticeship programs, and they encourage people to "buy a sister a tool", which works to support women in developing countries. <https://www.sistersinthebuildingtrades.rocks>

<sup>118</sup> Women of the Building Trades started in 2013 and the program has now become a national initiative for Canada's Building Trades Unions (CBTU) since. It has focused on challenging existing myths and stereotypes and enabling space for a rigorous conversation on means of engaging women in the industry. As part of their outreach process, tradeswomen have attended tradeshows, career fairs, schools, mentorship events, and networking functions across Canada. The program is run by Canada's Building Trades Unions (CBTU), in partnership with Moxie Trades, Office to Advance Women Apprentices & Canada's Building Trades Mentorship Alliance. <http://buildtogether.ca/our-focus/women/>

<sup>119</sup> In addition to the mentoring activities, the program also includes training for senior leaders to better enable them to incorporate diversity and inclusion in the workplace. <https://www.balfourbeatty.com/how-we-work/diversity-and-inclusion/affinity-networks/?month=5&year=2019&parentId=1212>

multicultural backgrounds, and people with disabilities to foster diversity and inclusion and enable long-term cultural change. The gender equality 'Affinity Network' includes a reverse mentoring program in which employees are paired with those in senior leadership positions.

Some programs have also provided additional support activities alongside mentoring. As an example of this, the Women's Engineering Society (WES) in the UK's 'MentorSET'<sup>120</sup> offer support on managing health problems or a disability alongside one's career. Master Builders Australia's 'Women Building Australia' program<sup>121</sup> is another example. The program caters to women with one to five years' experience in the construction industry and offers them mentoring and coaching to support their retention in the industry. This is complemented with a dedicated phone line to report harassment and discrimination in the workplace.

Another means of supporting women in a male-dominated industry is enabling women to connect with one another. In Australia, several initiatives pursue this aim by providing networking, such as 'The Sparkettes'<sup>122</sup>, 'TradeUP Australia'<sup>123</sup>, 'The Lady Tradies Australia'<sup>124</sup>, and the 'Women in Trades Network'<sup>125</sup>. These initiatives offer support and connection to assist women in entering and remaining in the construction industry. A summary of these can also be found in Holdsworth et al. (2020).

Networking is offered to tradeswomen from all areas of North America and for all trades through 'Lean in Circles for Tradeswomen'<sup>126</sup>. Lean In is a women's advocacy group started by Facebook Chief Operating Officer Sheryl Sandberg. She promotes 'lean in circles' for women to connect and share their experiences in the workplace. They have recently teamed up with North America's Building Trades Unions (NABTU), AFL-CIO, and Build Together to run

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<sup>120</sup> MentorSET is a mentoring program for women (and also men) in STEM and lasts for up to 2 years. The program offers networking opportunities for both mentors and mentees. The program assists career planning, reduces isolation in male-dominated industries, provides information about returning after a career break, allows participants to develop public speaking and leadership skills and offers additional support services. <https://www.wes.org.uk/content/mentorset-1>

<sup>121</sup> In addition to these support activities, the 'Women Building Australia' program includes career expos, "Female led Business Register" and a dedicated website to act as a portal for program information. <https://www.womenbuildingaustralia.com.au/about-women-building-australia>

<sup>122</sup> Founded in 2013 and originating in Darwin, The Sparkettes, have now expanded to include Sparkettes networks in Queensland, New South Wales, Western Australia and Victoria. They work to connect women in the electrical trades and facilitate mentoring. They offer this to all tradeswomen, as well as women considering a career as an electrician. <https://www.facebook.com/DarwinSparkettes>

<sup>123</sup> TradeUP Australia advocate for women in the trades by conducting talks with businesses and community groups and promote the industry to women and girls. They also work to connect women with one another by running events for networking and facilitating mentoring. Beyond this, they also work to empower women through workshops allowing them to develop practical skills. <https://tradeupastralia.com.au/>

<sup>124</sup> The Lady Tradies Australia provide an avenue for tradeswomen and apprentices to connect with other women in the industry and provide support to them. They also facilitate recruitment, where employers are able to advertise opportunities, women are able to connect with employers regarding these and sole traders are able to advertise their businesses. Beyond this, they also conduct outreach with schools to engage young girls in careers in construction. [www.theladytradies.com.au](http://www.theladytradies.com.au)

<sup>125</sup> The Women in Trades Network connects tradeswomen with one another via social media. [www.facebook.com/groups/womenintradessocialnetwork](https://www.facebook.com/groups/womenintradessocialnetwork)

<sup>126</sup> <https://leanin.org/circles-for-union-tradeswomen>

the ‘Lean in Circles for Tradeswomen’, across the US and Canada. What began by a New York-based tradeswoman using a lean in circle to discuss her experiences has grown into a partnership between the global organisation and major trades bodies. In this program, women are put in groups and are able to share their stories over Zoom with one another. Seventy six Lean In circles have taken place across the US and Canada in the last year, and approximately 700 tradeswomen have participated in the program. By having this platform to confide in one another and share experiences, the program seeks to help women navigate the bias and harassment that is rife in the industry. It assists women by not only connecting them with others in the industry but helps them to advocate for themselves and other women in the workplace.

### **Cultural change**

Resource development activities on respectful workplaces were often accompanied by pledges or accreditation interventions. Accreditation or pledge activities act as another means of engendering cultural change in the workplace. They often focus on engaging those in leadership positions to commit to implementing organisational changes, address workplace culture and achieve gender parity. Demonstrating this, ‘We Are Trades’<sup>127</sup> have developed resources for employers to guide them on creating safe and inclusive workplaces. They then use a pledge system so employers can signal their commitment which encourages accountability. In the US, ‘Culture of CARE’ also uses a pledge program to enable cultural change in construction. The initiative was created in partnership with the Associated General Contractors of America (AGC) and the AGC of Washington, with the aim of making construction an industry of choice for diverse workers through fostering inclusivity. This process involves committing to a no tolerance policy in relation to harassment, hazing, or bullying in construction workplaces. Pledges can be made either at a company level or as an individual. In doing so, ‘Culture for CARE’ works to attract a diverse workforce and not only retain but empower those in the industry. To support this process, the initiative provides resources for employers to update workplace policies, toolkits for workplace training, a diversity and inclusion assessment tool and stickers and signs to demonstrate their commitment publicly.

The ‘Considerate Constructors Scheme’<sup>128</sup> in the UK also acts as an accreditation style program. Their ‘Spotlight on’ initiative seeks to improve the image of construction and aims to raise awareness among sites, companies, and suppliers as to their roles & steps they can take. The scheme has run various campaigns focusing on different groups or issues to ‘spotlight on’, including diversity, the environment and health, among other areas. By

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<sup>127</sup> We are Trades is run by The Canadian Coalition for Women in Engineering, Science, Trades and Technology (CCWESTT). It provides employers with clear steps to create safer and more inclusive workplaces for women.

<https://www.cwestt.org/equity-and-the-trades/about/>

<sup>128</sup> <https://ccsbestpractice.org.uk>

encouraging workplaces to improve their practices, they aim to better the working conditions of those in the industry, as well as aid the attraction and recruitment of a more diverse workforce. Others, like the Major Projects Association in the UK, have incorporated workplace change activities, developed for male-dominated industries more broadly, into their own initiatives. As a part of their ‘Gender Balance Initiative’<sup>129</sup>, one of their components was the ‘Ten Steps to Diversity and Inclusion Programme’<sup>130</sup>, developed by the WISE Campaign to recruit, retain, and develop women in STEM. Ten Steps involves a signatory process like a pledge or accreditation style program. WISE has found success across the STEM sector in facilitating this process in workplaces.

Similarly, the ‘Advancing Women in Engineering and Technology Project’<sup>131</sup> used these types of activities to support the recruitment, retention, and development of women in these fields and enable a cultural shift in the sector. In doing so, they created actionable resources and raised awareness of diversity and inclusion strategies among schools, tertiary institutions, and industry employers, from which they then developed a network of “champions”. The use of champions is common amongst these types of programs, with another example of this seen in Canada’s ‘Build Together’. ‘Build Together’<sup>132</sup> is a workforce development program aiming to increase diversity in the construction industry. To do so, it is focused on the recruitment and retention of underrepresented groups. These include women, indigenous people, youth, older workers, and immigrants. Within this program, they run projects that address each of these groups. Complementing their project focused on women – ‘Women of Building Trades’ – they have also recently started an ‘Industry Champion Campaign’ focused on engaging leadership at all levels in the industry to become “champions” and pledge to ensure respectful workplaces.

The use of champions in accreditation types of programs has also been seen across industry groups. This type of program has been used to advocate for workplace cultural change in which men take responsibility as drivers of this change alongside women. Men are assigned the term “champion” for driving needed cultural change in many industries. This has been

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<sup>129</sup> The Major Projects Association in the UK is the industry body for organisations involved in the development and delivery of major projects, programs, and portfolios. Upon recognising that their members were having difficulty in achieving gender balance on major projects, they launched the ‘Gender Balance Initiative’ in 2015 to support this process and share best practice. <https://majorprojects.org/about/our-priority-themes/>

<sup>130</sup> WISE’s ‘Ten Steps’ has been developed based on what has worked in the industry prior and supports organisations to recruit, retain and develop their female staff. Workplaces are able to use their diversity and inclusion diagnostic tool, they will receive a personalised report and are able to progress through the program at their own pace. WISE supports this process through training, workshops and consultancy services. <https://www.wisecampaign.org.uk/what-we-do/ten-steps-programme/>

<sup>131</sup> The Advancing Women in Engineering and Technology Project was implemented by the Association of Consulting Engineering Companies BC (ACEC-BC), in partnership with the Applied Science Technologists and Technicians of BC (ASTTBC) and Engineers and Geoscientists BC (EGBC), all based in Canada. <https://womeninengtech.ca/about-us/>

<sup>132</sup> Build Together is run by Canada’s Building Trades Unions (CBTU) in partnership with Moxie Trades, Office to Advance Women Apprentices and Canada’s Building Trades Mentorship Alliance. <http://buildtogether.ca/about/>

seen in the Australian-based initiative 'Champions of Change Coalition'<sup>133</sup>, which now has a global presence as well. Not only does this program facilitate national program groups, but it also runs industry-specific program groups in many male-dominated areas, such as STEM and sport. It also offers an industry-specific group for representatives from the built and natural environment sectors, including design, advisory, and engineering professions. This operates in partnership with Consult Australia, the industry association representing Australia's consulting firms who work in the built and natural environment. The program activities engage leaders in this industry and focus on cultural and systemic barriers to gender equality, perceptions of men and women in the workplace, sexual harassment, and the benefits to men of a more inclusive and equal workplace. In turn, these workplace leaders then act as "champions" of gender equality and implement changes in their own workplaces. In their 2020 progress report, the notable impacts of the program included workplace programs to encourage a greater number of women in leadership, including sponsorship and a gender balance in senior positions, and accountability through diversity targets. Other achievements include changes to flexible work, the introduction of shared parental leave and a 'call it out' program in one company to report inappropriate and sexist behaviour (Consult Australia Champions of Change, 2020).

While some programs may have undertaken these as requisites of the accreditation type program discussed earlier, others included these activities as the program's focus in and of itself. These types of activities included training on unconscious bias, bystander behaviour, diversity and inclusion and workplace culture. Examples of these include 'The Shift for Organisations'<sup>134</sup> and 'The Shift for Men/Be More Than a Bystander'<sup>135</sup> programs run by the BC Centre for Women in the Trades (BCCWITT). These programs focus on engaging male leaders in the industry to promote cultural change. Similarly, the National Association of Women in Construction (NAWIC) in Queensland recently piloted a new program, the 'NAWIC Queensland Male Allies Program'<sup>136</sup>. First piloted in March 2021, the program focused on engaging men to enable cultural change within the industry. Over ten weeks, the program helped men become confident in being advocates and equipped them with the skills to

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<sup>133</sup> Ten years after its formation, 'Male Champions of Change' changed their name to 'Champions of Change Coalition' with the tagline 'men stepping up beside women on gender equality'.

<https://championsofchangecoalition.org/>

<sup>134</sup> This program engages employers, contractors, unions, and training providers to enabled cultural change in the construction industry. <https://bccwitt.ca/whatwedo/shift-orgs/>

<sup>135</sup> This program consists of a three-day "train-the-trainer program" to enable men to become male leaders in the industry. It also offers a two-hour bystander training workshop. <https://bccwitt.ca/whatwedo/bystander/>

<sup>136</sup> The program has been funded by Construction Skills Queensland (CSQ) and developed in partnership with emberin, who are leaders in diversity and inclusion programs. The program is the centrepiece of NAWIC QLD's Passport to Diversity Strategy. A brief report on the program includes quotes from a CEO participant, who outlined the changes he has facilitated in his organisation as a result of the program. These include changes to domestic and family violence leave, for example, as well as changes to amenities and flexible working hours, among other policies.

<https://www.nawic.com.au/common/Uploaded%20files/BLOG%202020/NAWIC BLOG June Male Allies Program.pdf>

encourage change in others. Following this, NAWIC has now launched a nationwide iteration of the program in a virtual capacity, which was to begin in October 2021<sup>137</sup>.

Other programs have worked to embed cultural change activities in the workplace. Respectful workplace training, with a focus on gendered violence, was piloted on two Victorian construction sites as part of the women in construction strategy (Francis et al., 2021). This training, which uses the lens of OH&S, familiar to construction employees and workers, was developed and conducted by the Victorian Trades Hall Council. Another example is in Sweden and run by an industry leader Skanska. They are working to increase the number of women in leadership positions by addressing workplace culture. They developed an ‘Ethics Stops’ program<sup>138</sup> to make the workplace more inclusive for women. In ‘Ethics Stops’, employees are tasked with scenarios to work through and must draw conclusions on the appropriate course of action. This type of session is preventative in nature, requiring employees to think through how they would deal with an ethical dilemma before it may arise. This encourages employees, particularly male staff, to reflect on the barriers experienced by women and their experiences in the workplace. In doing so, Skanska aims to promote awareness and reduce biases and harassment. On the other hand, Tradeswomen Australia’s ‘Workplace Diversity Project’<sup>139</sup> has included diversity and inclusion activities in a bid to improve workplace mental health. The project includes an internal audit on workplace diversity practices, the development of resources to support this, and workshops on change management for supervisors, unconscious bias, and diversity.

Such cultural change activities have also taken place across the industry, with examples including ‘CoRE Hi Vis’<sup>140</sup> run by Women’s Health in the Grampians, in Victoria. This program, established in 2019, engages with medium to large local employers in the construction and manufacturing industries to identify the barriers and enablers to gender-diverse workplaces. Other programs have engaged with industry stakeholders to conduct research and identify best practice examples to encourage cultural change in the construction industry. An example of this is ‘Culture in Construction’<sup>141</sup> in Australia. This initiative, involving research, is a part of the Construction Industry Cultural Taskforce. The focus is on work-life balance,

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<sup>137</sup> This iteration of the Male Allies Program begun in October 2021 and is funded by Woolworths. The nationwide program will engage 75 men to enable them to be leaders of gender equality in their workplaces. [https://www.nawic.com.au/NAWIC/Event\\_display.aspx?EventKey=MALEALLIE3](https://www.nawic.com.au/NAWIC/Event_display.aspx?EventKey=MALEALLIE3)

<sup>138</sup> <https://group.skanska.com/media/articles/working-toward-a-gender-equal-skanska-in-sweden/>

<sup>139</sup> The Workplace Diversity Project was launched in July 2021 and is funded by WorkSafe Victoria’s Workwell Mental Health Improvement Fund. The project focuses on improving working conditions in Victorian automotive workplaces. <https://tradeswomenustralia.com.au/workplace-diversity-project/>

<sup>140</sup> The CoRE Hi Vis project seeks to increase the number of women in construction and manufacturing and reduce the gender gap in these industries in the Grampians region by 5%. The long-term goal of the program is to reach a critical mass, wherein equitable roles and workplace structures are the norm. The program provides training and resources for both industry employers and for women, as well as working to identify best practice to inform programs in the area more broadly. The program is funded by the Helen Macpherson Smith Trust. <https://hmstrust.org.au/annual-report/2019-annual-report/grants/case-study-womens-health-grampians/>

<sup>141</sup> <https://cultureinconstruction.com.au/about-us/>



diversity and inclusion, and physical and mental health in the construction industry. Similarly, the Major Projects Association in the UK, which were mentioned earlier, also engaged in industry research activities as a part of their program to develop a picture of best practice in terms of gender equality in the industry.

### 3.5 Growth career stage

The analysis of the programs uncovered three key program intervention themes relating to the growth career stage. These include:

- Connection
- Development
- Stakeholder engagement

These intervention types seek to help women to continue to progress and succeed in their chosen industries. These themes and programs are summarised in Table 5.

**Table 5. Early experiences stage intervention themes and programs**

Intervention Themes	Examples	Programs	
		National	International
Connection	Networking, professional events.	16	38
Career development	Mentoring, leadership sessions, professional development, academic training & speaking opportunities.	38	51
Stakeholder engagement	Research, engagement & training with industry.	3	16

#### Connection

While activities such as networking have been identified at both ‘Early Experiences and ‘Growth’ stages, these activities tended to have differing focuses at each stage. While some offer these activities to women at all stages, networking activities have also been found to be tailored to women’s career development. For example, in the US, ‘Professional Women in Construction’<sup>142</sup> and ‘Women in Construction Operations’<sup>143</sup> run regular networking events to empower and advance women. Other such as ‘Federation of Women Contractors’<sup>144</sup>

<sup>142</sup> PWC is a not-for-profit organisation that aims to support and connect women and advocate for diversity in the architecture, engineering, construction industries. <https://www.pwcusa.org/>

<sup>143</sup> Women in Construction Operations seeks to advance women in construction via mentoring, education and networking. <https://wiops.org/about-us/>

<sup>144</sup> The Federation of Women Contractors is a member-based organisation who advocate to local government on behalf of women business owners and executives in construction. They are driven to advance entrepreneurial women, whose members or employees include professional services firms, contractors, and

advocates for and offers networking specifically to support women-owned businesses and women executives in construction. Also aimed at women who run construction businesses is 'Tradie Wives'<sup>145</sup> in Australia. This initiative began as a Facebook group dedicated to supporting women running a business with their tradesperson partner. The initiative has since expanded its reach through an online business directory.

In Australia, Awesome Women in Construction (AWIC)<sup>146</sup> is a member-based organisation that provides networking opportunities for women in the construction industry across South-East Queensland. These events are provided to aid personal and professional development, which will build women's confidence, broaden their network, and provide an avenue to showcase them and their organisations. Similarly, Master Builders Australia offers via the 'Master Builders Women in Construction group'<sup>147</sup> networking and professional events to women in the construction industry to recognise their achievements and aid them in achieving personal and professional success. Also in Australia is Women in Technology (WiT)<sup>148</sup>. They offer networking to advance women's career growth in the technology sector, among other forms of personal and professional development, such as mentoring and board readiness.

In Canada, the 'Tradeswomen Network'<sup>149</sup> run by BC Centre for Women in the Trades (BCCWITT) aims to retain and advance women in the trades. To do so, they conduct regular networking events and meet ups as a part of this program. Similar interventions are also run by companies, with examples such as Faithful+Gould<sup>150</sup> in the UK who provide internal networking initiatives with the aim of enabling career development. Working to advance

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suppliers. In addition to this, they hold monthly networking sessions for members with industry speakers and conduct educational workshops. <https://fwcchicago.com>

<sup>145</sup> Tradie Wives connects women business owners with one another to reduce feelings of isolation in the industry and they provide a directory to connect tradespeople with relevant services and for members to advertise their businesses. <https://tradiewives.com.au>

<sup>146</sup> AWIC provide networking opportunities for their broad array of members, who represent everything from small independent businesses to international organisations. This is facilitated by their team who have a breadth of experience working to break down barriers and smash the glass ceiling' in the construction industry. AWIC also provide a directory and run a podcast. <https://awic.org.au/about-awic/>

<sup>147</sup> Master Builders Australia in the ACT founded this initiative in 2018. It is sponsored by Snedden Hall & Gallop and Harvey Norman Commercial and supported by Shaw Building Group and Master Builders Insurance Brokers. <https://mba.org.au/event/women-in-construction/>

<sup>148</sup> Operating for over two decades WiT work to support and advance women in STEM. They provide support for women entering the sector and those returning to work and run programs for mid-level and senior women looking to advance in their careers. <https://wit.org.au/careers/>

<sup>149</sup> BCCWITT's 'Tradeswomen Network' connect women in the trades via network, Facebook group and regular meet ups on Zoom. It also includes leadership training and access to volunteering opportunities. <https://bccwitt.ca/whatwedo/network/>

<sup>150</sup> Faithful+Gould provide professional networking for women in the construction and property sector, where they also provide internal and external speakers. <https://www.fgould.com/uk-europe/articles/women-construction-professional-networking/>

women in the male-dominated energy sector, initiatives such as ‘Hypatia’<sup>151</sup> and ‘Women in Renewable Energy’ (WiRE)<sup>152</sup> provide networking opportunities to women.

## Career development

Through mentoring activities, other programs have sought to aid women’s career growth in male-dominated industries. An example of this is seen in ‘Women in Tech’<sup>153</sup> and the ‘International Women in Resources Mentorship Programme’ (IWRMP)<sup>154</sup> run by International Women in Mining (IWIM). Such programs focus on not only supporting women but developing them. The IWRMP, for example, is specifically for women with five years or more experience and describes itself as “perfect for recently promoted professions or people who find themselves at a pivotal moment in their career or who feel that there is a glass ceiling above them” (IWIM, 2021). In Europe, the Baltic Gender Project<sup>155</sup> offers mentoring to advance women's careers and reduce gender inequalities in marine science and technology. Noticing the lack of women in leadership positions in the industry, Baltic Gender focuses on the need to utilise the capacity of women that is currently untapped. The program takes place across the Baltic region and provides international mentoring opportunities for female postdoc researchers to advance their careers. Mentoring interventions have also aimed to help women progress in male-dominated industries like mining in Australia. The ‘QRC/WIMARQ Mentoring Program’<sup>156</sup>, which is now in its eighth year, has sought to improve the retention and progression of women in the mining and energy sectors. The program aims for its outcomes to be sustainable by facilitating mentor/mentee relationships that continue beyond the program’s duration.

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<sup>151</sup> German initiative, Hypatia, provides networking opportunities for women in the renewable energy and cleantech sector. It was founded in order for women to exchange knowledge, contacts, experiences and expertise. They also provide resources on their website and promote women in the industry, as well as run events. <https://www.hypatia-network.de/ueber-uns>

<sup>152</sup> Sponsored by industry and government, Canadian initiative, WiRE, offer networking, capacity building, awards and speed mentoring to women to grow their careers in renewable energy. <https://www.womeninrenewableenergy.ca>

<sup>153</sup> Women in Tech a global initiative with a number of different chapters, who run mentoring and advocate for women in technology. <https://women-in-tech.org/who-are-we/>

<sup>154</sup> The International Women in Resources Mentorship Programme (IWRMP) was established in 2018 and is an annual, international program working to empower and advance women to progress their careers, overcome obstacles and develop the confidence needed for leadership in the mining and resources industry. The program is 6 months in length and IWRMP have mentored 200 women in over 20 countries to date. <https://internationalwim.org/iwrmp-2018-update/>

<sup>155</sup> The Baltic Gender project implemented a number of different activities to retain and develop women in the marine sciences and technology sector. In addition to mentoring, they also offered women workshops, networking opportunities and developed a series of blogs to give visibility to their work. This work with women was complemented by workshops and training across partner institutions in the industry to encourage change in the industry and allow for the dissemination of best practice. <https://www.baltic-gender.eu>

<sup>156</sup> Delivered by Women in Mining and Resources Queensland, this mentoring program has reached 350 women by the end of 2020, with 90 per cent of participants surveyed reporting that the program had a positive impact on their careers. <https://womeninminingqueensland.com/mentoring-program/>

Meanwhile, other mentoring programs have sought to advance women by enabling them to transfer their skills and experience across countries. The 'EUMENTORSTEM'<sup>157</sup> program works with migrant women who already have a background in STEM to assist them in applying their background to jobs in the European market. This is coupled with training provided to the program's mentors as well.

Other programs work to aid women's career growth through leadership and professional development sessions. This is seen in the National Association of Women in Construction (NAWIC) 'Executive Leadership Program'<sup>158</sup>, run through their Queensland chapter. This program supports women in becoming prepared for board roles in the construction industry. Similarly, the South Australian chapter runs a leadership development program<sup>159</sup>, and there is a 'CEO shadowing program' offered in Victoria<sup>160</sup>. Also in Australia is the 'Women in Construction, Engineering & Infrastructure Leadership Summit'<sup>161</sup>, which brought women industry leaders together to discuss best practices for inclusivity and diversity, sponsorship and mentorship, and leadership skills. The goal of the program is to enhance participants' leadership potential to succeed in a male-dominated industry and develop a network of like-minded people. These types of activities are also offered by 'CSOWISE Healthcare Science Leadership Development Programme'<sup>162</sup>. Run by the WISE Campaign in the UK, they offer female scientists leadership development sessions, including training on personal branding and peer coaching. They also receive mentoring from senior leaders in the health sector and academia. Combining both leadership and professional development training with mentoring also occurs in Australia's 'Women in Leadership Development project'<sup>163</sup>. This equips women

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<sup>157</sup> EUMENTORSTEM is Co-funded by the EU's Erasmus+ programme and operates across the UK, Sweden, Hungary, Italy, and Greece. <https://www.eumentorstem.eu>

<sup>158</sup> NAWIC QLD partner with industry to run this program comprising of events to support women in becoming prepared for board roles in the construction industry.

[https://www.nawic.com.au/Web/Chapters/QLD/QLD\\_Exec\\_Leadership.aspx](https://www.nawic.com.au/Web/Chapters/QLD/QLD_Exec_Leadership.aspx)

<sup>159</sup> NAWIC SA Leadership Development Program' takes place over the course of 6 months and is designed to develop women's leadership skills and capacity.

[https://www.nawic.com.au/web/chapters/SA/SA\\_Mentoring.aspx](https://www.nawic.com.au/web/chapters/SA/SA_Mentoring.aspx)

<sup>160</sup> NAWIC VIC CEO Shadow Program offers participants, who are in middle or senior management, have the opportunity to shadow a CEO for a day.

[https://www.nawic.com.au/Web/Chapters/VIC/CEO\\_Shadow\\_Program\\_And\\_Mentoring/CEO\\_SHADOW\\_PROGRAM.aspx](https://www.nawic.com.au/Web/Chapters/VIC/CEO_Shadow_Program_And_Mentoring/CEO_SHADOW_PROGRAM.aspx)

<sup>161</sup> The summit operates in partnership with the Women Leaders Institute and is endorsed by NAWIC Australia.

<https://wic.womenleadersummit.com>

<sup>162</sup> The program has been developed in partnership between the WISE campaign and the Office of the Chief Scientific Officer (CSO). The most recent iteration of the program has built upon the success of the CSO WISE Fellowship. Taking the most successful elements of that program, this leadership development program was offered to female scientist in 2019/2020 to propel their career development. The program is open to mid career female healthcare scientists in any disciplines of the NHS. <https://www.wisecampaign.org.uk/what-we-do/wise-projects/the-csowise-healthcare-science-leadership-development-programme/>

<sup>163</sup> The 'Women in Leadership Development project' is provided through the Medical Research Commercialisation Fund, which is managed by Brandon Capital Partners. The project is run annually over the course of 6 months. Initially beginning as a pilot project in Victoria in 2019, WILD has now expanded and is being rolled out nationally and in New Zealand. <https://wildforstem.com>

in STEM to tackle barriers to career advancement by providing them with the knowledge, skills, confidence and networks to secure senior leadership and board positions. In the transport sector, Transdev France has partnered with Femmes & Pouvoir to implement their 'Gender Equality Action Plan'<sup>164</sup> program, which includes gender equality club to empower women to leadership positions, motivate women and foster personal and professional development.

Some programs have taken a different approach to aid women's advancement. The EU-funded project, 'High Heels: Building opportunities for women in the construction sector'<sup>165</sup>, carried out by partners across Bulgaria, Greece, Romania and Cyprus, focused on improving women's soft skills to aid both their entry and advancement in the construction industry. However, despite the program's reported success, the program's activities have been subject to controversy and scrutiny as they fail to challenge cultural barriers imposed by the male-dominated industry and instead focus on moulding women (European Construction Sector Observatory, 2020; Clarke & Sahin-Dikmen, 2021). This approach inherently implies that there is something "wrong" with women. In doing so, it has been argued by Clarke and Sahin-Dikmen (2021), that such approaches perpetuate the gendered division of the construction and engineering sectors. There have been no further iterations of this program (European Construction Sector Observatory, 2020).

Some programs include academic training to facilitate women's advancement. An example of this is the 'Women Empowerment Programme'<sup>166</sup> in South Africa. The program sought to empower women to grow their enterprises further. In WEP, participants attended a four-month academic program that includes training from leading academics and industry experts, which is then followed by mentorship. By the end of the four months, participants are expected to have developed a detailed business plan, and these are assessed for revenue growth. Over 300 women have gone through the program since its inception, and it has been lauded as a success, receiving an award for "the Most Innovative Training Programme"<sup>167</sup> at the Women in Construction Awards.

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<sup>164</sup> <https://cms.uitp.org/wp/wp-content/uploads/2020/08/WISE-II-Brochure-English.pdf>

<sup>165</sup> The 2013-2015 EU-funded initiative 'High Heels: Building opportunities for women in the construction sector', was carried out across construction companies, training centres and industry consultants. [https://ec.europa.eu/growth/sites/default/files/ecso\\_ar\\_human\\_capital\\_2020.pdf](https://ec.europa.eu/growth/sites/default/files/ecso_ar_human_capital_2020.pdf)

<sup>166</sup>The Women Empowerment Programme, created in partnership between NHBRC and the Gordon Institute of Business Science's Enterprise Academy seeks to empower women to further grow their enterprises. This involves a four-month academic program which is then followed by mentoring. <https://www.campaign.nhbrc.org.za/women-in-business/>

<sup>167</sup> The Women in Construction Awards took place at the Sandton Convention Centre, on 13 May 2015. This is considered a prestigious award to win. <https://fhpsa.co.za/updates/the-women-in-construction-programme/>

Finally, others have sought to increase women's exposure through speaking opportunities, with examples such as 'IWIMSpeakUp'<sup>168</sup> for women in the mining industry. Similarly, the 'CSOWISE Healthcare Science Leadership Development Programme'<sup>169</sup>, highlighted earlier, also offers participants speaking and ambassadorial opportunities to boost their career development in STEM. Another Australian-based program, 'STEM Women'<sup>170</sup>, facilitates speaking and professional development opportunities for women through an online directory to promote women in STEM. This works to increase their visibility and thereby gain access to greater opportunities through this platform.

## Stakeholder engagement

As discussed in the Education and training as well as the Early experience stages, many programs have been found to engage employers and industry stakeholders in this career stage as the focus of their programs. These programs have focused on working with industry and employers to identify barriers preventing women from advancing in male-dominated industries and help dismantle them. This has taken place in the form of forums, such as the 'Advancing Women in Construction forum'<sup>171</sup> in Australia, which fostered industry collaboration on barriers to women's advancement in the construction industry and means of addressing them. Other programs conducted research activities to inform further initiatives to aid women's career development in the construction industry. The EU-funded 'Women in construction scientific research' (WOMEN-CORE)<sup>172</sup>, for example, worked to further develop women in construction research and broaden their influence in the sector. Engaging with the higher education sector as well as industry, the project identified factors affecting progression, informing further initiatives at the European, national, and local levels. Similarly, the 'CAWIC LEVEL BEST Women's Advancement Project'<sup>173</sup> was a research and action

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<sup>168</sup> 'IWIMSpeakUp' is run by International Women in Mining (IWIM) to assist professional women in the mining industry and operates on an international level. <https://internationalwim.org/iwimspeakup/>

<sup>169</sup> <https://www.wisecampaign.org.uk/what-we-do/wise-projects/the-csowise-healthcare-science-leadership-development-programme/>

<sup>170</sup> STEM Women is an initiative by the Australian Academy of Science. This website both facilitates women's professional development as well as increases the visibility of women in STEM. <https://www.stemwomen.org.au/>

<sup>171</sup> This program is run by CPB Contractors. It involves a forum to discuss barrier to women's advancement in the construction industry and share ideas of how to address them. <https://www.cpbcon.com.au/en/news-and-media/2021/mentoring-program-supports-female-participation-in-victoria>

<sup>172</sup> The 'WOMEN-CORE' project took place between 2006-2008, was funded by the European Commission and implemented by Fundacion Labien in Spain. The project identified career breaks for family responsibilities, lack of outside support, work inflexibility and few females in senior positions, so therefore few role models, as key factors affecting progression. For these reasons, a greater number of women were attracted to academia. It also identified emerging trends construction research content, which was less male-dominated, being focused on environmental and social issues. <https://cordis.europa.eu/project/id/17568/reporting>

<sup>173</sup> The CAWIC LEVEL BEST project took place between January 2014 and December 2016. By engaging with industry stakeholders and women in the industry, the project was able to facilitate material changes for women in the industry, which would better enable them to progress within it. <https://cawic.ca/about/level-best/>

initiative funded by the Canadian government. The project aimed at construction employers, unions, and contractors to improve women's progression into leadership roles within the Canadian construction industry. It raised awareness of barriers present to women in the industry and developed measurable action plans for the industry.

### 3.6 Conclusions

While some specific intervention themes and interventions themselves did differ between career stages, overarching themes focused on encouraging girls to enter male-dominated industries and supporting women to remain and develop within them. Increasing girls' awareness, as well as those who influence their career decisions, is critical. This includes making career opportunities in male-dominated industries more visible and achievable, as well as debunking gendered career stereotypes among girls and boys at a young age. These programs have sought to change opinions about these industries, with the aim of supporting change in women's developing or developed gender schemas. Role models are also an important element of this, as are hands-on activities that increase women's skills and self-efficacy perceptions.

A significant focus of programs has been on training as an essential means of educating girls and women to help them consider a male-dominated industry, like the construction industry and translate that into a vocational choice. These have also often been tailored to address the barriers women face and support them to continue in these industries. Support and guidance activities continued throughout women's careers in male-dominated industries, with networking and mentoring reoccurring interventions in many stages. However, as noted in the literature, these activities recognise that change in construction will not occur overnight, and they more likely act to retain women than necessarily assist their advancement. Support also extended to encompass the negative experiences women face in male-dominated industries, often due to their toxic and sexist cultures.

Cultural change has been a key focus of many programs. Recognising that the lack of women in male-dominated industries is not simply alleviated by channelling more women in and that the culture of these industries can be exclusionary and discriminatory. Many of these programs focused their interventions on working with men and workplaces more broadly. Male leaders are provided with a platform to address gender inequity and are often termed "champions" for their work. While it has been argued that these leaders are doing what all good leaders should do, this mechanism has acted to overcome resistance to change. Finally, focusing on women in their mid to late careers, many programs have included activities centred around retaining women and enabling their development. This has included tailored

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not only to support and guide but also additional professional development and leadership opportunities.

While these programs were implemented by an array of stakeholders, including government, non-government organisations and private companies, many included a number of program partners to increase their reach and financially support the programs. However, many programs remained relatively disparate in their approaches and funded for the short term, limiting their long-term impact. Often women contribute on a voluntary basis to these programs. Unfortunately, this lack of certainty of ongoing funding serves to limit the sustainability of program outcomes. However, it is noted that some have been able to establish their programs, allowing for sustained benefits. As Chen (2005) emphasises, this ecological context is critical in determining the long-term change a program will achieve. Programs that have been particularly successful in this respect have worked to address the barriers women face alongside assisting their entry and progression in male-dominated industries and have been supported through a number of program partners or industry bodies. New, innovative programs also show promise for changing the number of women in these industries, with the new focus being placed on changing the culture of the VET industry, for example, and on the use of new technology, like games, TV shows and virtual reality, to bolster program effectiveness.

Overall, these programs provide great insight into what can be achieved to encourage, retain and advance women in construction. The six case study examples outlined in Section 4 explore the work of some exemplar programs in more detail.



## 4. CASE STUDY PROGRAMS

### 4.1 Introduction

Case studies are a common qualitative data collection method and were chosen as a way to focus on a select number of programs in greater detail. While case studies cannot be extrapolated due to their small sample size, they offer a deeper level of understanding than that gained from large sample sizes (Punch, 2014). As in the review of existing programs presented in Section 3, the analysis of each case was guided by program theory (Chen, 2005).

Out of the large pool of local and international programs identified, a list of 20 exemplar programs was compiled. These were selected due to their uniqueness, the success of their initiatives and their focus with regard to career stage, program size, implementers and intended audience (tradeswomen or professional). All 20 program managers were approached to take part in an interview to collect further information. Several managers did not respond, and some cited workload issues as the reason for declining the invitation to be interviewed. In the end, six specific programs from the original list were selected<sup>174</sup> as case studies, which included four international programs and two national programs. As with the international and national programs discussed in Section 3, more programs were focused on women and trade roles. All focussed on several career stages, but less was directed to the career growth stage, demonstrating the focus is often to get women to consider construction and support their early entry. All programs utilised different approaches and focussed either on women alone or women and other stakeholders.

Some programs had significant secondary data available, particularly the larger, better funded program. This information included program evaluations or impact reports, well developed websites, etc. which allowed access to more detailed information on program implementation and outcomes. Further information was required for the majority of the programs to provide a more detailed account of the initiatives. Interviews were used to complement secondary data and gain first-hand accounts of the programs. Some interviews

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<sup>174</sup> The University of Melbourne proposal outlined that ten programs would have their web-based materials supplemented through the use of 45 min key informant interviews, involving up to 2 program staff per program. Twenty programs were identified and contacted but unfortunately many declined to be involved or simply did not respond to our requests. A different approach was needed. Several programs had extensive evaluation or other reports detailing their activities, so it was decided to switch to a more detailed case study approach using a lesser number of programs. Two interviews had already been conducted before this change in approach. One program was eliminated from consideration as it was apparent the information available would be of insufficient detail compared to the other case studies. The other program kindly agreed to our request for a supplementary interview which was then was conducted. The case study approach required reviewing, and in some instances translating publicly available and requested reports. In total seven program personnel were interviewed for an average were 1.5 hours each, with the longest being 2.5 hours. The total time for primary data collection was this component of the work exceeded the minimum outlined in the original proposal.

were recorded when permission was granted, and the researchers relied on transcriptions and/or researcher notes. The case study programs included are outlined in Table 6:

**Table 6. Summary of case study programs**

Case Study Programs	Location	Participation rates of women in construction	Career stage	Focus
Women Can Build	Spain Portugal France Italy Belgium Germany	Approximately 9% <sup>175</sup> (Women Can Build, 2018a).	Exploration Education and training Early experiences	Trade roles School-aged girls Women VET sector Companies Construction
Women into Construction “Moving on Up” program	United Kingdom	Approximately 11 % overall and 1% in site-based roles (Clarke, 2021)	Education and training Early experiences	Trades roles Professional roles Women Company Career change within construction
Boss Ladies Project	Denmark	Approximately 11.9% <sup>176</sup> (Schulz, 2015).	Exploration Education and training Early experiences	Trade roles School-aged girls Women Companies VET sector Schools Construction
Frauen in Handwerk und Technik (FiT)	Austria	Approximately 10% <sup>177</sup> (Statistics Denmark, 2019)	Exploration Education and training Early experiences	Professional roles Trade roles Unemployed women VET sector University sector Male-dominated occupations (min 40% women)
NAWIC Victoria “Mentoring program”	Australia	Approximately 12.4% (in Victoria) (MBAV, 2021).	Early experiences Growth	Professional roles Women Built environment
Supporting and Linking Tradeswomen (SALT)	Australia	Approximately 12.7% (in Australia) (ABS, 2020).	Exploration Early experiences	Trade roles School-aged girls Women (including women who are survivors of domestic violence or are culturally diverse) Companies Male-dominated manual trades, including construction

<sup>175</sup> This statistic is an average across the partner countries, according to national statistical data (Women Can Build, 2018a).

<sup>176</sup> This statistic includes administrative, technical and professional occupations. In contrast, women make up 8.5% of apprentices in the industry (Schulz, 2021).

<sup>177</sup> Rate has remained consistent over recent decades but masks occupational disparity of where women make up 30% of painters, but only 4% of masons (Statistics Denmark, 2019).

## 4.2 Case Study 1. Women Can Build

### Introduction

Women Can Build was a multi-country program to increase the number of tradeswomen in the construction sector and began in 2017. The program aimed to redefine and transform Vocational Education and Training (VET) sector to improve gender equality in the construction industry (Women Can Build, 2020a). To achieve this, the program focused on several key action areas: working with VET trainers, VET centres, companies, and women. The program was conducted across Europe in Spain, Italy, Portugal, Belgium, Germany and France (Women Can Build, 2022a). The implementing partner Fundación Laboral de la Construcción, in Spain, ran the project in partnership with Agencia para el Empleo de Madrid del Ayuntamiento de Madrid (Spain), Formedil (Italy), Fondazione ECIPA (Italy), Cenfic (Portugal), Bildungszentren des Baugewerbes eV (BZB) (Germany), Centre IFAPME Liège-Huy-Verviers (Belgium), and CCCA-BTP (France) (Women Can Build, 2022a). The Spanish Service for the Internationalization of Education awarded €293,121 (\$466,633 AUD) to Women Can Build through its allocation of €34.9 million (\$55,620,130 AUD) to innovation projects and the exchange of good practices as a part of the European project, Erasmus+ (Women Can Build, 2017). The program also received an EU grant of \$453,853 AUD (European Commission, 2022).

The foundation of the Women Can Build program is the notion that equal opportunities in employment and education are the cornerstones of achieving gender equality. The program addresses ongoing inequalities that limit women's opportunities which have an impact at the broader society level (Women Can Build, 2018a). This is a core element of the European Commission's Strategic Commitment. With women making up only 9 per cent of the construction industry, the sector stands as a significant challenge to equal opportunity. For this reason, Women Can Build sought to tackle this issue across multiple countries and review and alter the provision of VET courses in the construction sector (Women Can Build, 2018a).

*Construction is not a matter of men, it is a matter of qualified professionals and, above all: Women can Build! [Senior Project Officer for International Projects, Fundación Laboral de la Construcción] (Women Can Build, 2018b)*

In this program, the program partners have aimed to normalise the presence of women in the construction industry and break down the barriers, prejudices and stereotypes that prevent their involvement (Women Can Build, 2020a). The program's ultimate aims have been to raise awareness of the need for equal opportunity in the sector, improve the culture of the industry, and advance professionalisation (Women Can Build, 2018a). It has sought to enable a paradigm shift in the sector and break down the socio-cultural barriers which prevent women's participation in construction (Women Can Build, 2018a).

*[The program] aims to disseminate, raise awareness and educate to achieve a more equal sector, with more women, reaching the conclusion that being a qualified professional, sex does not matter. [Senior Project Officer for International Projects, Fundación Laboral de la Construcción] (Women Can Build, 2018b)*

Building on prior programs aimed at increasing gender parity in the construction sector at local and regional levels, Women Can Build has aimed to have an impact across Europe and become a basis for similar programs in other countries (Women Can Build, 2018a). The program includes training for VET trainers, a training initiative for women, and resources developed for both the VET industry and construction companies on gender biases in the industry (Women Can Build, 2022a).

#### Summary of key objectives of the Women Can Build program

VET teachers: To increase VET teachers' awareness of barriers to gender equality in the sector and gender biases in VET teaching and equip them with practical skills and steps to address these issues.

Women: To give women skills and insights into the construction industry and help overcome the cultural barriers that prevent their involvement, thereby increasing women's attraction to the sector.

Sectoral VET providers: To create educational materials and training for the VET providers on achieving gender equality in order to break down gendered stereotypes in VET systems and enable the increased involvement of women.

Construction companies: Create resources for and offer guidance to companies to encourage their implementation of gender equality initiatives in their workplaces, and thereby change the culture and segregation of the industry. (Women Can Build, 2022b)

## Interventions

Women Can Build established a series of interventions to target each of their key objectives. These interventions were conducted in a number of phases during the 38-month duration of the program. The phases each focused on the different target audiences: VET teachers, women, sectoral VET providers and construction companies (Women Can Build, 2022b).

#### Summary of Interventions

VET teachers: Training of trainers through a MOOC (Massive Open Online Course) and development of a manual for teachers and careers advisors.

Women: Training for women in a variety of trades.

Sectoral VET providers: The development of a roadmap for VET institutions on educational methods and training for VET centres on gender equality.

Construction companies: The creation of an Action Plan for companies on achieving gender balance. (Women Can Build, 2022b)

### VET teachers

Phase one focused on training the trainers via a MOOC (Massive Open Online Course) to facilitate gender equality practices in VET teaching (Women Can Build, 2022b). This aims to address the lack of knowledge or awareness some VET teachers may have around gender inequality in the sector and the barriers women face in progressing through VET courses (Women Can Build, 2022b). The training equips them with knowledge and skills to be applied in the classroom to address these issues. This phase has several steps, including field work to identify gaps and propose solutions, the development of the MOOC training and resources for teachers and careers counsellors and the launch, piloting and accreditation of the MOOC (Women Can Build, 2022b).

#### **Activities - phase 1**

600 VET construction teachers were surveyed to identify gaps

Six workshops on the topic of gender to identify solutions

The development of content for the training course and resources

90 trainers complete the MOOC

(Women Can Build, 2022b)

### Women and girls

Phase two of the program involved conducting training with women to introduce them to the industry. In this training, they received hands-on experiences in several trades, such as masonry, tiling, plasterboard, electricity, and painting (Women Can Build, 2022b). Women are not only met with prejudice and stereotyping by those in the industry, but they often internalise this and lack the confidence to pursue a career in construction (Women Can Build, 2020b). This training experience aims to offer women a safe environment with skilled trainers to allow them to explore the industry and rid them of insecurities around their own abilities (Women Can Build, 2020b). Having this chance to explore various trades may then encourage women to pursue vocational training in construction (Women Can Build, 2020b).

Beyond this, another key part of this phase was the collection of testimonials from women working in the construction industry. This intervention was carried out to complement the efforts of the training workshops in attracting women and girls to the industry. By showcasing the experiences of women, it sought to raise awareness in women and girls that these careers were possible for them also. The head of the Women Can Build program describes the effect of the testimonials as follows:

*The experiences of pioneering women, inspiring women who have fought and have broken barriers, serving as references to other women, as well as younger women to choose these training pathways as a possible career, which is a way to break some of the gender stereotypes [Senior Project Officer for International Projects, Fundación Laboral de la Construcción] (Women Can Build, 2018b)*

**Activities - phase 2**

The development of objectives and content for the training

Six workshops on gender to finalise course content development

60 women complete the training, run by a trainer who has completed training in gender equality

Six working groups with experts to identify successful aspects and areas to improve

Workshops with participants on careers pathways

Experiences of women were collected via testimonials to inspire and encourage the greater participation of women in the industry. (Women Can Build, 2022b)

Sectoral VET providers

Phase three involved the development of resources for the VET industry. This included an educational roadmap for VET providers, including gender sensitivity training (Women Can Build, 2022b). This overarching roadmap gave recommendations and actions relating to aspects such as redesigning VET courses and their delivery and specialised resources to address gendered stereotyping and enable the greater involvement of women in VET courses (Women Can Build 2022b).

**Activities - phase 3**

Disseminate 300 surveys to VET centre staff (trainers, managers, counsellors)

Conduct 18 focus groups in VET centres with adolescents to understand their experiences

Conduct SWOT analysis and evaluation of gender equality strategies in VET centres

Identify gaps, areas for improvement and solutions, as well as Roadmap resources for gender-sensitive VET training. (Women Can Build, 2022b)

Construction companies

Lastly, phase four focused on developing an Action Plan for companies (Women Can Build, 2022b). The Action Plan sought to address the horizontal and vertical gendered segregation in the construction industry through awareness and action taken by companies (Women Can Build, 2022b). This resource offered guidance on gender competencies to introduce in their workplaces to achieve gender parity (Women Can Build, 2022b).

#### Activities - phase 4

60 interviews with construction companies (small to large) to ascertain gaps and identify existing beliefs and norms which give rise to gendered stereotyping and reproduce gender inequality in the industry.

120 interviews with women working in the construction industry to understand barriers they face and identify any positive practices.

SWOT analysis on best practices and barriers faced by women.

The development of handbooks that provide information and guidance to companies on how to improve gender equality. (Women Can Build, 2022b)

## Participants

The participants of the Women Can Build program can be broadly divided into four categories: women, VET teachers, sectoral VET providers and construction companies (Women Can Build, 2022b). The participants took part in the program across the six countries implementing the program.

### VET teachers

After the completion of qualitative and quantitative research on the VET sector, the gaps within teaching practices needing to be addressed were ascertained, and content for the MOOC training was developed (Women Can Build, 2018a). A total of fifteen VET teachers from each training partner completed the MOOC, which lasted approximately 4-6 hours (Women Can Build, 2018a).

### Women and girls

The training workshops targeted women without prior experience in the construction industry. This activity was offered by all five of the training partners – Fundación Laboral de la Construcción, Formedil, Bildungszentren des Baugewerbes eV (BZB), Centre IFAPME Liège-Huy-Verviers and CCCA-BTP. These workshops were run differently in accordance with the needs in each location, which led to the workshop groups consisting of women of varying ages, backgrounds and motivations within each country (Women Can Build, 2020b).

The workshops run by BTP CFA, a VET centre in France, included ten women between the ages of 27 - 31 (Women Can Build, 2020b). They became involved in the program through contact with an employment service for young women and men facing job difficulties (Women Can Build, 2020b). Five trainers were involved. The women who became involved in the program had no previous experience, and their motivation to take part stemmed from seeing the construction industry as a possible career pathway (Women Can Build, 2020b). The translated title of the workshop is “Women in building trades – let’s go!” (Women Can Build, 2020b).

Three women and three trainers took part in a workshop at the Centre IFAPME, a VET centre in Belgium. The translated title of the workshop was “Working in construction – an asset for women” (Women Can Build, 2020b). Ten women initially enrolled; however, seven did not attend (Women Can Build, 2020b). These participants were reached via social media and an employment agency (Women Can Build, 2020b). The women who participated were between 32 and 54, came from different educational backgrounds and were all looking for a career change (Women Can Build, 2020b). This career change was prompted by difficult circumstances faced by each, including illness, divorce, and unemployment due to the COVID-19 pandemic (Women Can Build, 2020b). Each was curious about the possibilities the construction industry offered (Women Can Build, 2020b).

The BZB VET centre workshops participants were young high school women aged 17 to 18 (Women Can Build, 2020b). Nine participants took part all up (Women Can Build, 2020b). The German students were reached due to a relationship the VET centre had with the school, and they were motivated to participate due to their interest in planning and managing the building of a house (Women Can Build, 2020b). Not surprisingly, the translated title for the workshop was “Planning and managing building a house – from bid to handling over the key” (Women Can Build, 2020b).

At the workshops run by FORMEDIL, nine women, aged 27 to 59, attended (Women Can Build, 2020b). The women had no prior experience in construction and were reached through newsletters and local employment services (Women Can Build, 2020b). The women were motivated to participate due to their interest in developing new skills relating to green technologies (Women Can Build, 2020b). FORMEDIL is a VET centre in Italy, and three of their trainers were involved in the workshop focussed on Eco-efficient masonry: green building - how to apply internal and external insulation (translated) (Women Can Build, 2020b).

Initially, ten women (aged 21 – 44) started the workshops run by Fundación Laboral de la Construcción, a VET Centre in Spain (Women Can Build, 2020b). However, this number dropped to seven due to the COVID-19 pandemic (Women Can Build, 2020b). Women were reached through social media and Madrid's local employment service. A total of 76 women registered their interest in the program, of which 63 progressed to the selection process (Women Can Build, 2020b). Out of those, 16 women were selected, with 10 offered the opportunity to participate in the training and the remaining six placed in reserve (Women Can Build, 2020b). Two trainers were involved in the workshop “We also build -Practical initiation into construction” (translated) (Women Can Build, 2020b).

In addition to this, women working in the industry were also targeted by the program in order to gain testimonies of their experiences. These women work in roles across the construction sector in the partner countries in which the program operates. Testimonies were also sourced from the staff at some of the training centre partners in the program.



### Sectoral VET providers

Staff at construction VET centres, including trainers, managers and counsellors, took part in the research and consultation activities within the sectoral VET providers. Their participation in these activities informed the development of ‘Roadmap’ for VET institutions (Women Can Build, 2022a).

### Construction companies

Employees and managers within both large and small companies took part in the research and consultation activities regarding the practices of construction companies. Other participants included women working in the industry (Women Can Build, 2022a).

## **Outputs**

Output data illustrates the number of each program activity achieved. These serve to highlight the effectiveness of the Women Can Build program.

### **Summary of program outputs**

500 VET teachers surveyed

63 industry stakeholders consulted

42 women trained

Over 30 events

(Women Can Build, 2020a)

Key outputs in each phase include the completion of research and consulting activities with the VET industry (including teachers and managerial staff), the development and implementation of MOOC training, the completion of training workshops with women and the completion and dissemination of resources for both the VET industry and construction companies. Additional outputs beyond this include advocacy activities – where campaigns, such as showcasing women’s testimonies, were disseminated, and within-country and multi-country events were held to collaborate on and raise awareness about the program.

## **Outcomes**

After 38 months of Women Can Build, the program was lauded as a success by the consortium of program partners (Women Can Build, 2020a). Outcome data on the program demonstrate both its impact in relation to its intended objectives and the unintended effects of the program, such as its influence across Europe (Women Can Build, 2020a).

### VET Teachers

Key outcomes of this phase are the completion of the comprehensive research on equality in teaching practice, which informed the delivery of the MOOC training (Women Can Build, 2018a). This foundational research yielded detailed insights into VET teachers’ perspectives on the role of women in the industry (Women Can Build, 2018a). Women Can Build describe

this process as having allowed them to gain an in-depth understanding of both teaching approaches and gendered stereotypes and prejudices that pervade VET classrooms (Women Can Build, 2020a). This understanding was able to shape the content of the MOOC to enable interactive and engaging educational content, which demonstrates inclusive approaches to implement during teaching (Women Can Build, 2020a). However, further research and evaluation are needed to ascertain what changes were made to the attitudes and practices of these VET trainers as a result of the training to more fully understand the impact of this phase.

### Women and girls

Program partners implemented training workshops in each of their respective countries in a bid to attract women to the sector (Women Can Build, 2020b). The training for women offered by Fundación Laboral de la Construcción in Spain stands as a notable example, with 76 women registering interest in the program, but ultimately only seven were part of the program (Women Can Build, 2020a; Women Can Build, 2020b). This does highlight women's interests in careers in construction. The following presents some of the experiences of female participants of the program's training workshops, held at Fundación Laboral de la Construcción in Spain. Participants' experiences of the program in Spain are summarised.

#### **Motivation for taking part in the program:**

*.... it is a good opportunity for other women who have never thought about it before  
I thought it was the best way to join the sector.*

#### **Experience of the training content:**

*Thanks to this training I felt protected and supported  
I didn't know there was such an academic training in the trades*

#### **Thoughts on the future:**

*I would like to define myself in something that we see in the course and make a Certificate of Professionalism. This is a sector with many opportunities, there is a lot on offer"*

#### **Prior perception of the industry:**

*I never thought that a woman could be here. Not because I can't, but because I didn't even think about it  
This type of project ...helps to make this change less difficult for women who are starting in the sector, and faster.*

#### **Barriers to women entering the industry:**

*I think that, like men, we can do anything, we just have to know that we are able  
Many because they don't know, others believe that they can't do it or that it is for men, and others because they don't decide to be part of the sector in their teenage years.*

#### **Messages to women:**

*I would tell them that I encourage them, that this is a job opportunity  
.... if we tell ourselves that we are not able to, we are closing doors  
Don't deny yourself a chance 'for fear of'. (Women Can Build, 2020c)*

Program feedback from participants across all five of the training centres is summarised.

### Participants' view of the industry

At BTP CFA, participants viewed women in the construction industry as tomboys prior to taking part in the program. Since their involvement, this perception has shifted. However, they still considered the construction industry to be a male space after their participation.

At FORMEDIL, participants' image of the sector did not change. Program staff suggest that this is due to the ongoing hostility towards women in the industry from men and until this changes, the perception of the industry will not change.

At Centre IFAPME, participants already held a positive view of the industry prior to their involvement, however, the program is thought to have reinforced this image.

### What participants enjoyed about the workshops:

At FORMEDIL, participants enjoyed working together in the workshops.

At BZB, participants liked trying out small, hands-on projects while supervised by their trainers, and were inspired by the VET centre as a learning environment, with some participants requesting more information on vocational training.

At Centre IFAPME, participants enjoyed the range of workshops offered and the workshop environment, which they reported as being very positive and welcoming.

At BFP CFA, participants also found the trainers and staff to be welcoming and enjoyed the organisation of the week, which included a variety of different trades to explore.

### Thoughts on future iterations:

At FORMEDIL, participants enjoyed working together in the workshops.

At BZB, participants liked trying out small, hands-on projects while supervised by their trainers, and were inspired by the VET centre as a learning environment, with some participants requesting more information on vocational training.

At Centre IFAPME, participants enjoyed the range of workshops offered and the workshop environment, which they reported as being very positive and welcoming.

At BFP CFA, participants also found the trainers and staff to be welcoming and enjoyed the organisation of the week, which included a variety of different trades to explore.

(Women Can Build, 2020b)

In addition to data collection of women and girls' experiences of the training workshops, program partners also gathered data on the first-hand accounts of women who are working in the industry and their experiences and collected over one hundred testimonies (Women Can Build, 2020a). The testimonies of other women are very powerful and represent a good outcome of the program. These included messages to other women, messages to companies and initial difficulties.

### Sectoral VET providers and construction companies' outcomes

As previously mentioned, the program's four phases yielded success with the comprehensive collection of data from VET providers and construction companies, including both managers and women in the industry. This informed the development of resources for both areas to tackle gender equality. Beyond their dissemination, however, the further impact of these activities is unknown, and research or evaluation is required to understand the extent to which VET providers and construction companies are actioning these recommended changes.

### The wider impact of the program

Through awareness raising, the program was able to increase the case for women in construction trades via its presence across Europe. This enabled an “echo of Women Can Build” (Women Can Build, 2020a, p.1) to have a wider impact. The program was reported in over 150 media publications and programs, such as TeleMadrid, Radio Nacional de España, Radio Televisión Española RTVE and Canal Sur Radio (Women Can Build, 2020a). Women Can Build also participated in and was presented at more than 30 events across Europe. These included, for instance, Construmat 2019 International Fair in Barcelona, the Conference for Women’s Empowerment and Gender Equality, organised by the University of Applied Labour Studies, the joint conference of Fundación Laboral and the Red Cross, ‘Promoting the incorporation of women in construction’, among other events (Women Can Build, 2020a). At the Conference for Women’s Empowerment and Gender Equality, which took place in Germany, the program was highlighted as an “example of international good practices in the construction sector” (Women Can Build, 2019, p.1). Women Can Build also received acknowledgement of their impact from the broader society. As implementers of the program, Fundación Laboral de la Construcción, received the 2019 prize from the Spanish Association of Women Entrepreneurs in Madrid for its social commitment in disseminating, promoting and fostering the value of women in the sector (Women Can Build, 2020a). Beyond this, Women Can Build also garnered 14,600 website visits and 732 followers on social media, highlighting the program's reach (Woman Can Build, 2020a).

### **Challenges and future changes**

The majority of data collected during the Women Can Build program relates specifically to the training undertaken with women (Women Can Build, 2020b). This was the only area in which challenges were documented, and they include:

- Recruitment of participants.
- Fixed mindsets - both construction workers and trainers involved with the centre did not believe women belonged in construction.
- Learning experience impacted by the organisation of the training.
- Length of the training is too short.

### **Conclusion**

The multi-partner, multi-country Women Can Build program is a key example of best practice in the construction sector. Its cross-country reach has bolstered the impact of the program, coupled with its multi-level approach. It has not only worked to facilitate women and girls’ attraction to the construction industry but has also worked to alter the teaching practices of VET trainers and enable culture change in both these centres and within construction companies. The positive reports of women involved in the program’s training highlight

effectiveness in the knowledge of the skills needed and opportunities available in the construction industry. Furthermore, extensive field work to form the basis of training and resources developed for both VET professionals and construction companies signals promise of their utility in embedding change in the sector. Furthermore, with the program's funding by the European Commission and their focus on adapting the sector to meet the demands of the future, the program was able to introduce women to green skills and roles which will be in high demand in the coming years, which positions them to excel in the sector.

### **4.3 Case Study 2. Women into Construction**

#### **Background**

Women into Construction is a UK-based, not-for-profit organisation that advocates for gender equality in the construction industry. They have sought to support women entering the industry and aid contractors in hiring an increased number of women. Their objective is to help achieve a more gender-equal construction workforce (WiC, 2022a). They are well known for their Women into Construction (WiC) project, which was established in 2008 to support contractors in meeting gender equality targets during the construction of the London Olympic Park (Wright, 2016). Over the three years that the WiC project operated on the Olympic Park, it was able to more than double the number of women employed on the site (Wright, 2014). This clearly indicates that women find employment in the construction industry when presented the opportunity (Wright, 2014). They were funded for the duration of this work on the Olympic Park by the Construction Industry Training Board (CITB) and the London Development Agency (LDA) (WiC, 2022a). Viewing the initiative as a success, after the Olympic build's completion in 2011, CITB supported the WiC project's extension to construction sites across London (WiC, 2022a). As of 2015, Women into Construction became an independent not-for-profit and has continued to offer the range of interventions that it had created on the Olympic Park (WiC, 2022a). They are now a member-based organisation and receive support from industry, local councils, and training providers (WiC, 2022a). The WiC project has continued to engage women in large projects across the industry. Its model is unique from other initiatives developed to increase women's representation – it focuses on preparing women for roles within the construction industry and engaging with a large network of employers (Wright, 2014). Due to this, the WiC organisation now stands as an exemplar in increasing women's participation in construction. The WiC programs have also been the subject of research by Wright (2014) and Munn (2014).

WiC currently runs several programs broadly focused on engaging women in construction via training and employment support (WiC, 2022b). Many of their programs specifically target unemployed women, and their current programs include 'Places for People Apprenticeship Programme', 'WiC Employment Programme – London', 'WiC Employment Programme –

Cambridgeshire’, and ‘WiC Employment Programme – West Midlands’ (WiC, 2022b). Program activities include:

- Work placements
- Employability training (cv writing & interview tips)
- Qualification training
- Career guidance, and
- Job application support (WiC, 2022b)

Some of their programs also offer further support, such as childcare in their recent program, ‘Women into Construction with West London College’, (WiC, 2022b). Women into Construction partner with a range of major contractors (WiC, 2022b). It has expanded its reach to also support women’s career retraining within construction. This is seen in their recent program, ‘Moving on Up’ (WiC, 2021) which is the second case study.

## **Moving on Up program**

### Background

The WiC’s newest program, ‘Moving on Up’, is a prime example of a WiC initiative. Data on the impact of this program was obtained from their program evaluation, ‘*Moving on Up Social Impact Report 2021*’. WiC’s ‘Moving on Up’ program was originally conceived in 2018 due to feedback from WiC’s female clients, who were struggling to advance in their careers. The new program was developed based on an analysis of research on the barriers women in construction face. Women are paid on average 14% – 22% less than men in the industry, and this disparity increases to 22% for women in senior or supervisory roles (WiC, 2021). The ‘Moving on Up’ pilot program took place between July 2019 and July 2021. The program was funded by the Construction Industry Training Board (CITB) Trust for London (TfL) and supported by BAM Nuttall UK Ltd (WiC, 2021). Trust for London (TfL) provided £120,000 (\$228,259 AUD) in funding (TfL, 2021), while CITB provided £122,569 (\$233,113 AUD) (CITB, 2021). The program supported women in construction companies across London to advance their careers by engaging with women in low-paid roles in group coaching and mentoring, one-on-one coaching, and technical training (WiC, 2021). The program also worked with the construction companies to retain and progress women and improve the gender diversity within their companies by engaging direct supervisors of the women and senior managers in the construction companies involved with the program. This was to educate leaders and supervisors on the business case for gender diversity in the workplace, give them practical tools to enable women’s progression in their companies and help them to reduce the gender pay gap in the industry (WiC, 2021).

## Interventions

As part of the Moving on Up program, WiC implemented a series of activities targeting women, supervisors, and managers. These interventions are summarised below.

### Summary of Interventions

#### Women:

Coaching & mentoring training - Six-month long formal group coaching and mentoring sessions, followed by one year of ongoing support for women.

Job-specific training - Training to allow women to develop technical or managerial skills specific to career progression opportunities.

1-1 Coaching - Bimonthly one-on-one coaching sessions with program staff.

Support - Support sessions with women to assist them with applying for advancement opportunities, such as negotiating better wages, hours, and employment security.

#### Supervisors and senior managers:

Senior management pay gap & progression workshops - Six-month long program of workshops and a concluding event to showcase best practice, pinpoint common issues and identify cross-company progression opportunities.

Supervisor coaching & mentoring training - Training in unconscious bias, inclusivity and coaching techniques to encourage behaviours and attitudes that enable a supportive working environment for women.

Gender pay gap review - Review of the company's gender pay gap and planning to remedy this.

Evaluation - An evaluation to assess the impact of the program on the company's gender pay gap.

(WiC, 2021)

## Participants

The pilot program of Moving on Up involved 39 women in low-paid roles. These women were on or below the London Living Wage (£13 /\$24 AUD per hour) (WiC, 2021).

It also worked with 20 senior managers and 20 direct supervisors of the women in these construction companies involved with the program (WiC, 2021). The program targeted construction companies that had a desire to increase diversity, employed women on low wages, had opportunities available to women to progress, gave support for supervisors and women to participate in the program, and had a commitment from senior management to tackling the gender pay gap in their company (WiC, 2021).

## Outputs and Challenges

The program's outputs are seen in the number of activities completed. These, measured against the target amount of the activities to be run by the program, give an indicator of its level of success. These are outlined in Table 7.

Table 7. Agreed and achieved targets.

Outputs	Agreed Target	Achieved
Companies supported	20	24
Women supported through coaching and mentoring	40	39
Women accessing additional job specific training	40	15
Supervisors trained	30	25
Senior managers trained	20	24

Source: Women into Construction (2021). Moving on Up social value impact report 2021.

[https://www.women-into-construction.org/wp-content/uploads/2021/11/WIC\\_MOU-Impact-Report-Nov-2021\\_-12.pdf](https://www.women-into-construction.org/wp-content/uploads/2021/11/WIC_MOU-Impact-Report-Nov-2021_-12.pdf)

While some targets were achieved others fell short. This included getting women to access additional job-specific training. This was, in large part, due to the external environment the program found itself in (WiC, 2021). During the delivery of the program, the COVID-19 pandemic emerged, which thrust the UK into lockdown (WiC, 2021). Although WiC acted quickly to move its program online, this was not without its challenges (WiC, 2021). Some women preferred the remote delivery of the program as it reduced travel time and made the program easier to access. However, others expressed hesitation at the prospect of added training or applying for new roles during the pandemic. Some no longer had the capacity to undertake the program due to additional caring responsibilities as a result of the pandemic (WiC, 2021). However, the targets in relation to the companies themselves were generally met, indicating a good level of interest and commitment from industry.

## Outcomes

### Women

Key outcomes for women included 15 women progressing in their careers. This included getting a better job with more responsibilities within their company or moving into a new position with another employer in the industry (WiC, 2021). Sixty three per cent of women reported that they were more likely to make use of industry contacts, and the same percentage of women also reported an improved ability to both challenge and benefit their companies (WiC, 2021). While more advanced roles come with added responsibility and stress, women reported that the trade-off of this increased power and income was worthwhile (WiC, 2021). On average, the salaries of the women in the program increased by £5,850, or approximately \$10,990 AUD, with a maximum salary increase of £17,500, or \$32,872 AUD (WiC, 2021).

### Supervisors and senior managers

For supervisors, outcomes included insights into their own behaviours and attitudes and their effect on the workplace (WiC, 2021). Eighty per cent of supervisors reported improved



teamwork through the acquisition of new skills and knowledge. The same percentage reported that they now actively support equality initiatives in the workplace (WiC, 2021). Similarly, senior managers reported feeling more motivated to share their newly acquired knowledge with the leadership team and an improved ability to address gendered stereotypes (WiC, 2021). New action plans were also being put in place to advance gender equality in the workplace, with 71% of senior managers reporting that they were working on new strategies in this area (WiC, 2021). Overall, upon completion of the program, one third of companies involved reported a greater focus on gender diversity and inclusion, and half of those involved in the program reported having strategies in place to increase equality and reduce the gender pay gap (WiC, 2021). Additional outcomes also included a women-only support group being set up at one company, with a focus on workplace barriers that women face, like returning to work after having children (WiC, 2021). The following is an example of a success story from the program.

### Success story - Maria

#### Background

One of the Moving on Up program participants has been highlighted in the 'Moving on Up Social Impact Report 2021', as an example of the impact of the program. This participant, Maria, had been working as a traffic marshal for three years prior to her participation in the program. Her motivation to take part in the program stemmed from her desire to progress in her career, as she enjoys working in the construction industry.

#### Barriers

Despite this desire to advance in her career, she had lacked confidence and was unaware of the opportunities available within the company she worked for. Aware of her need for additional training to improve her confidence and progress in her career, Maria was grateful for the opportunity to take part in the Moving on Up program.

#### Interventions

Maria took part in career coaching workshops and received mentoring as part of the program. With assistance from her mentor in the program, she identified that completing a CITB Site Supervisor Safety Training Scheme would aid her in progressing in her career.

#### Outcomes

After her participation in the program, Maria indicated that the program had allowed her to expand her skillset. After the conclusion of the program, Maria moved into a new role as an Office Administrator for Europe's largest rail infrastructure organisation. This new position allowed to achieve a 19% pay rise per hour and – with overtime – she can now earn 78% more than her previous salary.

*My self-confidence has improved so much, and I am very pleased to have completed my SSSTS and First Aid at Work training; it will look good on my CV, too. I also want to thank my employer for putting me forward to the MoU programme so that I could benefit from the training. I would love to find out how the other women progressed; it was so inspiring to meet them and to hear their stories in construction.*

*I am so happy with my new job as an Administrator. I felt that when I started this job I couldn't learn [new sector] ... now everything is fine, and I am so happy. It's everything I ever wanted.*

(WiC, 2021)

## Conclusion

The 'Moving on Up' program has not only achieved hugely successful outcomes but is also demonstrated to be 'value for money', as seen in their impact reporting of the social value of the program (WiC, 2021). The Social Value created by 'Moving on Up' over the duration of the program totalled a minimum of £486,238 or \$914, 531 AUD; "between £1.85 and £2.55 for every pound spent on the programme" (WiC, 2021, p.5). Due to the success of the pilot program, companies have been invited to sign up for the next 'Moving on Up' program, which is due to start in January 2022. The program stands as a key example of engaging both women and companies to facilitate women's career progression. By coupling these two aspects, the program upskills women with the experience, qualifications, and confidence needed to progress and encourages the supportive and inclusive environment needed for them to succeed by working with supervisors and senior managers. This approach recognises that while women face systemic and internal barriers to advancing in male-dominated industries, one of the largest barriers to their advancement is the industry's culture. The program's success has been enabled through partnerships with industry and the willingness of construction companies to take part in the program. Women into Construction's Moving on Up program represents a prime example of assisting women's retention and their career progression within the construction industry.

## 4.4 Case Study 3. Boss Ladies Project

### Introduction

The Boss Ladies Project is an innovative, Denmark-based initiative focused on engaging girls and empowering women in the construction sector. The Boss Ladies project aims to break down stereotypes and address the prejudices that prevent women's involvement in the building and construction industry (Boss Ladies Project, 2021a). They have sought to broaden the idea of what "male" and "female" work looks like to inspire young women to foster their talents and pursue careers in the building and construction industry (Boss Ladies Project, 2021a). The program includes six different activities. Boss Ladies Project is run through the not-for-profit organisation, Divérs (Boss Ladies Project, 2021a). The founder of Boss Ladies' had a background in working on gender equality for two decades and began Boss Ladies four years ago after meeting two tradeswomen and gaining new insight into the barriers they face in the construction industry.

*I found out that the prejudice and challenges that they were struggling with were on a whole other page than anything I have ever seen in Denmark before. And I knew that if I didn't know about these women's challenges, then there wouldn't be many people in Denmark who knew about it [Program Manager]*

The additional impetus for founding Boss Ladies was the strength and perseverance of the tradeswomen themselves.

*These women had enormous strengths, because they were still working in the building industry, even though they were facing all these challenges; they were still there. So, there was enormous potential, because they were really strong, these women, and that was the two main reasons why I started Boss Ladies. [Program Manager]*

Boss Ladies' approach is rooted in what they call broad collaboration – a wide network of partnerships with industry and societal stakeholders.

*I knew that we had to make change in this industry where there has been no change for more than 20 years ... [In] the companies, the TVET institutions, there was no attention at all concerning what was going on. So, I knew that we had to make a broad collaboration if we were to succeed. [Program Manager]*

The Boss Ladies Project work with an alliance of Danish institutions, trade unions, construction-focused business associations, private foundations, the VET industry and municipalities. Their partnerships include Dansk Byggeri, 3F, TEKNIQ, Dansk El-forbund, Blik og Rør, Danske Malermestre, Dansk Malerforbund and KL, among others. The program is funded by Nordea-fonden, Grundejernes Investeringsfond, Bygge- og anlægsbranchens Uddannelsesfond, The STARK Foundation and Teknologipagten (Boss Ladies Project, 2021a). Further information can be found at <https://www.boss-ladies.dk/samarbejdspartnere>



Figure 5. Broad Collaboration: A change alliance diagram indicating current partnerships

The reason for this extensive collaboration was due to the fact that Boss Ladies acknowledged that it would not be able to achieve what it hoped by just partnering with one

stakeholder. Multiple stakeholders were required to work towards shared goals. The project staff acknowledged that these partnerships were of particular importance when addressing gender inequality.

*Sometimes - in Denmark, it's not easy to get everybody to join projects concerning gender equality ..... Nobody thought that we had a problem in Denmark. So, we had to address that. But we found some good people in the institutions, and... Of course, there [are] a lot of obstacles...because that's how it is with change; there's always someone who doesn't want it ... But that is also why you need this alliance, so you're not alone. [Program Manager]*

Funding for the project has also increased and diversified over its duration. Project staff noted that the initiative began with most of its funding being from the private sector and some additional funding from trade unions and industry groups. This split between funders is now equal, and the project's budget is double what it was initially. While project staff still believe the budget to be small in relation to the scale of change they are enacting, the expansion in the project's funding allows for the continuation of the initiative and signals promise for its future. The project began with \$8 million Danish Krone (DKK), or approximately \$1.7 million AUD, which has now nearly doubled for the three years ahead, totalling approximately \$3.3 million AUD. While the number of partnerships has grown over the past four years and the initiative itself has expanded, the partnership model has remained the same. From the beginning, it has been important for the project to enable systemic change via a cross-sector of partnerships.

A form of ecological model was used to guide their approach to systemic change. The design of the Boss Ladies Project is to target multiple societal levels and career stages in order to achieve change.

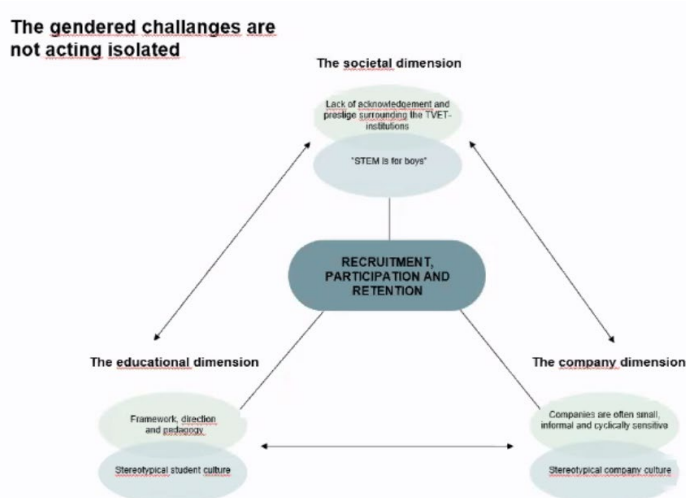


Figure 6. A model of systemic change for gender inequality in the construction industry

*What we are trying to do is we are trying to change the narratives, the mental models, both for young girls, of course for their schoolteachers, and also for the TVET institution and the companies, and society as well. [Program Manager]*

In explaining this approach, project staff emphasised that in order to create impact, they needed to work with multiple sectors and participants.

*It was very important to us that we did not only make change in the small area...it was important for us to say that if you have to make change - real change, and not just a nice project - then we have to face all the challenges all together.  
[Program Manager]*

In setting out to achieve this, Boss Ladies have identified key barriers to target at each level. They considered it important to recognise each of these focuses do not operate in isolation. This barrier mirrors those from the literature review and areas being addressed in existing national and international programs.

### **Obstacles to gender equality in the construction industry**

#### Education & stereotypes

Gender biases in education and gendered stereotypes of career choices begin from an early age, impacting girls' considering a career in the construction industry and their support to do so.

#### Left out in VET intro courses

Gendered stereotyping is also seen in the messaging around VET courses, displaying the trades as male vocations, which serves to discourage young women from pursuing them.

#### Isolated during VET courses & big dropout rate

With the gender disparity in VET courses, women often feel isolated and due to this, many drop out of the courses. In Copenhagen, 40% of young women drop out within the first year of their VET course.

#### Apprenticeships & employment

Many companies discriminate against women in the hiring process, and therefore women find it hard to find apprenticeships.

#### Sexism in the workplace

Sexism is rife in the construction industry, limiting women's career progression and their well-being in the workplace. They are also isolated in many of these male-dominated workplaces and unable to voice these issues.

### **Interventions**

The Boss Ladies Project conduct a number of interventions in order to increase the number of women in the construction industry. The various activities they run each work to complement one another to achieve their overall goal.

*So that is our main goal...to change these narratives we work on different kinds of levels, and...we're working directly with both girls and boys is doing ambassador visits in public schools...So we are teaching and showing the students a broader sense of their own choices. And then we work with a media strategy in both the national newspapers and also the local/regional newspapers... And then we are also working on social media ...And then we work...with all the grown-ups, all the professionals, surrounding the girls. [Program Manager]*

The following interventions summarise those undertaken within the Boss Ladies program.

### **Boss Ladies Project's Interventions**

#### Boss Ladies Ambassadors

Boss Ladies Ambassadors engages early career tradeswomen to give talks at primary schools and vocational schools. These ambassadors then also receive support and mentoring from the Boss Ladies Project.

#### Girl Boss Garage

Girl Boss Garage is an out-of-school program for young girls. It is run after school and on the holidays to give them hands-on experience and insight into the trades.

#### Learning Labs

Learning Labs are run with teachers, careers counsellors, VET teachers and VET coordinators. They are workshops on addressing gender bias in education.

#### Reversed Recruitment

Reversed Recruitment involves facilitating networking opportunities for young women to secure apprenticeships, where the onus is on the employers to attract the women.

#### Cultural Change

Boss Ladies run cultural change training activities with a range of different companies in the construction industry to facilitate women's recruitment and retention.

#### A New Narrative

A new narrative is presented via social media and traditional media to debunk stereotypes around women in the construction industry and encourage young women to consider it as a future career prospect.

### Boss Ladies Ambassadors

At the centre of Boss Ladies' activities is the Boss Ladies Ambassadors. It began with 45 young female builders and craftswomen visiting primary schools, vocational schools, and "UU-centres" (youth guidance centres) to give presentations on their own career paths and the possibilities that exist for women in construction. In doing so, they are able to act as role models for young girls.

To develop women as ambassadors, they provide a camp, workshops, and a mentor to guide the young professional women on how to handle working as women in male-dominated spaces (Boss Ladies Project, 2021a).

Boss Ladies Ambassadors are the centrepiece of the Boss Ladies Project. Boss Ladies Ambassadors is a way to inspire the next generation and support these women in the industry. Project staff discussed how working with these ambassadors allows them insight into the industry and the realities women face.

*They are ... who are out in the field and who have all these experiences. So, if we weren't involved with them, we wouldn't know, obviously, half the things that we do. And we found out quite early on in the project ... that they feel really alone, and they feel really alienated, both when they're in the vocational schools, but also when they're out working on the trade sites, on the construction sites. So, we wanted to, obviously, pull them in and make like a community through the project.*  
[Project Manager]

The women who take part in Boss Ladies Ambassadors are typically early career tradeswomen. They have a breadth of experience to share with young girls, but they benefit from the support offered by being a part of the Boss Ladies Ambassadors as they progress in their careers. As seen in the Australian construction industry, many women enter the industry a little later, beginning their careers in the industry as a career change. This has been suggested to be an asset by the Boss Ladies Ambassadors in navigating a challenging industry.

*So, these women, they're also saying that they are happy that they were a bit older when they made this choice of education ... Now, when they are 22, they can give some backfire. That's one part, and the other part, I think, is the stereotypes. It's difficult to walk against your parents' expectations and the expectations of society when you are 15 years old. It's a bit easier when you are 22.* [Program Manager]

A key part of Boss Ladies Ambassadors is sharing women's stories, as they are seldom given the space to do so and an important means through which these tradeswomen can bond with one another.

*No one's ever asked them to tell these stories before... But what we also saw was that when we gathered them for the very first - we called it a 'talent camp', where we needed to educate them on how do we role model and how to give presentations ... we just saw that they actually found so much in each other, sharing all these experiences that they have - both the good ones, and the bad ones.* [Project Manager]

Supporting these ambassadors is a central focus of this intervention, with talent workshops offered regularly to help the women upskill. This is also tailored to the specific needs of women in the industry and to address gaps in a male-dominated environment.

*One of the topics that we've been focusing on is how to start your own business, so we have real cool role models, women within the construction and building*

*industries who have started their own business... So, we invite them in to give courses on how can they inspire our ambassadors. But it can also be something like where to buy appropriate work wear for women. [Project Manager]*

The creation of a community amongst the Boss Ladies Ambassadors is also a huge part of the activity. This is something they often lack in the male-dominated environments they work in. This not only allows these women to socialise and develop friendships with people sharing similar interests, but it also creates a support network to draw upon, which is vital in such industries.

*One of them said to me a couple of years ago, 'It's like I have colleagues now; not just in my work space, but I have colleagues all the way out through Denmark, and I know if I feel alone with something that I can't talk to my male colleagues about, I have this safety net.' Actually, she said, 'It feels like you have a rock band that's always on there for you. [Project Manager]*

Beyond the support received through one another and through upskilling in a talent workshop, ambassadors are also offered individual support. This can be in employment support and emotional support – helping women through issues they may encounter in the workplace and giving them a sense of community.

*[Project staff] are really good at just being involved with these women, like calling them, just 'how are you?' every day. Helping them ... finding apprenticeships, but also it can be simple things like they're maybe sending out a resume for the first time ... So we have colleagues of ours that can sit and help with that. But it can also be some of the more difficult things like experiencing this sexual harassment or sexually offensive tone at a work site, experiencing a boss that's not treating you right...So they turn to us, and we are there for them. [Project Manager]*

### Girl Boss Garage

Girl Boss Garage grew out of the Boss Ladies Internship and was conducted for young girls (14 to 16). It provides a space for girls to explore using tools and gives them newfound confidence and insight into the construction industry. Project staff discussed how the internship was created because many young girls did not have exposure to the construction industry at a young age unless they had a family member working in the industry. During the internships, girls would be placed at local businesses in small groups, where they would have the opportunity to gain hands-on experience and insight into the industry. This model has since evolved and has now transformed into a new iteration: Girl Boss Garage. Girl Boss Garage follows a similar format to its predecessor; however, the key difference is its change of setting.

*What we wanted to do was create this sense, or this feeling, in a bit more safe space where it's actually just girls, and we also wanted to move it out of a school*



*setting... So, the Girl Boss Garage is more like a spare time activity, as opposed to being 'in my spare time I play football, I play soccer', we want to say 'in my spare time I do Girl Boss Garage, I do trades and I do crafts and I'm really, really good at it' [Project Manager]*

To inspire the young girls, the Boss Ladies Ambassadors also give talks at Girl Boss Garage in addition to school settings. These talks allow young girls to gain new insight into the industry, with Girl Boss Garage giving them hands-on experience. The new setting of the activity being outside of school also allows a greater deal of flexibility. The young girls participating can attend every Thursday for six weeks or one week during the school holidays.

### Learning Labs

Learning Labs is about educating the educators and recognises the importance of working with those that have an influential role in young people's career choices. In Learning Labs, Boss Ladies work with teachers and careers counsellors in public schools as well as trainers and leaders in the VET industry. These Learning Labs highlight how gender may influence their own practices to these educators. Project staff gave an outline of the content of the learning labs activities, where they discussed the activities focus on gender awareness rather than simply an approach of gender neutrality in schools' and VET's teaching practices.

*Teachers will often have this idea that we have to not see gender at all; if we have to work with girls and getting them equal to boys, then we have to not see gender. We kind of take a different approach and say we need to make these teachers aware that they are gender bias, and that there are obstacles concerning gender. [Project Manager]*

The culmination of this learning is putting it into practice which involves schools or VET institutions making changes in their learning environments. Educators gain new perspectives and awareness of gender biases which helps them create tangible changes.

*That can range from anything from saying, 'oh actually, we have changing facilities for women, but we kind of use them as storage, because we don't see that many women; maybe we should clear that out so that the women in this specific course, and this specific part of the school, can actually use the changing facilities'. But it can also be on a more political structural level, saying 'we don't actually have guidance for if a student is experiencing sexual harassment'. [Project Manager]*

### Reversed Recruitment

Boss Ladies also run a Reversed Recruitment activity. This involves flipping the normal recruitment dynamic. Job seekers need to make themselves stand out to potential employers in a normal scenario. However, Boss Ladies instead place this role on employers, requiring them to make their businesses more attractive to young women looking for apprenticeships.

To run this activity, they collaborate with vocational schools to put on events with employers and young female apprentices to facilitate networking and allow women to secure an apprenticeship (from Boss Ladies Project, 2021a).

### Cultural Change

In order to facilitate cultural change in the industry and make it welcoming and inclusive of women, Boss Ladies have been working with industry to foster this change. Having worked in this area for several years now, Boss Ladies have established connections with many companies in the industry. For Boss Ladies to achieve company-wide and societal change more broadly, it was considered essential to work closely with companies. One of the ways in which Boss Ladies work to enable cultural change in companies is to empower men to act as champions of cultural change in their companies. This involves training these men to enable them to create change within themselves and those around them. The construction industry workforce is not a homogenous group, making cultural change a multifaceted issue. The Boss Ladies project staff explained the nuanced needed in approaching this.

*Of course, this industry, we have a lot of small companies, and it's an informal industry, and that is also one of the main obstacles ... it's difficult to make changes here. But it's also this small company that are taking the biggest responsibility concerning apprenticeships, in general, in Denmark, so we have to work with them. But of course, it's easier to work with the bigger companies, and it doesn't have to be very big, but if it's 50 or 100 or 200 employees it's easier. [Program Manager]*

Just as companies vary in size, they also vary in their culture and approach. Boss Ladies have recognised that companies need to be receptive to this change. So, they have begun with more progressive companies and expanded from there.

*We located, to begin with, five - and then 10 - of the most progressive companies, and it wasn't that they were so progressive, but they were just sort of progressive. And then we located these companies and said 'okay, so if we can make a change model here, then we can inspire all the other companies through this change'. [Program Manager]*

Due to the complexity of tackling this issue, Boss Ladies discussed employing two different approaches to encouraging cultural change in different companies. The first involves contacting the company and attempting to assist them in hiring more women.

*..... just contacting these companies saying 'okay, so do you want to have female employees?' And if they say 'yes', then we say 'okay, can we make an agreement that next year, when you're hiring, we can send the resumes for our ambassadors to you? And then, of course, you can choose who you are hiring,' but then they just have a better chance of getting a contract. [Program Manager]*

The second approach – with more progressive companies – is more in-depth and involves working with company leaders to encourage them to put initiatives in place to foster gender equality in their workplaces.

*So, we are working with the business managers, the leaders, of course; sometimes also the board of the company ..... we work out a plan, a strategy, making some concrete activities that they will focus on; of their choice, of course, but with help from us. And then maybe doing some activities, making their own local ambassador corps for their female employees. And if we are doing our best work, then we get them to also do some cultural work with their male employees. That's very important. [Program Manager]*

### A New Narrative

In order to reach the third level in their strategy – the societal level – Boss Ladies also incorporate media-focused activities into their project to create ‘a new narrative’ around women’s involvement in the construction industry (Boss Ladies Project, 2021a). This element is two-pronged, utilising both traditional media (for those who are older) and social media (for those who are younger).

*We are working in the papers and the national media we are working - you can say - more at a grown-up level, trying to influence the parents, but of course also the stakeholders in Denmark. And then in the social media we are working more at a youth level, so we are working with the young girls standing before choice of education, but also young women in the TVET institution, making this community and making it cool to take in these educations, but also talking about the prejudice and stereotypes. [Program Manager]*

### **Participants**

As each activity is quite different, different recruiting methods are adopted. A vital part of the recruitment process for Boss Ladies has been their partnerships with an array of industry and community stakeholders. In this recruitment process, they aim to work with women, schools, VET institutions and businesses in the same municipality; to have an in-depth and local focus in each place they work in. Partnering with these municipalities also enables Boss Ladies to reach participants, such as helping them reach local schools in which to run Boss Ladies Ambassadors’ visits. These partnerships broaden Boss Ladies’ networks and allow them to reach participants they may not have otherwise been able to.

*We also use local networks within the municipality; they can have different strategies for that. One of the municipalities that we work with has this concept called ‘active holiday’, for instance, so we enrol our activities in that and get the aid of a bit more of an established partner in the municipality. Something that the parents, for instance, already know about, so they say, ‘mum and dad, or the*

*parents, are working in the first week of the summer holiday, and when we want to look for activities, we always look at this active holiday site'. And if we have, then, Girl Boss Garage enlisted here, then the parents can get to know about that.*  
*[Project Manager]*

A direct recruitment style is used in some settings, where Boss Ladies are able to reach participants through outreach activities. For example, when operating in schools with Boss Ladies Ambassadors, they are able to inform students directly about their Girl Boss Garage activity. For other types of activities, social media is used as the primary method to recruit participants. This is a key way in which they have been able to recruit Boss Ladies Ambassadors.

## Outcomes

### Summary of Key Outcomes

9,961 students have been reached through Boss Ladies Ambassadors visits. A further 1400 students took part in the National Championship in Skills event.

398 secondary school teachers have been involved in Boss Ladies Ambassadors visits at schools.

141 girls have taken part in either the Boss Ladies Internship or Girl Boss Garage.

19 TVET institutions have or are taking part in Learning Labs or other activities on increased attraction and retention of female students.

28 municipalities have taken part in Learning Labs for careers counsellors.

Over one million users have been reached via content on social media platforms such as Instagram, Facebook and LinkedIn.

130 companies are currently employing women who are involved with Boss Ladies Project.

39 companies have agreed to be involved in Boss Ladies Project's community alliance, which works towards a greater representation of women and a better working environment regarding both physical and mental health.

Project Manager, BOSS

The key outcomes of Boss Ladies' activities are the significant growth in their participants throughout the duration of the project in each activity. This can be seen in the expansion of their Boss Ladies Ambassadors activity.

*We had a goal that we wanted to organise, make a community for 45 craftswomen in our Boss Ladies Ambassador corps, and now we are 240.*  
*[Program Manager]*

For the Ambassadors themselves, their involvement in the project has been crucial to them remaining in the construction industry. The support provided to the ambassadors, both from staff and other ambassadors, has proved to be vital to women's retention.

*They shouldn't feel like they're alone, as they do, all the time, so we really just want to be there for them, and I think this community and this empowerment, this network that we've given them, is probably one of the best retainment strategies that we've come up with ... Many of them, at least, tell us that 'there are so many obstacles... and I just want to give up, but now that I'm involved with Boss Ladies ... I find more strength to carry on with this' [Project Manager]*

The number of companies and schools Boss Ladies work with has grown significantly since the beginning of the project. The number of schools they are working with has increased from two to forty. When discussing the significance of these outcomes, the project staff noted the importance of the interest from schools. Boss Ladies now have a waitlist of schools interested in being involved with the project, indicating their growth and success.

*In Denmark, it's quite something because the schools are always so busy, and they have so many goals they have to achieve, so getting them to prioritise this work is something we have struggled for. [Program Manager]*

The openness of schools, VET institutions and companies to conversations around gender are also seen as a key indicator for Boss Ladies.

*For instance, on some of the first learning labs we did, one of the goals was also just getting the teachers to actually acknowledge that gender is an issue ... For some people, for instance, be like 'oh that's nothing', but for us, at least, that's a huge goal stepping in the right direction. [Project Manager]*

While this openness has been a marker of success, resistance, or reluctance to change is a key obstacle for Boss Ladies in many of their activities. This serves to limit Boss Ladies' reach in areas requiring change.

*They have to be open for us to work, really, with them, but some of the schools that are not open at all are the schools, of course, where the biggest problems are. And if we are not there, nobody is. So, then the female students are all alone. [Program Manager]*

However, with time, Boss Ladies have been able to increasingly make progress in these areas, which is indicative of the long-term success of these activities. As project staff discussed, cultural change in the industry is a long-term process; however, as indicated by schools contacting them for further activities on this topic, it is indicative of steps towards such change.

## **Conclusion**

The Boss Ladies Project is a unique example of a project working across societal levels and across multiple career stages. Through a broad array of partnerships with industry bodies, VET institutions and local municipalities, Boss Ladies have been able to grow their initiative over the past four years and significantly expand their reach. Boss Ladies have grown their

key activity, Boss Ladies Ambassadors, to 240 in the last few years and have plans to expand this to reach 700 within the next two years. With this success, the Boss Ladies Project has, and will continue to, impact the Danish construction industry significantly.

## 4.5 Case Study 4. FiT – Frauen in Handwerk und Technik

### Introduction

The Frauen in Handwerk und Technik (FiT) (translated as Women in crafts and technology) program began in 2006. The program works to increase the number of women entering male-dominated careers and supports women to take up training courses in a range of technical and craft roles. Coordinated by the Austrian public employment service (AMS) and implemented by 25 non-governmental subcontractors, the program engages unemployed women in manual or technical professions. It has sought to support women in foundational levels of training and as they enter male-dominated professions, thereby improving the labour shortage in these areas.

Participants' involvement in these training courses is supported financially by the public employment service (AMS), and participants receive a qualification upon completion. An evaluation in 2018 highlighted its success in meeting its objectives, with two-thirds of program participants have gone on to find work in their fields (European Commission, 2019). This indicates that the most effective program components were longer and in-company training (European Commission, 2019).

The program has been highlighted by the Office of the United Nations High Commissioner for Human Rights (OHCHR) (2020) as a promising practice to ensure “the realization of women’s rights to work and women’s rights at work, in the context of technological and demographic change” (p.1). OHCHR (2020) describes it as working towards two fundamental gender equality goals related to women in the workplace – ending gender segregation and lessening the gender pay gap. Craft and technical industries are traditionally better paid than female-dominated occupations, and jobs in these male-dominated fields are in demand (OHCHR, 2020). Therefore, the lack of women in these occupations must be addressed, and women should be encouraged to pursue careers in these industries (OHCHR, 2020).

One of the main subcontractors of the program is ABZ\*AUSTRIA. As implementers of the program, program staff provided an insight into the implementation of FiT. Program staff gave a background on the Austrian Employment Service, which manages the program.

*We, as ABZ Austria, have been cooperating with [the Austrian Employment Service] .... We’ve always had very, very close cooperation with, especially with the women’s department. And so, we were also involved when the program was kind of developed. [Managing Director]*

The ABZ\*AUSTRIA program staff describe the FiT program as having emerged following earlier initiatives focused on increasing the number of women in male-dominated industries, such as those focused on increasing IT women in the early 2000s. Following these earlier programs, FiT was rolled out nationwide. The program is completely publicly funded, receiving both federal and state funding to enable its delivery. The AMS funded \$36 million AUD in the 2020 program year (BMA, 2021). This figure has remained relatively consistent, with an increase of approximately \$6.8 AUD in yearly expenditure over the decade prior (BMA, 2021). This funding includes a subsistence allowance provided to participants, equivalent to a Centrelink allowance in Australia. \$18.8 AUD is provided per day to young people under 18, \$30.5AUD is provided per day to adults completing the course part-time, and \$43.5 AUD per day to adults completing full-time (BMA, 2021). Additional portions of the overall funding are allocated to companies to subsidise apprenticeships. Companies and training centres can receive up to \$721 AUD per month (BMA, 2021).

Individual states allocate additional funding, so there are differences in the programs in different parts of the country and which implementers run them. Therefore, the central government can provide financial incentives to encourage counties to run a program.

Financial support is offered to the women participating in the program both in the cost of their course as well as receiving unemployment support payments to aid their participation. This support is vital to women's involvement in the program and their continued work in these industries, which the Austrian government recognises. It marginally increases their income from the basic unemployment benefits and pays for training expenses.

*.... she gets that for the three years ... I think it wouldn't work if the Austrian government wasn't willing to give money to the women. Because most of them are between 25 to 40, so they're living their lives, they have costs, they have expenses .... That's a really important aspect of the program. [Project Manager]*

Speaking to the overall aims and goals of the FiT program, program staff indicated the purpose was to increase the number of women in male-dominated industries and for them to reap the benefits of these industries.

*.... there is a lot of jobs to be found in technical, in trade ..... And making women have their share of these developments because these jobs are also a lot higher paid than shopkeepers ... than retail, secretary, hairdressing. [Managing Director]*

As career decisions remain very gendered, the FiT program works to break down this divide. This is a vision shared by ABZ\*AUSTRIA as implementers of the program. ABZ\*AUSTRIA identified their overarching goals as empowering women to pursue careers in male-dominated industries.

*Our overall goals [are] breaking up segregations horizontally, breaking up the traditional choices young women, older women, make. ... And the FiT Program has always been a huge, an important column of these ambitions ..... it's about opening up perspectives and enabling new paths of career, and income.*

*[Managing Director]*

## Interventions

In the FiT program, women are supported to pursue qualifications in any male-dominated industry, which is defined as any occupation where women make up less than 40 per cent. Therefore, the FiT program includes a comprehensive array of focus areas, with these listed, which are just a handful of the focus of their overall training courses.

Career pathways		
Agriculture/horticulture/viticulture worker	Construction Assistant	Optician
Aircraft technician	Dental technician	Paver
Baker	Electronics technician	Potter
Boat builder	Electrical engineer	Printing technician
Building construction specialist	Hearing care professional	Roofer
Carpenter	IT clerk	Sculptor
Ceramicist	Laboratory technician	Stonemason
Chef	Landscaper	Structural draftsman/engineer
Chemical process engineer	Lettering design and advertising technology	Surveyor
Civil engineer	Mechanic	Textile designer
Coder	Media specialist - graphics, print, publishing, media	Upholsterer
Concrete worker/ Concrete construction specialist	Metal technician	Waterproofing engineer
		Wood technician

(FiT, 2021a)

The program includes three stages. The first of which was an initial 10-week training in a range of crafts, and then a vocational preparation course. This was followed by a 12-week vocational education phase, including basic qualifications. Finally, participants then have the option of continuing on to complete a vocational course (including apprenticeships and vocational schools), which can take up to three years. Different elements of the program's interventions are carried out by different subcontractors, like ABZ\*AUSTRIA. This, the program staff explained, is something that has changed over time. In the beginning, in Vienna, for instance, they were involved in delivering the whole program, but that has changed with various parts of the program being outsourced to different providers. However, not seeing women through their whole journey can be problematic, which is discussed later.

The FiT program works to support women throughout their apprenticeship or degree. This includes individual financial support to aid in completing their studies and support in the form of preparation and ongoing one-on-one counselling. In total, women can take part in the FiT program for up to three years, depending on their chosen course. The focus of ABZ\*AUSTRIA's role in the program is on the counselling component. Meanwhile, the



preparatory components are implemented by other contracted organisations. Program staff gave an overview of the focus of this component offered by the other organisations.

*So, there is an overall preparatory course for basic technical skills, like mathematics, physics, chemics, whatever, also some basic IT skills. And then there are preparatory courses with other organisations that are focussed on a specific training. [Project Manager]*

Looking at ABZ\*AUSTRIA's role, program staff explained the breadth of the counselling support they offer to women in the program. This support is offered to women throughout their course and continues for up to a few months after the program's completion, in which time they can receive assistance on finding employment. Talking about the frequency of the counselling for each woman participating in the program, staff indicated that the exact time allocated varied from person to person. The time allocated is approximately 24 hours per participant, and counselling sessions take place at least once per semester at a minimum. However, program staff indicated that most women make full use of these services.

*Most women have more; they need to talk more to their counsellors because they have difficulties in the program, they have difficulties at home. It's really very individual the counselling situation. [Project Manager]*

The counsellors themselves require an extensive skill set to complete the role. The longevity of the program has helped build this expertise. As there are a large number of career pathways available to women to pursue as part of the program, the counsellors have specialised knowledge across these disciplines and the barriers women face to support them. For instance, when talking of common obstacles, they stated:

*Is it childcare, is it maybe discrimination also, at the workplace, at the school, in the program and stuff, and they can give specific counselling for that. So, they have broad expertise in the field, but also in the field of women in education and problem-solving. [Project Manager]*

In addition to one-on-one counselling, women also have the opportunity to participate in group sessions, which cover topics tailored to women's involvement in male-dominated occupations, such as the gender pay gap and tools to navigate salary negotiations.

## **Participants**

The FiT program is open to unemployed women aged 19 years and older. Unemployment is the primary condition for participation in the program. The women are recruited into the program through their involvement with the Austrian Employment Service. If they express an interest in a technical or trade role, they are referred to the project. Within the program,

they are asked about their interests, what qualifications they would need, and if they want to continue, they attend an orientation course.

While it is only through the employment service that women can become involved with the program, they can find out information about the FiT program online prior to attending the service. In terms of the ages of participants, the most common age range of participants was between 25 and 49 years old (55 per cent), approximately a third of participants were younger than 25 years old (33 per cent), and the smallest age group of participants were those 50 and older (13 per cent) (FiT, 2021b). In the 2020 program year, 44 per cent of the FiT program participants came from a migration background (FiT, 2021b).

## Challenges

When discussing any challenges encountered in implementing the FiT program, ABZ\*AUSTRIA identified the disparate implementation of different program activities as a key hurdle they have faced. No longer having all of the program components centralised has led to a disjuncture in approach in facilitating women's educational pathways.

*It was hard to lose the one part [of the program] ... if you have the whole range, it's a very great path ... you can follow ... as they enter the education, and you counsel them till the end – and then they get the job, and you still counsel them for one or two or three months. I think that's great. We have had quite a few challenges with not doing the whole program. [Managing Director]*

Having the program implementation taking place across both of these organisations has led to different focuses on women's career planning, which then affects the role of ABZ\*AUSTRIA in helping women throughout their education.

*In the past, we had some trouble there, sort of that my colleagues found the career plans, they don't work, they were sort of made to fill open places in educational paths, but it's not really what the woman wants. [Managing Director]*

These challenges are not specific to the organisations that implement the program per se but rather are symptomatic of the complexities of outsourcing implementation to multiple stakeholders. However, to address this challenge, they have coordinated these parts more effectively in recent years due to the cooperation between the various parties. It was noted that this also needed time to evolve.

*But that is a bit of a challenge, .... because it is a complex program ... And because we want to prepare the women really well to succeed. [Managing Director]*

The COVID-19 pandemic also presented additional challenges. As seen across industries, women have often faced additional burdens during the pandemic due to unequal caring responsibilities.

*COVID was a big challenge the last two years, and we had these women sitting at home with their children having home schooling and with one computer at home. [Managing Director]*

However, despite these challenges encountered, the pandemic also led to some benefits to program implementation. The increased flexibility offered by remote counselling sessions worked quite well for many of the women involved.

*We found video distance counselling is actually a huge asset in this project because the women are doing their education the whole day, and offering counselling at 7.00pm is great. [Managing Director]*

## Outputs

### Summary of program outputs

In 2020, 7,075 women were engaged in the FiT program.

4,764 of these women undertook trades/technical preparation qualifications.

Between 2010 and 2018, a total of 41,912 women were reached by the program.

In 2020, the FiT program reached a total of 7,075 women (FiT, 2021b). Compared to the previous year, the number of program participants has increased by 2.2% (FiT, 2021b). As a part of this total figure, 4,764 women took part in a trades/technical preparation qualification (FiT, 2021b). Furthermore, in 2020, 1,248 women began a training course in a non-traditional occupation that includes at least an apprenticeship (FiT, 2021b).

The participants also came from a range of educational backgrounds, with 44 per cent of participants in the FiT program having achieved the compulsory education level and 39 per cent having already completed an apprenticeship or another higher education qualification. (FiT, 2021b).

Earlier data on the FiT program shows that between 2010 and 2018, a total of 41,912 women participated in the program. In 2018, 3,857 women took part in the orientation phase of the program (target was 3,300 women), 2,619 women participated in the vocational preparation phase (target was 3,088), and 1,247 women enrolled in a vocational training course (target was 1,342) (European Commission, 2019). Where these outputs have not reached the desired target has been attributed to raising the targets this year (European Commission, 2019). Outside of the participants reached, other program outputs include distributing advertising materials to facilitate engagement in the program. For example, this included producing and distributing brochures and posters (European Commission, 2019).

## Outcomes

### Summary of program outcomes

Approximately two-thirds of women successfully completed their training and transitioned into employment in the trades and technology sectors between 2010 and 2018.

Women report higher job satisfaction compared with those in traditional occupations.

(European Commission, 2019)

Evaluation data on the FiT program from 2018 has highlighted the program's success in encouraging women to complete training in male-dominated professions and enter careers in these industries (European Commission, 2019). Nearly two-thirds of the women who participated in the program completed their training and went on to find employment in the trades and technology sectors (European Commission, 2019). Moreover, the job satisfaction of these women is substantially higher than that of women who are working in traditional occupations (European Commission, 2019).

As for the outcomes identified by program implementers, ABZ\*AUSTRIA, they discuss the counselling component as key to the FiT program's success. This support, in their opinion, is essential during women's studies, and particularly during work placements, they may have in companies. However, through long term relationships with company managers, they can provide the support women need.

*If we just tell the women, "Okay, please go, there's a course, off you go", – it wouldn't have been so successful. The long accompanying of the women and being there for reflection and coaching and strengthening [is important].*

*[Managing Director]*

As an indicator of their success, key targets set by the employment service continue to rise as these targets continue to be met. Furthermore, program staff explained that organisations that run the courses indicate that they have increased the number of female participants due to the FiT program. As for the women themselves who have participated in the program, program staff suggested that women felt that the program had been an invaluable opportunity and that they were grateful to be supported to pursue these new careers.

*It's quite touching, many women say, "Well actually as a child I was always interested, but I never knew, and I didn't really see it as a prospective for myself." And then suddenly they come to this program, and wow, they grow stronger and decide to follow their path. [Managing Director]*

A key factor in the success of the program has been attributed to the length of time it has been running and, therefore, the experience and growth the program partners have been able to develop in that time.

*Well, I think that within the 15 years, it really has developed to a very high standard of how can you run a program like that. I think that's quite at the top level, I would say. [Managing Director]*

Despite its success thus far, the FiT program plans to continue evolving and adapting to match the changing labour market continually and in doing so, best prepare women for these changes. Overall, program staff suggested that while changes are at times incremental, these gradually work towards achieving the ultimate goals of increasing the participation of women in male-dominated industries, and in doing so, their presence will also become normalised.

#### **Success story: Mahboobeh Kashi – Construction Engineer/technician**

After completing FiT program, Mahboobeh Kashi has gone on to begin working as a construction technician as of January 2021. Out of all of the options available to study through the FiT program, Maboobeh chose construction engineering. In discussing her decision to pursue this, she said, “I always wanted to do something in the technical field and to do something unique. There aren't many women that choose this field – so I thought to myself, I really want to do it”.

*Women can achieve exactly the same as men – we have to trust ourselves, the trust in ourselves is so important. Since I've been working, I've become more confident. I feel very lucky, my life has turned around – it is unique when you achieve something and are successful, it changes so many aspects of life*

Maboobeh explained that what she finds interesting in the job is that every day you encounter something new. She plans to progress in a career in the industry and wants to become an engineer in three years' time, after which she plans to become a site manager.

*Construction technician – a more diverse occupation, where one has a lot of development opportunities* (ABZ\*AUSTRIA, 2022a)

#### **Success story: Leejia Giagou – Construction engineer/technician**

Leejia becoming a construction technician is something she never thought was possible. While Leejia had always found construction plans interesting, she was never very good at maths, so felt insecure in her ability to pursue a career in this area. Although statistics still are not her favourite, she has worked hard to understand everything and make her way through the course, and in hindsight, she is very proud of what she has achieved. When reflecting on the subjects she completed, Leejia said that when studying construction planning in particular, she was in her element – “*all of my favourite subjects have been related to drawing, creativity, and problem solving*”. Since March 2021, Leejia has been working for a family business run by three sisters, which she is thoroughly enjoying.

*I love it so much; I can't believe how time flies. It's something I've always wanted in my life, to have a job that I enjoy so much.*

When talking about the counselling she received from ABZ\*AUSTRIA, Leejia was quick to thank everyone that had helped her along the way and is grateful to have had the opportunity to be a part of the program. Her advice to other women is – even if they think they do not have the talent for a technical job – to take the time to inform themselves of what is out there and to persevere in what they are passionate about. In her opinion, it is never too late to choose a new path.

(ABZ\*AUSTRIA, 2022b)

## Conclusion

The FiT program's fifteen-year duration and continuous growth are a testament to its impact. The program has successfully supported thousands of women through education in male-dominated industries and assisted them in their transition into work. As shown, providing support to women financially, emotionally, and socially are key success factors in enabling women to participate in education in male-dominated fields and enter into them. Beyond this, the program's holistic focus, evolving nature and strong, long-term support from federal and state government funding have been fundamental to their ultimate success. Their ability to meet the needs of the labour market coupled with their strong relationships across these industries work to ensure that women are well-placed to transition into secure and sustainable in-demand jobs. The FiT program is an example of a coordinated, nationwide initiative's impact across many male-dominated industries.

## 4.6 Case Study 5. NAWIC – Victorian Mentoring Program

### Introduction

The National Association for Women in Construction (NAWIC) is a member-based organisation and a leader amongst initiatives to support women's involvement in the Australian construction industry. Like their NAWIC counterparts in the United States, NAWIC Australia has chapters in each state and territory and offer a number of educational programs with girls and women to increase gender parity in the industry. In addition to this, they also offer networking and events for their members. NAWIC's Victorian chapter offers many such initiatives and has a history of success in many of these programs. One of NAWIC Victorian chapter's educational programs is their mentoring program. The purpose of the program is to offer support to its participants and aid their career development by pairing them with leaders within the construction industry. Mentoring was seen as a means of sharing knowledge and experience, which can guide personal and professional development. The ultimate outcome of this program is that a greater number of women will not only remain in the construction industry but will progress to senior positions within it. NAWIC Victoria, in 2021, partnered with the Blue Collar Women (BCW) to run this program, and it has been sponsored by CPB Contractors. This support has been described by program staff as vital to the implementation of the initiative.

### Interventions

The program runs for six months and is centred around its core component of mentoring. It consists of an initial meet and greet, followed by monthly one-on-one mentoring sessions, and is concluded with a closing celebration. The monthly mentoring sessions are between 1-2 hours in length, and mentors and mentees are paired based on their skills, experience, strengths, and goals. Last year's program's initial meet and greet took place in March 2021.

Past iterations of the program have been more self-directed. While NAWIC facilitated the program, the mentoring was primarily run by the mentors and mentees.

*So, in the past ... we did a guideline and a booklet for the mentors and mentees, and it was pretty much self-driven. [Now there is] content around how to set goals. There [were] areas to write down your notes for your mentoring sessions ..... the feedback we had was that sometimes, it's hard to keep the conversation going without extra support, without someone guiding you.  
[Program Manager]*

The 2021 iteration of the program evolved from this previous format, and based on feedback NAWIC Victoria had received, they included further information and workshops throughout the program. NAWIC Victoria partnered with the Blue Collar Women (BCW) to run this program. This iteration of the program included three workshops throughout the year, with the focus being placed on goal setting, communication and feedback, and the DiSC model<sup>178</sup>. The program was sponsored, which has been vital to the program's implementation.

*[Sponsorship] helps to pay for the workshops. And also, with the launch. So yeah, so the sponsorship helps for the workshop content and also any of the networking sessions we do. Because otherwise, it's quite difficult. This way, we can do a proper breakfast event for the launch. [Program Manager]*

## Participants

The program's mentee cohort includes a mix of women – while some have the minimum of three years experience required by the program, others have been in the industry for 25-30 years. Most were in professional or management roles across a range of built environment industries. Those at this more senior end are paired with a more senior mentor. Mentorship is open to females only due to NAWIC's focus on supporting and empowering women in the industry.

Gender was not, however, a criterion for mentors; mentors can be both male and female. The key prerequisite for mentors is a minimum of five years' experience in the industry; however, most have at least ten years. Most of the mentors engaged in the program have been involved with NAWIC previously, which facilitated their involvement in the program's current iteration. Others have been involved through referrals, mostly from other NAWIC committee members.

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<sup>178</sup> Originally developed by William Moulton Marston in the 1920's, the DiSC model is a behaviour self-assessment tool which has evolved over the past century. It stands for four main personality profiles of dominance, influence, steadiness, and conscientiousness. It is commonly used in workplaces to improve recruitment, retention and teamwork. <https://www.discprofile.com/what-is-disc>

The program manager detailed the various steps involved in the recruitment and pairing process. Participants are recruited through an application process through the NAWIC website, and those that meet the criteria will then be progressed. Mentees are then paired with their program mentors. Mentors and mentees are paired based on shared goals, interests and backgrounds.

In the most recent iteration of the program, NAWIC has had 35 pairs, totalling 70 program participants overall. The mentees themselves have been drawn to the program for the career opportunities it holds and the chance to meet senior people. They know about the program having heard about NAWIC or having been involved with them previously in events, awards, and other initiatives. They may not have had the opportunity to receive mentoring in their own workplaces, so they have appreciated the opportunity to receive this support externally. It is suggested that mentors' motivation for involvement comes from the benefits of the program's content for other mentoring relationships. However, the primary motivation comes from the opportunity to support younger women in the industry.

The changes made to the most recent iteration of the mentoring program are credited as having helped keep participants engaged throughout the program's duration.

*Having the workshop placed out evenly, and then also with the networking ... [help to] touch base just to bring them back together to say, "Hey, let's start the conversation again." ... That way, you just keep that momentum going. [Program Manager]*

## Challenges

The COVID-19 pandemic and the multiple lockdowns in Victoria proved to be a core challenge for the program. The key difficulties encountered were logistical issues and the need for additional staff. NAWIC is run predominantly by volunteers with full-time careers.

*.... overall, it was done pretty well. It was a bit time-consuming for the logistics side of things because, at the beginning of this year, it was myself and another committee member who had to do most of the grunt work. So, we are hoping to get maybe a full-time support person within NAWIC to help out with all the logistics stuff like that. [Program Manager]*

With 2021 being the second year of the COVID-19 pandemic, program staff were able to anticipate the likelihood of running the mentoring program in a remote capacity once more. Due to this, everything except for the program's launch was planned to be conducted virtually. Program staff had hoped that by the end of the program, they would be able to hold an 'in person' closing event. However, this had to be carried out online due to a COVID-19 lockdown in Victoria.



Overall, COVID-19 proved to be both a roadblock and an opportunity in the 2021 program. It highlighted that many of the program's components could be offered in a remote capacity, which, in turn, expanded the reach of the program to many people who would not have previously been able to be involved due to distance or other commitments. However, despite the positives offered by a virtual program, it also negatively affected the program in that networking was not able to take place as planned.

*I think the biggest lesson learned was we need to have face-to-face sessions ... So while workshops can all be virtual, but I think it is kind of crucial to have [the] face-to-face sessions, networking sessions, so that way, you can actually share and experience ideas. Because you can do it to a certain extent virtually, but it's not the same as doing it in person ... So yeah, there was an opportunity and a roadblock at the same time. [Program Manager]*

## Outcomes

### Summary of program outcomes

Several participants have achieved promotions in their workplaces.

Two mentees have now joined NAWIC Victoria's educational committee.

Mentors have increased interest to take on more than one mentor in future years.

The workshop content was well-received by the participants and, due to this, NAWIC plan to follow a similar structure in future iterations. The program manager credited the new addition of these workshops as aiding the positive experience of those involved.

*This time, you had your workshop ..... so that was all the theory given to you, which was in the booklet as well, but then you've got a practical component...So I think that was quite a big change from the last few years that we've had the program... And it was well received by everyone, and they all loved [Program facilitator], so we got her on board for next year. [Program Manager]*

In terms of individual outcomes of the program, the program manager highlighted success stories of participants applying their newfound confidence and communication skills to having conversations with their managers, resulting in promotions. Additional outcomes of the program were that two mentees also joined the NAWIC Victoria educational committee. Due to their enjoyment of the program, they will be involved next mentoring program. Beyond this, NAWIC's membership does increase as a result of getting people interested and involved.

*This is the biggest committee we've had. So previously, it was just maybe two or three of us. And this year we've got five, which will be five next year as well ... The biggest I think since I've joined. It's, I think, a positive consequence of the program. [Program Manager]*

Program mentors also saw significant benefits in the mentoring program and were interested in increasing their support in the program. Feedback from the mentors was that they would be interested in taking on more than one mentee if they have the capacity to. Mentors suggested the inclusion of a panel or cohort of mentors in future iterations of the program, so the mentor-mentee relationships are expanded.

### Future plans

Building on the program's success, NAWIC hopes to expand the current format into a rolling program, where two 6-month mentoring programs are run each year. This would give applicants two sign-up dates per year, giving them a shorter wait time increasing their opportunity to be involved. They also plan to have an increased focus on networking, with two sessions per program dedicated to networking. Through this, they hope that participants will be able to develop informal mentor-mentee relationships as well. Along with increased networking opportunities, planned changes for next year's program include a certification of program completion. This ties into the potential plans NAWIC's have to bring together state-based mentoring programs and create a National NAWIC mentoring program. While the state-based programs may still exist, a national program would allow participants to connect with mentors in other states, thereby broadening their networks. Beyond expanding nationally, NAWIC Victoria also plans to expand their program to include a wider variety of participants.

*At the moment, a lot of them are from tier 1, 2 or 3 companies. But yeah, we are trying to target small businesses [and] trades. So hence we are opening the 15 scholarship positions for next year to - hopefully, we'll get more involvement from them, so we'll have a more diverse group rather than just the corporate sector.*  
[Program Manager]

Other changes to the program in 2022 include a program cost and commitment requirement. There will be a change in the program's cost due to changes in NAWIC's membership structure. The program's cost will be approximately \$50 for mentees and free for mentors. However, they also plan to offer scholarships to assist with this cost.

*We're also trying to have 15 scholarships for anyone from small businesses. So that way, we get more of them involved. Small businesses or even trades.*  
[Program Manager]

New prerequisites of the program for mentees will also include committing one hour a month to the program. This ensures that the mentor's time is valued and that the mentees get the most out of the experience. There will also be a requirement for participants to attend eight out of the ten of the program events in order to receive a certificate of completion.

NAWIC Victoria also plans to expand their mentoring to offer a similar program to university students. Due to the significant interest in the mentoring program, NAWIC could not include university students in the program. As there were many students applying, there are plans to develop a ‘buddy program’ to meet this need. This will create a cyclical effect of the mentoring program, where mentees will then ‘buddy’ for a university student.

*The mentee - so buddies – will be one to three years in the industry. But that is the plan is to – yeah...run a program for final year university students and kind of pair them up with a buddy, yeah, from the industry. [Program Manager]*

This buddy program aims not just to aid students’ transition into the industry but to give them insight into the industry and what their career pathways could be. This is planned to cover multiple disciplines in the construction industry, such as engineering, project management, and design, and include tips on the industry and opportunities to connect with people in the industry.

### **Other NAWIC programs**

The Victorian chapter also offers a number of other programs to aid women’s retention and progression in the construction industry. Their ‘CEO Shadowing Program’, for example, has been described as quite successful in giving women unique insight into senior-level roles. In this program, future female leaders – women who have approximately fifteen years’ experience and lead a team, aspiring to become directors, be on a board or an executive level – are paired with a CEO or director, whom they shadow for a day. Due to the nature of the program, however, it has not been able to take place over the past two years due to COVID-19. The ‘CEO Shadowing Program’ is unique to Victoria and is not run in any of the other NAWIC state chapters.

The NAWIC Victoria’s educational committee also conduct a financial well-being series. This was delivered across two workshops in 2021, and two more are planned for 2022. The focus of these is on managing super, investment and tax. This is complemented by a panel offered by the Victorian chapter on tendering. These are a focus of NAWIC’s because there is a lack of education on these topics, particularly for women.

*So, with your super, how do you make sure that you're making the best decision for yourself. Because we have had conversations with - saying women are less advantaged, disadvantaged to an extent with, yeah, super, especially if they take out maternity leave and things like that. So, you know, how do you make sure you catch up so you're not missing out? So, it's just basic things like that I just find that you don't get told. [Program Manager]*

Across Australia, most other states run versions of the mentoring program, among other programs. They also offer various other educational programs. An innovative example of these include the ‘In-school Experience Program’ and the ‘NAWIC Queensland Male Allies

Program’, both running out of the Queensland chapter. The In-School Experience Program is delivered by the NAWIC Queensland and Queensland University of Technology (QUT). It worked to engage female high school students, especially those in regional areas. The program has sought to highlight the career options available in the construction industry and give students hands-on experience to develop their understanding of careers in construction and engineering. They hoped that the program would spark female students' interest in this area when choosing VET or school subjects. During this program, Dr Fiona Lamari, who was the recipient of a NAWIC IWD scholarship, also piloted the Virtual Construction Site (VCS) Tour project. This approach sought to engage female high school students in the industry via an immersive virtual reality experience that mimicked a real building construction site and allowed students to gain insight into the variety of roles present on-site. The project was reported as being highly successful, with 99% of students who participated having enjoyed the VCS experience and an increase in students’ interest in pursuing a career in the construction industry (Lamari, 2020).

NAWIC Queensland also launched a pilot program in March 2021 that focused on engaging men to enable cultural change within the industry. The premise for this initiative was that beyond supporting education and training and offering mentoring and networking to enable greater opportunities for women in the construction industry, the culture of the industry itself needed to be challenged. The program has been funded by Construction Skills Queensland (CSQ) and developed in partnership with Emberin, who are leaders in diversity and inclusion programs. The program is the centrepiece of NAWIC QLD’s Passport to Diversity Strategy. The program targets men in the industry who want to support gender equality and assists them in developing the confidence to become strong advocates and encourage a change of attitude in those around them. The program includes five online modules, each 30 minutes long, over the course of 10 weeks and working group discussions. As a signal of this program’s success, it has since been expanded nationwide and is being delivered in a remote capacity.

## **Conclusion**

NAWIC is a key fixture in the Australian construction and built environment sector and the pursuit of gender equity. Their educational programs and events run in each state have a demonstrable impact on women's experience in the industry and those considering a career in it. Beyond their staple programs, which are continuously evolving, they also offer new and innovative initiatives like the examples provided. The organisation's significant strength is its holistic approach – targeting multiple career stages – which reaches success through its member base and partnerships with industry bodies. The NAWIC Victoria mentoring program itself shows success as crucial support to women’s retention and career development in the industry.

## 4.7 Case Study 6. Supporting and Linking Tradeswomen (SALT)

Supporting and Linking Tradeswomen (SALT) is a not-for-profit organisation that seeks to increase the number of tradeswomen in Australia. Founded by Fi Shewring in 2009, SALT has become a well-known name in this space. Shewring herself has not only published research on women in trades but has been recognised for her work in the construction industry through a number of awards, including the HIA's Construction Woman of the Year Award in 2016 and of the Australian Trades Teacher of the Year Award (Holdsworth et al., 2020). She has a background as a painter and decorator and as a TAFE teacher (Oxenbridge et al., 2019). SALT is run by volunteers who come from backgrounds in a range of male-dominated trades (Oxenbridge et al., 2019). SALT's aims are to provide support, mentoring, and avenues for networking, promote diversity and the work of women in the industry to the public, and advocate for a change of attitude towards women working in the trades and for changes to facilitate women's involvement (SALT, 2021a). One of SALT's main activities is their SkillWomen Workshops. These workshops help girls and women gain familiarity with and confidence in using a range of different tools. SALT has continued to grow from its beginnings in Wollongong and now has a vast reach across Australia. Beyond workshops, SALT also runs regular meetings for its members to connect with one another and facilitate this networking through social media (Holdsworth et al., 2020). In addition to being a support network for tradeswomen, SALT also offers mentoring for women looking to enter the trades and provides information on job vacancies in the industry via their Facebook page (Oxenbridge et al., 2019).

SALT has become an established initiative and work in partnership with government and other organisations to provide trades workshops to young girls (Oxenbridge et al., 2019; Oo et al., 2020). SALT has partnered with the New South Wales (NSW) Government policy unit, Women NSW, to deliver workshops with young women interested in learning more about the trades (Oo et al., 2020). Working with the Australian Department of Education and Training, SALT has been part of the *Real Skills for Real Careers program* (SALT, 2021c). Within this, SALT has worked with companies that want to encourage greater diversity in people applying for roles and already working in their trades (SALT, 2021c). In 2018, they also received funding from the Department of the Prime Minister and Cabinet for their program, *'From DV to trade, a new perspective for women's lives'* (GrantsConnect, 2021). Beyond supporting women with a history of domestic violence, SALT has also worked to support women from multicultural and indigenous backgrounds (SALT, 2021a).

SALT's initiatives have been highlighted as examples of success in the Australian construction industry literature. Bridges et al. (2019) describe SALT as a successful community education program, while Oxenbridge et al. (2019) highlight it as a key example of an organisation supporting women through networking. The benefits of SALT's network have also been touched on in Bridges et al. (2021), where a number of tradeswomen interviewed discussed the value they found in being members of the women's network, as it helped to validate

experiences of working in the industry. Indicating the reach of its members, SALT was also one of two Australian tradeswomen support networks chosen by Oo et al. (2020) in their research. A sample of tradeswomen was sourced through SALT to look at experiences in the Australian construction industry. In particular, looking specifically at their career choice factors, career barriers and job satisfaction. Finally, SALT was also highlighted by Holdsworth et al. (2020) as a positive example of an Australian organisation both promoting the construction industry to women and supporting women in it.

Fi Shewring, SALT's founder, was driven to start the program due to the lack of women in the trades and her recognition of the interest and abilities she knew women had in these areas. This realisation spurred the development of SALT's SkillWomen Workshops.

*When I went into TAFE [as a trainer], I started working with women ...And the women loved it .... the first one I did had 18 participants, and every single one of those participants finished the course. This was unheard of in TAFE. [Program Manager]*

*... it sort of kind of gelled for me that actually, women were perfectly comfortable doing this work. And ... everybody was saying 'all women don't want to do this work'. And I thought this is not true, I can blatantly see that women love doing this work ... And the system was such that it was very, very difficult for them to do so. So, I started to look into that. [Program Manager]*

## Interventions

The centrepiece of SALT's initiatives is their SkillWomen Workshops. The idea for the SkillWomen Workshops came about in 2012, with an ambition of educating as many women and girls as possible on how to use tools (SALT,2021b). Shewring's (2010) research found that the majority of women who were flourishing in apprenticeships were those that had been exposed to using tools at an early age. This became the basis for the SkillWomen Workshops – to give women and girls basic knowledge of tool use and expose them to a new career path that they may not have previously considered. It was “*the classic case of not knowing what you don't know*” (SALT, 2021b, p.1). The idea was then extended, and the idea for a mobile workshop emerged.

*So, we decided we had to do something that physically changed what people thought. And out of my research, we decided that we would start teaching as many women as possible how to use tools, because this was obviously a key thing from my research. [Program Manager]*

Both funding and sponsorship were gained to allow the trailer to be set up. However, this did not cover the entire cost of the mobile workshop. The cost of running the driving across states to tour with the mobile workshops has largely been borne by SALT and they have been

dependent on volunteers in order to run much of the initiative. SALT does not receive ongoing funding and is reliant upon short-term funding from government or organisations.

*One consistent one – that has been the New South Wales Department of Education. They've, you know, funded us for two weeks of the year almost continuously. .... So we've had, and I've just slowly been building up the funding to run because obviously, the more you do, the bigger you get, the more expensive it becomes, as well. [Program Manager]*

SALT has a consistent group of tradeswomen who facilitate the SkillWomen Workshops and a large pool of volunteers. Thirty three tradespeople have contributed to workshops, 26 of which are women and seven men, who come from 20 different trades (SALT, 2021b). For the founder, much of her work for SALT has been in a voluntary capacity until three years ago.

They currently run workshops in a variety of settings – primary schools, high schools, and community groups (Holdsworth et al., 2020; Oxenbridge et al., 2019). Since its beginning, SALT has run hundreds of workshops, teaching women and girls how to use tools to promote the trades as an attractive career possibility (SALT, 2021b). So far, they have reached thousands of participants across New South Wales, the Australian Capital Territory, Queensland, South Australia, and Victoria (SALT, 2021b; Holdsworth et al., 2020).

SALT run two kinds of SkillWomen Workshops. Workshop One consists of 4.5 hours in the workshop with up to 25 participants, run by five tradespeople. The workshop involves creating a timber project, which includes measuring up, cutting and assembling. Participants are able to gain experience with a range of different tools, all of which are explained to them, and their exploration with the tools is closely monitored. Workshop Two is run with larger groups and aims to give them exposure to tools. While participants are given the opportunity for hands-on experience in a similar vein to Workshop One, this is in a shorter time frame due to the size of the class (from SALT, 2021b).

The key thing that distinguishes these workshops from 'Try a trade' days, for example, is the length of the workshops and the number of tradespeople there to educate the participants in smaller groups. Having this extended period to gain hands-on experience with tools and insight into the industry is also very formative in shaping participants' views of their own abilities.

*I don't believe that when somebody leaves after 20 minutes of using a tool that they really know how to use it properly. I don't think it shifts their personal belief in what they can do. And we know that the workshop does shift that personal belief. [Program Manager]*

SALT also invite companies to attend their workshops to help change their views of what women can do in the industry and the organisation itself.

*We also encourage companies to come in ... because it's not until you see that workshop in action that you realize the power of it, you know, it's quite hard*

*sometimes to get across how powerful these workshops are. And so, we, we asked them to come in, watch it. And that changes their mind about us as well.*

*[Program Manager]*

SALT recently completed a Broken Hill tour, working with 'Girls in Trade Ambassadors', a careers initiative developed by Women NSW. Working with careers advisors has been important in fostering their understanding of women entering the trades. On this trip, nine schools were visited, and their mobile workshop travelled over 3000kms (from SALT, 2021d).

Along with the mobile van, SALT also have a SkillWomen Shed located in Sydney. This is a place where women can learn new skills or build upon pre-existing ones. They provide regular classes focusing on a range of activities and skills, including general household and maintenance skills. With a membership for the SkillWomen Shed, women can complete a free workshop in basic tool use, following which, there are options of a variety of short courses (from SALT, 2021e).

## **Participants**

Participants for SALT's workshops are generally reached via partnerships with the Department of Education, from which they are then referred to interested schools. This varies, however, in each state. In the absence of assistance from the Department of Education, SALT reaches out to schools directly. This, however, comes with difficulties of its own, as getting "past the receptionists" of many schools can prove to be a challenge.

*We've developed a way of approaching receptionists at schools to really kind of get across as quickly as possible, what we're about ..... if we just email, nobody even reads it. So, we have to first develop a relationship and then try and get through. But for everyone, we might contact five schools. [Program Manager]*

Similarly, when running workshops for women, SALT also directly contacts a local women's shed to facilitate these workshops, who then recruit the participants. These sheds and other community spaces also use SALT's workshops as a way of engaging new participants.

SALT has received some funding to run workshops with women who have experienced domestic violence. SALT's founder explained that their approach to recruiting these women to attend the workshops has adapted over time.

*We initially tried to specifically attract women in domestic violence situations. But women don't want to be tagged with that moniker. So, we actually found it was better for us to not ask that upfront. There are so many women who have been in that situation ... it's very rare that we won't have women who've been in that situation. Very rare. Some workshops [Sometimes] 70% of them have been [survivors of DV] [Program Manager]*



## Challenges

The key challenges SALT has encountered in the implementation of their workshops have been the difficulties presented by COVID-19, the availability of funding and the deeply ingrained gendered stereotypes of occupations. While COVID-19 has not hampered SALT's ability to continue its work, it has limited the size of its workshops.

*We did have to adapt what we did ... like, before that, you know, one trainee could run five or six people without any problems. Now, we never ever, we won't go over four and sometimes, you know, in schools, cos kids don't normally have to socially distance we can we do less people. Just so everyone's safe. [Program Manager]*

COVID-19 has also required SALT to adapt how these workshops are run in order to maintain social distancing and adhere to health advice.

*We deliberately changed the way we work so that we can limit the amount of time we're near anyone at all. .... And we also purchased more tools so that every single participant has their own set of tools. And we sanitize every, every workshop, which has added to our workload, but it's actually made for a better workshop because our trainees are talking them through .... [Program Manager]*

A more long-term, or ongoing, challenge SALT has faced is having adequate funding. As mentioned earlier, SALT has historically relied quite heavily on volunteers and has funded many aspects of the program themselves. While acknowledging the enormous value of their funding, a lack of ongoing funding remains a significant hurdle in their implementation.

*I'm still putting [in] money, lots of money. So, all the time, you know, but I'm incredibly grateful for the funding that we have had as well. So that makes a massive difference. [Program Manager]*

Lastly, another long-term obstacle SALT continues to encounter are stereotypes and attitudes towards women in the industry. These gendered stereotypes and sexist views have also extended to influence how some people interact with the SALT staff themselves when they are conducting their workshops, leaving them to be on the receiving end of some unpleasant behaviour.

*So, it's constantly breaking these stereotypical views... So, the whole workshop from breaking down the barriers in school to get in there. Work setting up the workshop that breaks down barriers. I've had handymen in schools be really rude to me, because they didn't think we should be there .... We've gone into schools where boys have kept calling out at us as we've got stuff out of the trailers, [but] by partway through, they're going, 'why aren't we on this workshop? ... Why is it just girls?', you know, so everything about it...changes those stereotypical views. [Program Manager]*

While this is an ongoing challenge encountered by SALT staff when running their workshops, addressing this gendered stereotyping is also a key outcome it works to achieve.

*It's constant, but it's getting better... We've learned, you know, how to combat all that kind of stuff. But the biggest thing is changing the individual woman or girl attitude to what she can do, .... And it is the most important thing that I believe that the workshop does. [Program Manager]*

## Outcomes

### Summary of program outcomes

Almost 400 workshops have been run across five states

Over 150,000kms have been travelled in the SkillWomen mobile workshop

Talks and workshops have been run with over 200 schools (SALT, 2021b)

Feedback from participants that took part in a number of SALT's SkillWomen Workshops was gained from the initiative's founder following the interview. This outcome data included survey feedback from girls, careers advisors and teachers, and women following their attendance at workshops. This data provides background information on the participants as well as on their experience of the workshops. The data presented below is from SALT's tour of high schools in New South Wales and Victoria during November and December 2021. This feedback illustrates girls' experiences of the SALT workshops as well as their perspective on future career options.

### Summary of feedback from high school students

86 students reached

52 reported experiencing a change of perspective as a result of the workshop

80 expressed interest in participating in another workshop in the future.

#### Murrumbidgee Regional High, Griffith Campus, New South Wales

Fourteen of the 15 participants indicated that they were interested in pursuing training in the trades and would be interested in taking part in more workshops. Out of the options of careers in the automotive, construction or electrical trades, most participants selected construction as their preferred career path.

#### St Margaret's Berwick Grammar, Victoria

Fifteen of the 19 participants indicated that they were interested in pursuing training in the trades. Meanwhile, all of the participants responded that they were interested in taking part in another SALT workshop in the future. Out of the options of careers in the automotive, construction or electrical trades, the majority of participants selected construction as their preferred career path.

Careers advisors and teachers were surveyed following workshops during a tour of SALT's through South Australia and the Northern Territory. Five schools were visited, including:

- Katherine High School
- Pine Creek Primary School
- Sattler Christian College
- Palmerston Christian College,
- Darwin High School

One careers advisor/teacher responded to the survey from each school.

#### Summary of feedback from careers advisors/teachers

- All five careers' advisors/teachers believe that the SALT workshop had changed students' attitudes towards a career in the trades.
- All five believe that the workshop had changed students' attitudes, including their confidence in using tools and their perception of what they are capable of.
- All five reported that they would like another SALT workshop in the future.

All respondents indicated that the SALT workshop changed students' attitudes towards a career in the trades and thought that other students at their school would benefit from SALT's workshop. All responded that they would be interested in another SALT workshop, with the majority expressing that annual workshops were their preferred timeframe. Careers advisors and teachers described the workshops as well-organised, professional, and visually enjoyable and described the staff as friendly, approachable and accommodating. Four out of five scored the workshop a ten out of ten, while one scored it a nine out of ten. When asked what they enjoyed the most about the SALT workshop, careers advisors and teachers reported:

*Having real tradies interact with students. Very professional. Worked well with students.*

*Seeing the younger people start to believe in their abilities.*

*Friendly staff. Worked with the students accommodating their needs, well organised.*

*The workshop was brilliant and all tradespeople professional and had excellent rapport with students.*

*I have not seen many of these students engage in school. This opportunity actually brought tears to my eyes. Thank you SALT and PLEASE come again.*

The data presented in below was derived from a workshop with participants at a neighbourhood house in Victoria. This feedback ascertained women's perspectives on the workshop and on the industry and whether they had experienced domestic violence<sup>179</sup>.

<sup>179</sup> Specific details of the workshop location are not provided in order to maintain the confidentiality of women of who disclosed their experiences of domestic violence.

### Summary of feedback from women

- 14 out of 16 participants expressed interest in attending another workshop in the future.
- 6 participants stated that the workshop changed what they thought women could do.
- 15 of the participants rated the workshop as 10/10.

Reflecting on their experience of the workshop, fourteen of the sixteen women reported having not considered a career in the trades as a possibility prior to the workshop. After the workshop, six of the 16 women indicated that the workshop changed what they thought women could do. Finally, fourteen of the sixteen women reported that they would be interested in participating in another workshop in the future.

The Lithgow Area Women's Shed reported positive feedback from the women and girls who attended the workshop. In their feedback, participants said they felt that the positivity of the SALT staff led them to consider a career in the trades as a possibility when they had not considered it as one previously. Participants now viewed the trades as not solely a male domain and saw it as an avenue to being more financially secure and offering greater flexibility. Individual outcomes of the workshop included a woman, who is a pensioner, now able to use a power tool at home for the first time. Another reported that she now had gained useful life skills, which now gave her confidence to fix things around the home. Finally, other participants stated that they had a social connection with other women in their community, which was hugely beneficial after suffering from bushfires and experiencing isolation during the COVID-19 pandemic. Beyond this individual impact, the Lithgow Area Women's Shed reported that the workshop also helped draw a greater number of women to the shed, thereby fostering a greater sense of community.

### Conclusion

SALT's proven success is seen in its vast reach, both in terms of participants as well as the distance they span across Australia. This reach is also seen in the network of tradeswomen they foster, and one which has been recognised in an array of literature. Their volunteer's commitment, consistent partnerships and support from government and industry bodies, and positive feedback from participants signal the benefits and success they have achieved. They have evidence their programs are working based on feedback from women of various ages who either change career paths or have built the confidence and aspiration to pursue a career in the trades (SALT, 2021b). Demonstrating this impact, SALT gives the example of their return to the small mining town of Cobar in New South Wales (SALT, 2021b). In their first workshop in the town, they had 15 young women participate, and in their second workshop, two years later, this number had grown to 27 (SALT, 2021b). SALT's program is unique to Australia and is also the only initiative of its kind worldwide. Building upon a foundation of research that highlighted the importance of engaging girls at a young age, SALT's workshops target a vital stage and expand girls' views of their own abilities and career

pathways. Furthermore, SALT's workshops have also aided women's introduction to the industry, giving them life skills and opening their eyes to new career possibilities.

## 4.8 Conclusions

The six case studies presenting best practice examples are summarised below.

**Table 8. Case study cost, aims and impact summary**

Case study	Cost	Aims	Impact
Women Can Build	Equivalent of \$466,633 AUD by the Spanish Education and \$453,853 AUD through the EU. (Women Can Build, 2017; European Commission, 2022)  <i>Duration: 38 months</i>	To redefine and transform VET sector to improve gender equality in the construction industry. Working with VET trainers, VET centres, companies, and women for this change.	Overall, several thousand individuals were consulted to help develop a suite of work including: Development of MOOC training course for VET trainers using input from 600 trainers and six workshops. To date, 90 trainers have completed the course. Hands-on experiences for several trades developed and conducted with young women across Europe. Resources developed for VET sector, including a roadmap and recommendations/actions relating to the redesign of VET courses. Action Plans developed for companies offering guidance on gender competencies 100 testimonies from women collated, 4,187 participants reached through resource dissemination. Intended and unintended consequences captured.
Women into Construction's 'Moving on Up'	Equivalent of \$461,372 AUD from the Trust for London (TfL) and from CITB. (TfL, 2021; CITB, 2021)  <i>Duration: 2 years</i>	Supporting existing lower-paid women in construction companies to progress. Working with employers to develop a more inclusive environment.	One pilot program that is part of a larger suite of work by Women into Construction (started officially with the London Olympics). 24 companies supported, 39 women received mentoring & coaching, 15 women accessed job-specific training, 49 supervisors and senior managers trained. 71% of senior managers reported that they were working on new strategies in this area 15 women received promotions (Covid impacted planned training). The average salary increase for women was \$11,000 AUD. The Social Value created by 'Moving on Up' over the duration of the program totalled a minimum of \$914, 531 AUD;
Boss Ladies Project	Equivalent of \$1.7 million AUD initially for 3 years. This has now increased for the next three year period to \$3.3 million AUD  <i>Duration: The project has operated for the past 4 years and is ongoing.</i>	Engaging school-aged girls and empowering women in the construction sector, by working to break down stereotypes and address the prejudices that prevent women's involvement.	Several streams of programs, but the major one is the ambassadors' program. They also have camps and a range of other activities. 9,961 female students reached through Ambassador visits, 1,400 students reached at the National Championship in Skills, 398 teachers participated in school visits, 141 girls participated in either an Internship or Girl Boss Garage, 19 VET institutions took part in Learning Labs, 28 municipalities participated in Learning Labs for careers counsellors, over one million people reached via social media, 130 companies are employing women who are engaged with the project, and 39 companies agreed to take part in Boss Ladies' company-alliance, to increase women in the industry a better their working conditions.

Case study	Cost	Aims	Impact
Frauen in Handwerk und Technik (FiT)	Equivalent of \$36 million AUD by the AMS in 2020 (BMA, 2021). Additional funding is allocated by individual states.  <i>Duration: Ongoing</i>	Long-term government program to improve employment opportunities for unemployed women. Increasing the number of women entering male-dominated roles (less than 40% female participation)	Supporting unemployed women to gain long-term meaningful employment. Women are financially supported via their unemployment benefits, a top up scholarship, and free tuition. They receive ongoing support, advice, and help to decide on a course and to complete their tertiary qualifications in a range of technical and trade courses. Support is provided for up to three years plus several months post-completion. In 2020, 7,075 women were engaged in the FiT program, 4,764 of these women undertook trades/technical qualifications. Between 2010 and 2018, a total of 41,912 women were reached by the program. Between 2010 and 2018, approximately two-thirds of women successfully completed their training and transitioned into employment.
NAWIC Victoria Mentoring Program	Funded by volunteer labour and industry sponsorship e.g. in 2021 CPB Contractors Exact cost unknown.  <i>Duration: Ongoing</i>	To support professional women's retention and advancement in the construction and the broader built environment disciplines via a six-month mentoring program.	Focus on professional women. Known to increase women's confidence and improve their retention in the industry. Participants also built their networks and met other women facing similar challenges. Several participants have already achieved promotions in their workplace from last year's program, two mentees have now joined NAWIC Victoria's educational committee. Mentees often then go on to become mentors. Mentors also gain from the program and often want to take on more than one mentor in future years. Next year mentees will pay a fee to participate.
Supporting and Linking Tradeswomen (SALT)	Funded by a mix of volunteer, government, and industry monies. e.g., funding of \$28,601 for its 12-month initiative 'From DV to trade, a new perspective for women's lives' (GrantConnect, 2021).  <i>Duration: Ongoing</i>	To engage girls and women in the trades, provide support to women in the industry and change perceptions and attitudes towards women in the industry. Participants can do half-day workshops or taster days. They have a women's shed in Sydney.	Women, young and old, gain exposure to construction activities and tools. A secondary outcome is that teachers and parents are exposed to this too and gain evidence that women can pursue these roles. The mobile nature of these workshops means they can be conducted anywhere. Almost 400 workshops have been run across five Australian states, over 150,000km have been travelled in the SkillWomen mobile workshop, talks and workshops have been run with over 200 schools. Workshop feedback from women and girls highlights increased interest in careers in the trades. SALT also provides advice to companies on how to improve their gender participation. In particular, the transport sector has shown high levels of interest in women joining them. SALT also provided advice to young women seeking jobs. Some women who trained in their workshops are now volunteer members of SALT.

These programs are examples of how to build the supply of women in both trades and professional roles and reduce their attrition. The examples serve as models with interventions that could be successfully replicated in Victoria to boost the participation of women in the industry. A key theme across many of these programs has been a focus on

multiple career stages and, in doing so, working with multiple stakeholders. Beyond this, partnerships have proved to be essential to each program's reach and ongoing success. Ongoing funding has aided the sustainability of the programs, and further partnerships with local government, companies and schools have been key to reaching many participants and having widespread impact.

Multi-country programs such as Women Can Build, which took place across Europe, have demonstrated the success of coordinated strategies on an international scale. In addition to offering women and girls hands-on experience to encourage their interest in a career in the trades, Women Can Build have worked to change the industry. This has occurred in both VET and company settings to make them more inclusive and therefore support retention in the longer term. The combination of these efforts and the numerous partnerships is an example of a successful approach to embedding change in the sector.

In a similar vein, the FiT program taking place in Austria is a prime example of how a broad-reaching, multi-partner program can be implemented long term. Collaboration with multiple stakeholders has been key to both these nationwide and multi-country programs. Another central factor to FiT's success has been the support they provide to women to enable them to complete the program and their education; the financial support and counselling support provided have proven to be essential in their participation. Likewise, the Boss Ladies Project in Denmark has also emphasised the importance of providing support to women early in their careers in the construction industry. Having social and emotional support has been found by the project to be vital to women's retention. As seen in Women Can Build, the Boss Ladies Project focuses on multiple career stages. This has shown the importance of addressing the multiple barriers to women's attraction, recruitment, and retention in the industry in tandem. A core takeaway from all three of these programs is that addressing small parts of the systemic problems in the industry in isolation is less likely to be fruitful. These programs have acted at multiple levels, with multiple partners to foster a new culture in male-dominated industries and to ensure that women are supported throughout each different career stage.

The Boss Ladies Project and Woman Can Build also emphasised the importance of working with stakeholders at each level to debunk gendered stereotypes and biases which limit women's involvement in the construction industry. Both programs engaged VET teachers and managerial staff as well as company managers to address these ingrained views. In addition, the Boss Ladies Project also worked with teachers and careers counsellors in schools to educate them. These actions enable girls and women to explore construction career options, participate in training, and develop a career in the industry. A focus on cultural change was shared by UK-based Women into Construction's Moving on Up program. As identified by other programs, the culture and practices within a company often serve to limit women's career development. Moving on Up's approach recognised that for women to succeed in the

industry, they needed support to enable their own professional development and changes in the environment around them.

In Australia, NAWIC Victoria also recognised the need to give women the skills and connections needed to progress in the industry. The individualised support offered through mentoring equips women with the knowledge and tools needed to negotiate salaries and achieve promotions in their workplaces. Like Boss Ladies, NAWIC Victoria has also identified the value of connecting with other women in the industry. Addressing this, their program now has an increased focus on networking as well as mentoring. Furthermore, the program has recognised the benefits of linking such efforts nationwide to enable further connection and career opportunities for women in the industry. This is a view shared too by SALT, which has implemented its workshops across almost every state and territory in Australia. SALT's approach has been unique and has demonstrated the impact that a mobile program can have in the Australian context. Furthermore, as seen with Boss Ladies, SALT has demonstrated the importance of targeting girls at a young age to debunk gendered perceptions of career options. Like with other programs, partnering with state governments has been key to SALT's ongoing work. Despite the benefit of this, ongoing funding has been a considerable challenge for SALT. The landscape of initiatives in this area in Australia – while having many similarities – shows key differences in the disparate nature of many Australian programs and the lack of long-term support for these initiatives. Initiatives such as SALT, for example, show promise for continuing success but require longer-term support to achieve their full impact potential.

These case studies have demonstrated successful approaches both nationally and internationally. For the international programs, in particular, the gathering of primary data and further secondary data offered by program staff during interviews has allowed for additional insight into these programs, which would not have otherwise been possible. For many international initiatives, program information has been predominantly in their local language, limiting what can be ascertained. Primary data collected on Australian programs also yielded rich insights, especially into the challenges these programs face and their plans for these initiatives into the future. The insights gained on these programs and the program review allows for some interventions to be identified for future initiatives that would transfer well to the Victorian context. The applicability of the case studies to the Victorian context is summarised in Table 9. These examples of best practice all work across several career stages simultaneously and focus on multiple stakeholders.



Table 9. Summary of case studies and applicability to the Victorian context.

Case study	Career Stages	Focus	Applicability to the Victorian context
Women Can Build	Exploration Education and training Early experiences	School-aged girls Women VET sector Trade roles Companies Construction	Highly applicable. The program involved extensive consultation, resulting in comprehensive materials that suited the target participants. Focussing on the VET sector and the attrition of trainees would increase the supply of women. Giving hands-on experiences to engage women initially, MOOC training of trainers, redesign of courses, and action plans for companies could be replicated across all Australian States to defray some costs. The 100 testimonies provide positive examples to women, their parents, teachers, and employers. The program was also willing to adapt in the case of unintended consequences of their actions gained through a highly consultative process.
Women into Construction's 'Moving on Up'	Education and training Early experiences	Career changers within construction Women Trades roles Professional roles Companies Construction	Highly applicable. Women into Construction is a good example of where government procurement mandates on long public projects accompanied by the follow-up of a series of funded programs have not only yielded results in London but across the UK. This kind of program can help women move from lower-paid, less secure roles assuring their continuity in construction. Supporting and training women and their managers was a key element of this program. The program also demonstrated how a well-developed evaluation can capture the value gained from the project's cost. Women into Construction have a number of initiatives aimed at most career stages. A crucial part of their work is encouraging cultural change and working with companies over an extended period and at multiple levels.
Boss Ladies Project	Exploration Education and training Early experiences	School-aged girls Women Trade roles Companies VET sector Schools Construction	Highly applicable. This is an excellent example of a program that has grown through a deep understanding of gender inequity. This project is an example of what is possible with passion and ongoing funding. The Boss Ladies Ambassadors program is one that should be further investigated. The program has a self-sustaining element, which has grown the program, with the young women initially encouraged into construction then becoming Ambassadors. The program recognises the importance of the ambassadors, and importantly they are paid for their time. The program does more than a mere taster experience identifying that confidence is built via multiple exposures. The program has then developed separate initiatives targeting different levels which operate holistically to encourage girls, support women, and enable cultural change in schools, VET institutions, and companies. This project also shows the benefit of broad partnerships and a multi-level approach. By focusing on targeting each of these levels and progressively expanding, the actions work together successfully to improve women's involvement in construction trades.

Case study	Career Stages	Focus	Applicability to the Victorian context
Frauen in Handwerk und Technik (FiT)	Exploration Education and training Early experiences	Unemployed women Professional roles Trade roles VET sector University sector Male-dominated occupations (min 40% women)	Highly applicable. An equivalent program could be implemented Australia-wide (both state and federal government agreements). It would involve partnering with employment services specifically trained to engage female job seekers in training within construction (and perhaps other male-dominated industries). The additional financial support while gaining their VET or HE qualifications, along with initial advice and ongoing support, has been a critical element of the FiT programs. Additional supports could be offered by sub-contractors equivalent to ABZ*AUSTRIA. The key to success appears to be the inherent knowledge built up within these organisations over a longer period of time.
NAWIC Victoria Mentoring Program	Early experiences Growth.	Predominantly professional roles Women in Built environment including construction	Highly applicable. Already operating in Victoria and other states in Australia, NAWIC have demonstrated, most through volunteer labour, what can be done to assist professional women in staying within the built environment disciplines. It provides a forum for women to connect, gain skills and grow their networks. They also have other programs that could be supported or replicated. At present, few programs specifically focus on career growth. They have indicated they are keen to run a buddy system with HE students, which may also address some of the issues these women face when they enter their first jobs in the industry. An initiative combining these would have the added success of creating a chain of ongoing mentor relationships, supporting women throughout their education and early to mid career.
Supporting and Linking Tradeswomen (SALT)	Exploration Early experiences	School-aged girls Women (including women who are survivors of domestic violence) Trade roles Companies Male-dominated manual trades, including construction	Highly applicable. Again, this program has been passionately driven predominantly by its founder and a core group of volunteers. The standout feature of SALT's design is the flexibility of their initiative, allowing them to reach participants across the country. Their focus has been on girls at a formative stage and career changers. In working with girls and women, SALT has broken down gendered stereotyping of career options. They have also used these activities to garner understanding and support amongst teachers and industry. The building of a Women's shed in Sydney provides accommodation to run ongoing programs to support women, whether this is to pursue an ongoing career or skills in home maintenance issues. Support for the expansion of this or a similar initiative in Victoria is encouraged as well as the establishment of construction specific women's shed in Melbourne.

## 5. PROFESSIONAL WOMEN'S CAREER ROADBLOCKS: PERCEPTIONS OF WOMEN AND EMPLOYERS

### 5.1 Data collection and sample description

The primary data was sourced from focus groups with professional women working in construction, group interviews with women's organisations in construction, and interviews with a range of employers within the industry. It should be noted that this section is focused on professional women's experiences. The perceptions of nearly 40 individuals from industry were gathered. Further work is recommended to revisit the perceptions of tradeswomen and their employers to understand how things have changed since the previous strategy.

The interviews and focus groups were semi-structured to improve participation and allow a more equal dynamic between researchers and participants (Punch, 2014). Interviews lasted 45 minutes to 1.5 hours, and the focus groups were approximately 2 hours<sup>180</sup>. Due to the current COVID-19 restrictions in place, all were conducted virtually using Zoom. The interviews typically involved one researcher, and the focus groups included two researchers so that one could moderate while the other took notes. The researchers compared notes at the end of the focus group discussion when all the participants left the zoom meeting. Taking field notes also allows the researchers to note the body language and gauge the interest levels of the participants.

### 5.2 Sample description

The focus groups conducted included early career to senior women working in the construction industry. These women were professionals and managers working in contracting companies, and their experience varied from 3 to 31 years. They all worked within Tier 1 to Tier 3 contracting and subcontracting companies, except for three women who had spent more than ten years working in contracting companies prior to a career change into both private and public sector project management roles within the past 1 to 7 years. Their move to the "client-side" was precipitated by career and work-life balance issues with the contracting sector.

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<sup>180</sup>The University of Melbourne proposal outlined that 4 focus groups would be conducted, with up to six additional key informant interviews (of 45 mins) for those unable to attend. It was agreed by the Building Equality Committee that 3 focus groups, two with women and one with employers should be conducted at this stage. Two focus groups, of 2 hours each, with 10 and 12 early career to senior women, respectively, were held. For the women's groups, a group interview (similar to a focus group with 4 women) and two individual interviews were held lasting 1.5 hr to 2 hrs each. A focus group with employers was not conducted as a suitable common time could not be ascertained. In the end, nine employers agreed to be interviewed. These interviews lasted from 55 mins to 1.5 hrs. The total time for primary data collection was nearly 60% more than outlined in the original proposal.

The group interviews with the women's groups involved either the founders or current committee leadership. Due to identification reasons, they are not named, but the National Association of Women asked that their participation be noted in this report.

The employers interviewed were all Directors or CEOs within their companies. All were male and aged between 40 and 65 years. Companies could be classified as Tier 1 to Tier 3. Their experience was extensive, except for one Tier 3 company where the Director had just under twenty years of experience.

### **5.3 Data analysis**

This research project is subject to approval by the Human Research Ethics Committee of the University of Melbourne: Ethics ID Number: 22922. The expected date of approval is early November 2021.

Most of the interviews and all the group interviews and focus groups were recorded and transcribed verbatim by a reputed transcription service. Together these, along with the researcher's notes, were brought together and analysed using the principles of thematic analysis (Braun & Clarke, 2006). The analysis considered both the individual and cohort levels and was conducted manually and undertaken in an iterative manner. A bottom-up, data-driven, inductive manner was used following the principles of inductive thematic analysis as outlined by Braun and Clarke (2006).

The discussion focussed on perceived roadblocks to women's careers and strategies to overcome these. The questions followed the career stages approach, used throughout this report and looked at exploration, education and training, early experiences and growth career stages in turn. Overall, the combined data produced by the interviews, group interviews and focus groups provided a rich overview of the experiences and roadblocks professional women face in the construction industry. Findings at each career stage are presented below.

### **5.4 Exploration career stage**

The exploration stage of a career is when adolescents form their vocational interests alongside the development of their identity. It was agreed to be an important intervention point at which to expose young women to the construction industry. Three major themes were identified at the stage:

- Lack of adequate information and guidance
- Negative public perception of construction
- Impact of familial influence

Both interviewees and focus groups members commented that a negative stigma about the industry results in women excluding construction from their field of consideration when formulating their vocational and educational interests. While most women mentioned this as a strong theme, only a few of the employers considered this an issue. These employers focussed more on the mere lack of information about roles being a significant roadblock. In other words, they considered construction careers to be simply invisible to young women, so they were not even investigated as a vocational choice in the first place. There was almost universal agreement about the sheer lack of information available to young people about the broad range of professional roles construction offers. In addition, parents and careers counsellors also lacked knowledge surrounding the industry's professional career paths, which was an additional reason for them not actively encouraging women to pursue a built environment course at university. Utilising advertising that depicts women in various professional roles in construction was raised as a way to improve societal perceptions of the industry. Targeting information to early high school age students to improve their awareness of the myriad opportunities and pathways available was seen as a way to improve knowledge and reduce stigmas. Furthermore, many participants commented that familial influence is one of the most common enablers of women entering the construction industry. Having a family member in the industry appeared to act in two ways. Firstly, it acted as a means of increasing knowledge of the roles available. Secondly, exposing adolescent women to a positive perception of the industry allows cultural stigmas and misconceptions to be re-considered.

These themes, discussed in more detail below, help develop a more in-depth understanding of the perceptions of women and employers during the process of making construction a potential vocational choice.

### **Lack of adequate information and guidance**

To start with, it would appear that career guidance and information provided at high school is either absent or considered inadequate. As one of the younger focus group participants reflected:

*It's kind of just like, 'Hey, apply for these unis and these courses' without any information, without any guidance at all. It was just like, 'Hey, pick your degree now that you're 18'. [Focus group participant]*

While some fundamental knowledge appears to exist regarding construction, it is more to do with trade roles, where there appears to be at least some tacit knowledge. This may be due to it being more publicly observable within society. While more visible, they are often not considered suitable for women, and this is often made explicit to those who express an initial interest in them. As a focus participant remarked about a construction apprenticeship, *"It just would not have been an option for a girl or woman to do at our school"*. One of the women's

groups also raised this as an issue: construction is often thought not as a "*professional career*", but an option restricted to "*non-academic boys*".

It seems this lack of understanding does not just affect young women, as a senior manager commented:

*They don't understand. Young people – how do you even know what's available. You hear building you'd think of blokes in shorts, you don't really realise what is actually available. [Employer]*

This appears to get somewhat to the root of the problem when we consider professional and managerial roles in the construction industry – they are not generally well known or understood. As a senior manager in a Tier 2 company noted:

*There's that bit of a disconnect so when people talk building, they might look at the construction of it and more the carpentry, the physical aspect of the project whereas I'm talking from the professional aspect, the people that I'm trying to recruit to take on roles as our future engineers, architects, design managers, projects managers. [Employer]*

There appears to be a divide between the reality of the industry's professional roles (with good remuneration) and the dominant perception of construction as trades work and TAFE qualifications. This obfuscates the pathways on offer into the industry for women with skills in technology and design. So various professional and managerial roles are invisible to young people, particularly women, and their pathways are unclear.

When considering a professional vocational choice, the construction industry does not appear to be one that even gets an initial consideration. As two focus participants, who attended private schools, stated that within this environment, there was an expectation that while "*all the girls would move on to university*" the expectation was that "*smart girls go and do law or they're a doctor or they're a teacher*". Construction or engineering are not presented or discussed as viable options. One senior manager noted:

*I just don't think there's an awareness of what the industry provides or can deliver. I don't even think it's in their mindset that it is an industry that they can work in. [Employer]*

Despite many of the women expressing an interest in the built environment from an early age and some coming from construction families, support for this vocational choice was not necessarily forthcoming, and their interest was often brushed aside. With no family or friends in the industry, one focus group member had a career counsellor advising her when speaking about a construction management degree: "*you must be silly wanting to do this stuff*". This woman's pathway to construction, while relatively recent, was further delayed due to pressure from her parents not to even pursue a more general built environment degree, which had outcomes other than construction contracting.

It seems career advice on construction has not improved over time, with some of the more junior focus group members describing very similar experiences to many of the more experienced women.

*You didn't know about construction management in high school. They don't really tell you about that, especially for girls. [Focus group participant]*

Only one woman (an older senior manager), who had strong construction ties with family in the trades, went directly into the construction management degree after discovering it in Year 11. The lack of specific school-based information and guidance at school was countered by tacit knowledge from family networks.

*I just always wanted to – I'd always been at home fixing up things, flipping rooms for mom and dad, painting the house, that kind of thing  
[Focus group participant]*

The consensus from the professional women was that a lack of information and guidance had resulted in many of the women being unaware of construction at the point at which they were making decisions about which vocation to pursue, even though construction was well-suited to their skillset and interests. Many attended all-female schools, and this also appeared to hinder guidance or information regarding construction being acquired. When someone did have a technical bent, this was directed towards science or maths rather than construction or engineering. As one senior manager in a large contracting company noted:

*Coming from a girls' school it was a bit of a challenge to advise that you want to look into the building industry because they were very focused on a maths, science university path [Focus group participant]*

The focus group participants, women's groups and employers were unanimous about the need for intervention before and during high school. The earlier this information starts to be disseminated, the better. Some women and employers identified two significant stages: prior to social pressures placed on young women during puberty and before the middle of the high school years, when subject choices need to be made. This later age was considered an appropriate point of intervention with one senior manager noting:

*.....trying to get to all the year 10, 12 students maybe to explain to them what the industry is about, it's very hard to - because it's not shown, it's not glossy, it's not seen anywhere and it's all about transfer of information. [Employer]*

Another employer argued that young women in year 11 and 12 need to be directly targeted to improve their knowledge and awareness of construction. This sentiment that awareness was a principal roadblock was repeated by other employers.

The lack of awareness and inadequate career guidance contributed to many of the women interviewed taking a circuitous route into construction management degrees. This experience

was echoed by a women's organisation spokesperson who stated that had they been aware of construction as a professional pathway in secondary school, they would have "*done it straight away*". This also means that women come into construction via other pathways, and this was undoubtedly the experience of several of the female participants. Often this was via another built environment degree such as Architecture, which proved to be a gateway to construction.

The benefits of a construction management degree were considered numerous, and promoting it as a way not only into construction contracting and subcontracting may be useful. This was discussed by several women comment, with a senior woman adding: "

*There are so many different doors and professions that you can do coming from this degree, and I just don't think that it's conveyed to the Year 11 and Year 12 students. [Focus group participant]*

Both the women's testimonies and comments from the employers considered that a lack of information severely impacted the vocational choices of young women and young men. Interventions at this level are desperately needed.

The employers repeatedly emphasised that a lack of reliable information about the industry was the main obstacle preventing women from pursuing construction at a tertiary level. For many employers, it appeared that the lack of women in the industry would be resolved if this alone was addressed. As one senior manager in a Tier 1 company suggested:

*..... trying to get to all the year 10, 12 students may be to explain to them what the industry is about, it's very hard to - because it's not shown, it's not glossy, it's not seen anywhere, and it's all about the transfer of information. [Employer]*

The lack of awareness and ignorance about the professional side of the industry was undoubtedly considered a principal challenge from the perspective of many women as well - but this was also considered to be affected by stigmas and cultural misconceptions regarding the industry. The testimonies of the professional women demonstrate that they have often been actively discouraged from pursuing the built environment, despite a desire to utilise their maths, science, and design skills in their vocations. The women's organisation representatives argued that the professional side of the construction industry and the diverse pathways for career development are not advertised or communicated to young people considering their career choices. The professional women and employers also emphasised the right role models, and correct information aimed at high school-aged students would be a powerful strategy to promote the professional roles within construction. The timing of these could be from late primary school onwards.



## Negative public perception of construction

The lack of information available about the construction industry at the exploration stage was felt to be exacerbated by a negative public perception. This theme was raised by professional women, women's group representatives and employers and was of great concern, as one employer said:

*I think it's looked on as a more masculine industry so there's a mindset of masculinity and for sure, in the trades, men are probably suited to some of the tasks more than the women are, that's a fact but women can be plumbers, electricians, painters, carpenters. [Employer]*

This sentiment was confirmed by a professional woman with a trades background who acknowledged that the pervasive misconceptions around construction, which is misunderstood as a solely trades industry meant the option was not presented to her in secondary school, she said:

*It would never have been offered to me at my school or even suggested that an apprenticeship would've been an option for a girl or a woman to do out of our school. It would never have been tabled [Focus group participant]*

The employers and women's group representatives commented that the negative perception of construction was garnered from the media, which then informs both the young woman as well as those who influence her career choices, such as careers counsellors and family members. These conceptions of the industry may militate against women's interest in considering construction as a career option. The employers, women's groups and professional women were unified in their frustration regarding the ongoing stigma surrounding construction. However, the employers and women diverged in their reflections on the extent to which stigma surrounding the industry deters women from construction. The women's group representatives agreed that the stigma surrounding construction could result from problems within the industry the general public are aware of and not be wholly misleading. As one of the women's groups raised, the industry has recently suffered from bad publicity due to the 2021 protests in Victoria (which were against COVID-19 pandemic measures enforcing mandatory vaccinations and changes to lunchroom use) and involved numerous construction workers in Melbourne. This event involving displays of poor behaviour was said to have cast a pall over the entire industry in the minds of the public, despite being relatively unrepresentative of the wider construction workforce. As the spokesperson noted:

*Those protests didn't help us because it gave a perspective of a group of people who might work in the industry, but it certainly didn't represent everyone that worked for the industry. [Women's group spokesperson]*

The ways in which the construction industry is depicted as dirty, dangerous, and macho is widely cited in the literature as a deterrent for young people when formulating their vocational aspirations. Employer interviews revealed a commonly held perception that this representation of construction is unfair, misleading and unrepresentative of gender equality in the industry. As one younger employer put it:

*It's the way our industry appears to the outside world. Both men and women appear to be the stereotypical gruff, uneducated, heavy speaking tradie type image [Employer]*

The stereotypical masculine nature of trades work was highlighted as the only information available to most women if they are not from a construction family. This conventional understanding of the industry was felt to obscure the professional roles available, resulting in two distinct sides of a complex industry being entangled in a misrepresentative generalisation. Indeed, employers commented that construction workers are perceived as “blokes”, “hard yakka”, and “uneducated” thus militating against adolescent women’s interest in an industry so aligned with conventional masculinity.

Confirming the concerns of employers, one women’s organisation spokesperson commented that the construction industry in Melbourne “*couldn’t be more older [sic] white male if it tried*”. She observed the dominant understanding that the construction industry is “*archaic*”, conjuring images of “*men in hard hats*” and obscuring the myriad of professional and managerial roles available. Moreover, this women’s group spokesperson alluded to gender schematic decision making in adolescence, where women are guided towards design and architecture, which are perceived as more “*feminine*”. A perception that it is unattractive for a woman to be on the tools was said to be part of this problem, compounded by the societal alignment of construction work with masculinity. This converged with the focus group members’ observations, who recalled that despite an early interest in the built environment and an aptitude for maths and science, their pursuit of construction at a university level had often been sidelined by the negative perception of the industry maintained by parents and counsellors. The stigma and perception around the industry was just one challenge the women had encountered in their career journey; however, employers emphasised the industry’s perception problem as one of the most pressing issues. This was felt to be an inaccurate portrayal of an industry that was described by an employer as comprising “*hard working*” and “*beautiful*” people.

Moreover, an employer at a Tier 3 company argued that the industry culture of excessive drinking and bad language has “*drastically changed*”. Thus, the perception problem was felt to be a product of lack of information, negative media portrayals, and pervasive societal misconceptions rather than a consequence of industry shortcomings.

*It’s moved miles from that and the behaviour - it’s just like these people transformed into essentially being monsters in the way they behaved, and I*

*thought, 'They couldn't behave that way at home in front of their families.' That culture of a blokey thing, excessive drinking, language ..... when they got in groups, some of their behaviour, that's drastically changed for the better.*

*[Employer]*

Demystifying the trades and promoting a positive image of women working in the built environment was seen as key to promoting gender diversity in the industry. Female role models were raised by employers, and professional women as a strategy to challenge the biased view of the industry parents and counsellors may be promoting. It was summarised that *"if you can't see it, you can't be it"*. The literature confirms that vicarious modelling, where adolescents can witness someone doing a task and feel empowered to do it themselves, is necessary for young women to gain the confidence to pursue non-traditional work (Bandura, 1997). Improving the public image of the industry to make it more attractive to women by utilising female role models was agreed to be an important avenue to increasing attraction.

### **Impact of familial influence**

A powerful factor empowering women to combat misconceptions and stigma was felt to be having a familial connection to the industry. Commonly, having a father involved either as a tradesperson or professional in construction, or the built environment more broadly, increased adolescent women's knowledge of the opportunities and complexity offered by construction, exposing them to a positive perception. Both employers and professional women observed that many of the women who enter the industry and succeed within it, initially come to the industry because of a familial connection. Research demonstrates that having a parent in the industry can increase young people's understanding and attraction to the construction (Bigelow et al., 2018). This was exemplified by a senior woman in one of the focus groups who had numerous male family members in carpentry and said: *"It was just, I think, inherently in my blood"*. She noted:

*In primary school, I always knew I wanted to be in the industry. I had a lot of families and uncles, and my father was a trained carpenter, now a chef, and then my grandfathers were both carpenters. [Focus Group Participant]*

Other members of the focus group shared this experience as they too were affected by familial influence from a young age. For instance, another senior focus group participant shared her admiration for her uncle, that was a draftsman, who had inspired an early interest in the built environment. She said: *"I loved everything he did. So, from a young age, I always wanted to be an architect"*. Another participant confirmed that she also had an early interest in drawing houses and playing with Lego with her brothers. This early exposure to the built environment from trusted and respected family members was said to have been an immense impact on the formation of vocational interests of the women as adolescents.

*I certainly was interested in drawing houses if it was just something to do, and I just noticed that I was always just looking up, like looking up at buildings [Focus group participant]*

The employers agreed that having family members in the construction industry is a common way both men and women formulate a desire to work in the industry. Acknowledging the negative image of the industry, a younger senior manager reported a strong desire to introduce his young daughter to the industry and ensure she develops an understanding that people in this industry are “someone like her dad” rather than “this heathen that wolf-whistles at good-looking women when they walk past”. This employer acknowledged that while his daughter could benefit from this connection to the industry if she did ultimately select construction, this type of exposure was not usual for most young women.

*..... what I am sure of is that if my daughter wanted to participate in our industry in the future, she's not going to have any problems with understanding who the participants are. She's not going to be turned off because of any incorrect perception, but she's one of a million. One in a million that's had the chance to understand it. [Employer]*

Overall, the interviewees agreed that adolescents with a familial connection to the industry are uniquely privileged by having access to a more accurate depiction of what is often a disparaged industry. This is an opportunity that could be made available to all secondary students. Another employer echoed this sentiment, he said:

*The younger girls we're seeing coming into our business, they're all driven and passionate and actually love it, because they've either come from architecture and crossed into construction or gone straight into construction and love what they're doing, but it's few and far between. A lot of them have had either someone in their family's been in construction or been in industry or been in real estate and said, “You should try construction.” There's something that's drawn them to that because they've had someone open their eyes to it. That's not very often and not common. [Employer]*

In contrast, one interviewee raised that having family in the industry may also highlight that a career in construction is difficult. The industry is known for its long hours, which can take its toll on workers. This knowledge may serve as a deterrent to pursue this vocation. As one employer stated:

*You don't really realise what is actually available in building unless it's in the family you don't know it and if it's in the family your father probably worked too hard as a manager of building somewhere and you hardly saw him and you're kind of not attracted to it. [Employer]*

It seems that having a family member in the industry can be a double bind, with an early understanding of the expectations of the industry and lack of work-life balance serving as another element of women's hesitance to become involved. Without opportunities to witness a family member or role model working in the built environment, it was felt that adolescent women have little chance to formulate an understanding of the industry. This will act to exclude construction from their field of vocational consideration. Indeed, many agreed that young men often join the industry simply because *"their dads do it"*. The women's group members commented that subconscious understanding that women are not capable or not welcome in this industry is formulated at a young age without role models and visual exposure to women working in construction. For instance, one of the women's group representatives stated:

*If parents and teachers aren't visually putting that pathway as an option for females into their subconscious, it's not going to be there [Women's group spokesperson]*

The academic literature confirms that having a "tradie dad" acts as a confidence building activity that provides positive exposure to the trades in childhood (Shrewing, 2009a; Struthers & Strachan, 2019). Without this early exposure to construction via a family member, it was agreed that young women's understanding of the industry would be limited to what they glean from the media, family and society. Having family in the industry increases women's chances of understanding that professional, as well as trade roles, exist.

## 5.5 Education and training career stage

In each discussion, the education and training career stage was said to be a time when women encountered the least roadblocks. Indeed, many of the focus group participants reported that this period of their construction careers had been one of general equality and inclusivity. However, a significant disjuncture between the university and early experiences of work was observed amongst the professional women, suggesting that the meritocratic, progressive university environment may not accurately prepare women for the reality of working in construction. A common narrative from the women interviewed was that their education had begun in architecture or design, only moving to construction degrees after deciding architecture did not suit them. This indirect route to construction meant women were often older upon entering construction education but also brought with them a unique skill set. Another major theme that emerged in the education and training stage discussions was the shock of entering tertiary environments where women are usually the minority gender. Both employers and professional women agreed that this experience can be destabilising but is ultimately reflective of the gender makeup of the industry. Employer interviews revealed a common perception that male and female university graduates are

equal in skill and enthusiasm and that men and women face similar hurdles when transitioning out of university to the labour force.

The major themes that emerged in the discussions around education and training were:

- Indirect pathway to construction
- Transition to university
- Equality in the educational environment

These themes, discussed in more detail below, provide a nuanced understanding of the perceptions of women and employers during the education and training career stage, a crucial bridge between an interest in construction and working in the industry.

### **Indirect pathway to construction**

The professional women discussed the indirect pathways they had taken to studying construction and shared a common experience of arriving at the industry via architecture. This was not mentioned by the employers. Women were encouraged to pursue this more traditional pathway in high school due to an aptitude for maths and design. They described the pressure of school and families in late adolescence had rendered architecture as the most suitable option when making university decisions. This field was perceived to be more feminine in nature and did not suffer from the perception problem that plagues construction. A significant number of professional women from both the focus groups and group interviews recounted their journey to construction via architecture. They commented:

*I think it's a story as old as time with all the women I come across in this industry. It's, "I started architecture, I did a construction subject and then I changed [Focus group participant]*

*Similar thing, kind of landed in building because I had an interest in architecture and didn't look back [Focus group participant]*

*I wanted to be a fashion designer originally, and my father said, 'Get a job that pays', and then I decided architecture, but that wasn't a good move in the end either [Focus group participant]*

The consensus among the professional women was that many had found themselves in construction degrees after overcoming several roadblocks, including a lack of information, active discouragement from parents and counsellors, and initially undertaking degrees in architecture or related disciplines. This is a significant finding which demonstrates that women possess a disadvantage from the early stages of their career by their deferred arrival. In addition, one employer raised the strategy of creating scholarships for early career women to sponsor their education and guarantee graduate roles after completing university. This

early sponsorship and connection with industry were raised as a strategy to promote women, reduce student debt, and recruit women without a familial connection.

### Transition to university

Having commenced construction degrees, the focus group participants encountered further hurdles in the tertiary setting. A major theme that emerged in the education and training discussions was the experience of transitioning out of secondary school to university environments where women are suddenly the minority. One participant reported the transition from high school, often single gender, to university was a “*shock to the system*”. A women’s group representative reiterated the common experience of “*culture shock*” upon arriving at university to a male-dominated space, commenting that this environment is often the first situation in a young woman’s life where they are in the minority gender. Another woman described her group of friends within the construction management degree as: “*the token three girls. Three little blonde girls in the front*”. This experience was articulated as destabilising and confronting; a women’s group spokesperson emphasised that women must be supported in the university space to ensure retention at this career stage.

*When I started uni we had the highest female intake ever, at 17%, I think when we graduated it had dropped to 8%. So, we’re talking women, like the day one you walk into that first lecture, it’s just proving how small you are and how big the male mass is. So, how do we get women feeling comfortable in that space?*  
[Women’s group spokesperson]

The notion of women feeling uneasy in the construction space was echoed by an employer who recalled that during his tertiary education women were made to feel uncomfortable.

*And I can just recall from when I was at uni about, even when – our female members who were going to sites, there’d just be – it could be some banter from the tradies on-site, which was unnecessarily, and I think that whole undertone is still prevalent [Employer]*

Once settled in the university environment, several professional women shared that forming strategic alliances and social networks within the educational setting is necessary and advantageous. Having a network of women to relate to and provide instrumental support was described as a “*gamechanger*” for career progression as well as psychosocial assistance. One professional woman recounted her experience of befriending a group of first-generation Australian men who identified her as in “*a similar sort of minority group,*” sharing outsider status in the construction environment and became her support network. The experience of being the token female contingent within a male-dominated space is reinforced by gendered language. Benevolent sexism from teachers and instructors is well documented in the literature and is representative of some factions of the construction industry (Makarova et al., 2015). One professional woman recalled:

*There was definitely a recurring kind of language from all of the lecturers that only ever referenced men [Focus group participant]*

The exclusion and othering of women in male-dominated industries is well-documented. A women's group spokesperson commented that the constant messaging that women will encounter difficulties in the construction industry is a roadblock at the tertiary level, by creating a mental apprehension in female students about pursuing a vocation that is not equipped for gender diversity. This mentality was perceived as an obstacle to women succeeding at the tertiary level, which may obscure the myriad opportunities available for women in construction and cast a negative pall over their future careers.

*I think to a certain extent there's that messaging coming through, whether it's through the institutions or still through society. There's that understanding that as a woman you're coming into the industry and it's going to be difficult [Women's group spokesperson]*

Evidently, the tertiary stage of the career of a professional woman is different to that of their male counterparts due to the circuitous route often taken to arrive at a construction degree. The experience of being in the minority gender may be a "shock" to professional women after secondary school but was not described as a major hurdle or deterrent rather a confronting reality of the industry they are preparing to enter. The professional women and employers emphasised that promoting a positive mindset around construction and how fulfilling a future career in the industry would be a powerful strategy to promote women's confidence at the university stage.

### **Equality in the educational environment**

Despite the challenges discussed above, overall, the professional women reflected on their university experiences as positive; one participant observed she felt "extremely equal". However, the focus group participants agreed that their experience of equality changed upon entering the industry post-university.

*I had a really positive university experience, studying with my peers, it was a small cohort. Yeah, you kind of reaped what you put in [Focus group participant]*

Much like the focus group participants and women's support organisations, employers perceived the education and training stage to be the career stage most free from hurdles for women. Indeed, employers felt women experience relative advantage at the education and training stage and when entering the industry. One of the younger employers commented that he could not differentiate between males and females at the graduate level.

Several of the employers emphasised that their graduate mix is 50/50 male and female. However, quotas and gender targets in graduate recruitment were discussed as having both significant benefits and drawbacks. One younger employer described that the preference



given to female applicants due to diversity targets could have the unintended consequences of more qualified male applicants being sidelined. In this employer's view, the practice of giving favour to a female applicant was felt to be inequitable and tokenistic, he noted:

*If we're looking for equality, then let's say, right, male, female, he was the better applicant, he got the job, but I feel like that we have this self-conscious bias towards women, which is also unhealthy [Employer]*

The literature on diversity initiative effectiveness suggests that unintended consequences of gender targets may be false progress and backfire and that organisations have a critical role to play in the authentic implementation of inclusion practices that do not tokenise women (Leslie, 2019). Leslie (2019) argues that diversity practices can have the unintended consequence of creating a negative perception of targets, in this case, women, based on practices that are perceived to "violate the meritocracy principle" and are thus seen as unfair (Leslie, 2019, p. 548). The meritocratic nature of employment in construction was valued by another employer, who observed, in relation to diversity targets:

*We just can't get the numbers. And quotas are another debate. It depends if you want to go there but quotas – I get it, I get we've got to do something but you want people to be measured on capability as well" [Employer]*

Female graduates and apprentices were perceived as equal in ability and enthusiasm to their male counterparts. Being in the minority gender was the main obstacle women must encounter at this stage of their careers.

*I think they're ready and excited for the opportunity in my opinion. They're seen as equal and they're ready to go but I think once they turn up to the office and see the numbers, that might surprise them that there's not many of them around but at the same time, that would've have surprised them through uni [Employer]*

The employers lacked the insight the professional women shared as to their experiences of being a woman in a male-dominated construction degree, including culture shock and exclusion. Encouragingly, the employer's perception of new female graduates to the industry was one of equality with their male counterparts and enthusiasm to work. However, the employers lamented a dearth of female graduates and expressed ambivalence about the practice of diversity quotas to promote gender equality.

## 5.6 Early experiences career stage

The early experiences career stage encompasses the recruitment and first professional roles. The major themes that emerged from discussions surrounding this career stage were:

- Quotas and hiring targets
- Disjuncture between education and work

- Encountering the masculine culture of the industry
- Additional challenges facing migrant women.

In discussions of the early experiences career stage, it was observed by several interviewees that women possess an advantage, where quotas and targets work in favour of women being recruited to graduate programs. However, the women interviewed recounted diverse stories of early encounters with tokenistic policies and the masculine culture of the industry in their early careers. These early experiences encompassed harassment, exclusion, bullying and a challenging transition from university to work. It was also raised that when hiring policies are tokenistic, women may find themselves pigeonholed and expected to bring traditional feminised traits to a role rather than their unique skillsets. Moreover, the migrant women involved in the discussion shared their encounters with racism and tokenism, as well as practical hurdles to employment stemming from their residency status. Employers felt that female graduates to the industry are treated equally with their male counterparts and that being in the minority gender in a male-dominated industry would be the only challenge of concern at the early career stage.

### **Quotas and hiring targets**

Increasingly the construction industry is beholden to government diversity targets and has introduced quotas and targets to improve the representation of women and minorities within the industry. A young, junior professional woman felt she had benefited from her employer's recruitment targets for 50/50 gender equality, *"I also have the diversity card, I think, being Asian female so that, I think, kind of helped me get into [Large contractor]"* she said. On the advantages of diversity targets, a senior woman reflected: *"To be honest, it's stacked in our favour at this point in time"*. Despite diversity targets having obvious benefits for this traditionally male-dominated industry, discussion ensued as to the potential backlash to women becoming tokenised in employment. A women's group spokesperson spoke of their concerns and that of their members that professional women will now be kept from other opportunities due to the need to have them on-site to meet the new targets. Overall, they were concerned with the new government initiative and the potential backlash on women. A senior professional reported that women are consistently feeling *"less valued"* or *"questioning their value and the authenticity of the commitment to diversity"*. The experience of being tokenised may render women insecure or isolated in organisations, with tokenistic and poorly designed diversity policies failing to genuinely challenge the practices of the industry (Galea and Powell, 2015). A senior woman in a large company reflected on this phenomenon:

*We've gone from a minority number to now a number that's needed to win projects and does that lose our value within our project teams? [Focus group participant]*

One woman's group representative similarly raised that gaining employment may be increasingly easier for women entering the industry, which the other spokespeople affirmed. This representative described her experience of benefitting from diversity targets at the recruitment stage of her career, which mirrored the experiences of several of the focus group participants. The consensus from these discussions emerged that recruitment is not the main hurdle facing women in the construction industry due to quotas and diversity targets assisting employment, but ultimately retention is the key challenge.

*I was told by my HR person that I was interviewed because I had a female name and they needed to recruit a female. Then actually, based on my interview also got it on merit, but I probably would have got the job just that I was a female  
[Women's group spokesperson]*

Recruitment practices that may lack transparency or seek subjective notions of "cultural fit" are another factor that militates against recruitment to the industry. The professional women expressed their frustration with the need for strategic alliances, or word of mouth references renders women at an additional disadvantage at the early career stage. One woman's first experience of gaining employment resulted from a fortuitous interaction between a family member and a senior construction professional on an aeroplane, she observed:

*I think construction is – it's who you know, not what you know, and it's really annoying, and I think it's a struggle for everyone [Focus group participant]*

A junior woman also reported benefitting from strategic alliances, having secured her first job due to her sister, who also works in the industry, "it was just so hard trying to get your foot in the door," she said. Notably, a women's group representative raised the point that women are more likely to be in less secure, low paid, ancillary roles within the construction industry, a fact that undermines the nominal increase in gender parity. She said: "it's that low-level administrative construction that we're rapidly growing in terms of female representation". The literature confirms that women are over-represented in administrative roles in many male-dominated industries and that these positions generally do not lead to senior management and are often removed from decision-making contexts (Wright, 2016; Fielden et al., 2001, Tradeswomen Australia Foundation, 2019). The women's group also touched upon issues of benevolent sexism arising from tokenistic employment. One spokesperson bemoaned the patronising attitudes directed towards women in the early stage of their construction career. These attitudes were felt to emphasise women's differences in the workplace and undermine the inclusive aspirations and platitudes of large organisations.

*What I found difficult in my first few years, and actually what I've seen with my colleagues, my young female colleagues, is something I'm very passionate about stamping out is a sense of patronising tokenism. "Oh, you can do that. You can do that, Sarah. Go on, you do it. You show us. [Women's group spokesperson]*

The employer interviews revealed a consistently held narrative that women and men face nearly identical challenges in their early careers, including during recruitment. There was an apparent disconnect between the testimonies of the women interviewed and the employers, whose consensus appeared to be that nothing is holding women back at this career stage. In contrast to the women's accounts of tokenism and benevolent sexism upon recruitment to the construction industry, employers felt that graduate programs, in particular, ensure male and female entrants are on equal footing.

*Their challenges have been no different to what a male has in the industry*  
[Employer]

A senior employer at a large company observed that women are as “*mentally strong*” as men and are uniquely “*detail conscious, and chase things to an end*”. These stereotypical feminine traits are often cited as the advantages women bring to the workplace. However, as previously stated, the focus group women expressed their frustration with being pigeonholed in this way and expected to bring these feminised traits rather than their own unique assets as an individual. The discussion of this theme revealed that gender diversity practices must be coupled with authentic leadership from employers and a top-down commitment to inclusivity within organisations rather than performative platitudes.

### **Disjuncture between education and work**

At the early experiences stage, a major theme that emerged amongst the professional women's discussions was a disjuncture between expectations of the industry formulated at university and the reality of the work environment. Despite often being the minority gender at university, the women experienced relative equality during their studies in the meritocratic tertiary environment. The professional women discussed the disparities between their expectations of the industry and the reality they faced upon entering their first employment. These discussions highlighted the culture of presenteeism, sexism and unconscious bias and social isolation as challenges they had not been prepared for after the tertiary environment. While these issues were said to continue throughout the career lifecycle, encountering them at a young age with little experience was observed as challenging.

Early experiences in the construction industry were defined by being confronted with the long hours, total commitment to a work culture that can entail conflict and harassment. One professional woman observed: “*Once I got into the industry then it was like really got to prove that I've got what it takes*” which was affirmed by another woman who, after having a positive university experience, stated: “*It was only really when we headed out to industry where we were treated differently*”. Other women recounted the uncomfortable experience of being the sole woman on a job site. A younger woman said she “*absolutely hated it*”.

A senior employer at Tier 2 company acknowledged this hurdle, stating that “*some young women would find that intimidating to go from school to Uni and onto a building site where*

*there might be one or two other females on-site.”* Correspondingly, a woman with a trades background, who moved into a managerial role, recounted that the on-site experience for tradeswomen was also compromised by inadequate toilet facilities and uniforms. This woman recalled that during her apprenticeship, older men were less accepting of women in trades, less willing to give guidance, and would behave in a benevolently sexist manner by refusing to let her do tasks due to her perceived capability, she reported: *“they wouldn’t let you fully integrate into the trade, because of how they felt around women’s roles”.*

The culture of presenteeism and long work hours is endemic to the construction industry and the literature on women in construction confirms that this is one of the main barriers to women’s early integration and retention (Kamardeen, 2018; Galea et al., 2020). Indeed, this sentiment was affirmed by one employer who described graduate professionals as *“the slaves of the building site”*. A senior professional reported her surprise at this element of the work: *“The other thing that really shocked me when I finally got in was the work hours. I had no idea that I’d be working Saturdays”*. The surprise at being required to work on Saturday’s was echoed by a woman’s group representative, who lamented the loss of work-life balance and leisure activities at the early career stage. Construction being incompatible with having hobbies was acknowledged as a roadblock at early career where women may have to sacrifice participation in sport and other activities, she said:

*Engineers have to work Saturdays so all of a sudden, they were playing footy and they have to give up their Saturday activities because they’ve now got this commitment to work [Women’s group spokesperson]*

The employers recognised that young women might be intimidated when transitioning out of the university environment to being one of a minority on-site or in the professional environment. Several employers remarked that female turnover in the early years is not high, suggesting that obstacles encountered in early career are common issues faced by early entrants to a high-pressure workforce and not unique to women. One employer observed that becoming comfortable in male-dominated spaces, including construction sites, is a learning process, acknowledging that: *“not seeing many females in the industry, would have a tendency to make you feel uncomfortable.”* One employer argued that treating women and men *“exactly the same”* at the early career stage and ensuring they *“feel comfortable”* and supported is the best strategy to ensure equality from the commencement of their career journeys, rather than emphasising *“the female difference”*. Notably, an older employer in a large Tier 1 company commented that the qualities that are sought from applicants during the hiring process are *“common sense, determination, respect for one another”* to cultivate an equitable environment for both male and female employees. This sentiment was echoed by another employer, who said:

*I think it’s with any new grad or new entrant into the industry, it’s just about having the right induction process and having that equality around pay and*

*equality around progression and a clear roadmap from the company. So, I think that's the responsibility of the businesses [Employer]*

Few strategies were raised to improve the transition from university to work in these discussions; however, work-life balance and re-thinking the long hours culture of the industry are discussed in greater detail in the growth career stage.

### **Encountering the masculine culture of the industry**

A major theme that arose in early career discussions was the challenges of encountering the masculine culture of the industry, and the behaviour that is tolerated in these environments. The professional women were candid in their recollections of inappropriate behaviour they encountered in their early careers; however, there was a notable generational shift as younger participants expressed their shock and dismay at some of the older participant's testimonies. It was acknowledged that change is occurring and that the younger generation of women in construction are increasingly intolerant of behaviour that was once accepted. One women's group spokesperson recounted that she had been subject to sexual harassment in the form of targeted sexualised graffiti in her first job. This incident had been handled poorly by her employer, leaving her feeling unsupported. She also reported bullying, yelling, and a culture of exclusion that rendered her early career experiences challenging, she said:

*I'd always go to the bathroom and cry. You didn't want to do it out in the open. You didn't want people to know what you were upset, things were affecting you or whatever. I think having someone from senior management sort of check in and actually just yeah, even pretend to care. [Focus group participant]*

The literature confirms that the sexist graffiti and pornographic material on construction sites is a common strategy to make women feel unsafe and unwelcome in male-dominated spaces (Watts, 2007). These behaviours undermine women's authority and constitute sexual harassment. Encountering the masculine, aggressive culture of the industry had been challenging in this individual's early career, where the "boys club" resulted in social exclusion. This was attributed to the "old school mentality" pervasive in construction, where a culture of conflict and confrontational communicative styles can militate against women's retention in the early years of their careers. A women's group representative described:

*It was that brute, aggressive like screaming, yelling, fists on the table, punching, "you do as I say" and you do it to whatever – like whatever the cost is [Women's group spokesperson]*

This individual commented that her organisation's work of interviewing and showcasing the experiences and careers of female professionals in construction had shed light on how common these experiences are in women's early careers. Notably, she remarked that when working in a female-dominated team with female management, her experience was

completely different. This observation mirrors many of the other interviewee's comments that when women are in leadership positions, the workplace experience is improved.

*There was one project where pretty much the whole team were women, and I loved it. Yeah. It was just a completely different experience. Again, a different boss, so that also just helped a lot [Women's group spokesperson]*

Some of the more senior women in the focus group discussion recounted facing significant challenges entrenched in the construction industry, including harassment and bullying.

*Like sexual harassment, harassment, bullying, trying to challenge for title or role. Wage, that was a good one. You name it. Unconscious bias was happening and didn't even have a term for unconscious bias. Like everything. You name it, it's there [Focus group participant]*

However, one of the most junior participants expressed her shock at this experience and commented that when faced with sexism from clients or sub-contractors, she has felt empowered in her current role to raise the issue and demand respect. The generational shift towards more inclusive practices in the industry was noted by the senior and junior participants; whilst the older women described a culture of hard knocks and endurance, the women observed that younger women coming up in the industry refuse to tolerate inappropriate behaviour and maintain an attitude of "no, that's not okay". To this point, a senior woman observed: "They've got standards and there just seems to be bit more awareness from that side of things, which I think is brilliant." A younger professional recounted her experience of experiencing respect:

*So my experience was I was quite respected, and my seniors, like site managers or project managers, introduce me to people and say, 'This is [name] and she does this.' So at the front end when they do that, I get respected straight away" [Focus group participant]*

The discussion in the early experiences career stage confirmed that due to challenges facing women's entry to the industry, many women take a circuitous route to their first employment, and as a result, are often older. This may result in women facing a unique set of challenges in their early careers, including bias around age and the possibility of taking maternity leave. This was raised as an issue that may impact older women in their early careers.

*I think maybe sometimes if you were coming into construction saying you were in your 30s, there might be some unconscious bias around, "She's of baby-making age, is she likely to come on board and want to start a family, and then we'll have to replace her?" and all that sort of stuff [Women's group spokesperson]*

Pregnancy bias was discussed in further detail in the ensuing growth stage discussions. The employer interviews did not garner insights regarding the experiences of early career women

when confronting the masculine culture of the industry. They repeatedly emphasised the equality of male and female graduates and expressed their commitment to inclusion.

### **Additional challenges facing migrant women.**

Several members of the focus group were migrants and recounted the unique challenges both international students and workers face in the Australian construction industry. One focus group participant reported that cultural differences had impeded her ability to secure employment because of a disparity in knowledge and norms due to prior training in the Indian construction industry. This participant described her approach as *“find a need for your skills, and if it’s not directly linked to a builder, go to a subbie”*. As an under-resourced sector, she found that working with sub-contractors allowed her to gain experience in the industry and learn practical skills in an Australian context. Another woman described being made to feel that hiring her was a *“bold decision”* because she was *“international and a female”*. In her first Australian construction role, this woman found herself in a company dominated by Australian males, where she was the only migrant female. She found that this homogenous environment expected her to bring stereotypical female traits to her work, such as attention to detail and multitasking. She described her frustration with being pigeon-holed in this way, commenting:

*He [Her Boss] was saying that we want you to come and add this, kind of regardless of who actually I am as an individual [Focus group participant]*

A women’s group spokesperson lamented the lack of diversity in senior management roles in the industry, which can result in non-white women encountering unconscious bias, intolerance, and ignorance.

*You’re getting a lot of different cultures and different backgrounds, but where that gets hard is that, like [another group interviewee] said, our senior management are still very white, very male and have no ability to interact or understand some of the cultural diversities of the young women who are coming through. [Women’s group spokesperson]*

Another professional woman faced difficulties at the recruitment stage of her career due to permanent residency being a common prerequisite for employment, thus providing an additional challenge to international students. She recounted that she *“tricked the system”* by avoiding the topic of permanent residency until she had secured her job and assured the HR department that she would secure it within months. She understood that she would not have been considered for the role, despite her skills and experience, due to her residency status.

Unfortunately, another professional woman described encountering racist attitudes in the construction sector, with people making assumptions about her capability and professional status, she said:



*Lots of times, when they see a young female face, and also Asian face, they say, 'Probably that is just the girl typing the documents. [Focus group participant]*

These examples illustrate the additional barriers migrant women face in their early career, which intensify the existing difficulties for women in this industry. Employer interviews did not touch on this theme and overall felt that this was a stage with few barriers and many opportunities.

## 5.7 Growth career stage

The career growth stage encompasses mid to late career experiences, including maternity leave and promotion. These discussions illuminated several key factors impacting women's retention and promotion. The themes identified include:

- Challenges for women attaining leadership roles
- Role of sponsorship and networking
- Maternity leave
- Work-life balance
- Flexible working conditions

Several of the women interviewed shared experiences of being sidelined and overlooked after maternity leave, and the employers conceded that due to the enormous work expectations, senior leadership positions in construction have traditionally depended on having a domestic partner that does not work. This area of the discussions illuminated strategies to support women's ascension to senior leadership. These included childcare support, job sharing arrangements and formal sponsorship programs. The professional women shared their frustration with the industry's resistance to systemic change to support working mothers at the career growth stage, while employers emphasised existing programs and support mechanisms as satisfactory. These themes and divergent perspectives are discussed in detail below.

### Challenges for women attaining leadership roles

A prominent theme that emerged as discussions moved towards career growth was the challenges surrounding the promotion and attaining leadership roles for women in mid to late career. The focus group participants raised numerous structural factors disadvantaging women, including unconscious bias and sponsorship. Employers suggested women lack confidence and suffer from more self-doubt in comparison to their male peers, which adversely impacts their chances of promotion. One senior focus group participant observed that she's had to "*fight tooth and nail for every single promotion*" over the course of her career, and another confirmed that despite being successful and efficient in her current role, she is frequently overlooked for opportunities or to run projects. The participants felt that

women's capability is constantly questioned where men's is assumed. A senior woman observed an industry focus on why women may not be able to fulfil a role, rather than their applicable skills, which manifests in discrimination, she noted:

*There'll be this analysis of a female's capability and what their shortfalls are or what the hinderances are for that progression. For years, I thought it was us and I thought it was the women underselling their capabilities, but I've actually seen, especially over the last 10 years, it's actually imposed on us [Focus group participant]*

*We always have to prove ourselves in the roles that we do and we always have to be the best at everything, but why can't a woman just be a mediocre boss? Why does she have to be the best? Can't she just be okay at her job and fulfil it? Men do it all the time. Why does a woman have to have all these – she has to be an excellent communicator or a people person and have financial knowledge and all of these sort of – why can't she just be okay like most other men are in those positions? [Focus group participant]*

This phenomenon of men's capabilities being assumed to fit with construction roles where women must routinely prove there is reflected in the academic literature. Collins (2014) describes a dominant "masculinity as capability" perception, which results in factors including dominance and ambition becoming aligned with senior roles and explicitly sought in hiring (Collins, 2014). Others have identified that this perception heightens women's visibility and renders them vulnerable to increased criticism for making mistakes, which may affirm existing biases that women lack competency in male-dominated fields (Foley et al., 2020). Echoing nearly verbatim the concerns of the focus group participants, one women's group representative commented: "men get promoted on potential, women get promoted on what they've done". The notion of gendered assumptions being imposed upon women was echoed by other focus group participants, who recounted instances of clients mistaking junior males to be project managers instead of them. This experience of blatant sexism was shared by one focus group participant who added: "I think there was a lot of that mentality of, 'No, well, I want the guy with grey hair in this position'".

The experience of being undermined, questioned, and having authority challenged was common among senior women. This was reflected in the testimony of one of the focus group participants who had transitioned from a large company to project management. She said: "I had 15 years out on-site and I was done with all the BS [Bullshit] and all the yelling matches and the undermining". Another commented:

*You're procuring a package, millions of dollars, you have subbies come in and I've got a junior in the room with me and he's male, and they'll talk to him rather than talking to me because they think that he's the one that's going to give them the contract [Focus group participant]*

These roadblocks were cited as some of the main reasons women leave the industry at the growth stage, with the participants sharing stories of friends who have left construction.

*I think there's plenty of women that we've seen and I know really close friends that have either left building companies, left the industry in its entirety, gone to client side, gone reduced hours, gone to consultancy, because it just gets to a point in time where it's like it can get too hard [Focus group participant]*

One women's group spokesperson commented that the biggest problem facing the construction industry today is helping women transition from mid-level positions to senior positions and beyond. This problem was attributed to being overlooked after maternity leave, lacking opportunities to gain leadership experience and tokenism in hiring where women are placed in positions they are not trained for.

Despite these issues, it was observed that women managers are some of the most successful in the industry due to the interpersonal skills and feminised communication styles women bring to the role.

*I've had it said to me a few times from different GMs [General Managers] from construction companies that some of their most successful project managers are female. We're highly organised, we're great at interpersonal relationships and they're kind of the two key success measures a lot of the time for profit margins being better [Women's group spokesperson]*

Advancement was raised by each of the employers as an important career intervention point, where women are being lost in the industry and failing to ascend to senior management. This phenomenon was attributed to the conventional male breadwinner model of the industry, where traditionally senior managers had wives that would not be working, as well as the industry resistance to flexible working conditions for leadership positions. An employer observed that promotion to management roles occur in the late 20s/early 30s, a period where women often take career breaks to have children. This "motherhood penalty" results in wage penalties and disadvantages over time, often attributed to discontinuity of experience (Kahn, 2014).

*Typically, in those senior roles. The wives would be working part-time or not working. The issue is, a building site is a live breathing thing that, runs six days a week. And you're always working to a deadline. And the site is probably open 10 to 12 hours a day. So, if you're in charge of that site, you're a project manager, site manager. It's very, very difficult to have that flexibility. You can't actually run a building site from home [Employer]*

At the career growth stage, the issue of confidence and the ability to advocate for oneself was raised as a problem women wrestle with when seeking promotion. Men's confidence in their abilities, which may be incongruent with their skills, is an oft-cited disparity between

men and women in the workplace, where women will underestimate their capacity to meet the requirements of a role, men will overestimate (Singh et al., 2018). One of the women's groups representatives observed that confidence is essential in the confrontational culture of construction, stating: *"if you're not confident enough to ask for what you want, you will get left behind"*. This issue, she said, was contributing to the gender pay gap and lack of women in senior management.

*There's probably more females who don't have the confidence to advocate for themselves, so they miss out on job promotions over their male counterparts who maybe if they tick 60% off the next rung up on the ladder, they'll apply for it but the female won't if she has 90% but doesn't know how to do that last item. I think it's a confidence thing a lot of the time for females [Women's group spokesperson]*

*We've done it before, we've done topics on how to ask for what you're worth and overwhelmingly, that's the reason there's a gender pay gap and that's the reason that women are not getting the promotions and that's overwhelmingly the reason that women are getting left behind in terms of senior roles and board positions. They're not asking for it and they're not advocating for themselves [Women's group spokesperson]*

The employers also raised the issue of women being unsupported and lacking confidence in senior roles. As the professional women discussed, experiences of having authority undermined or challenged can destabilise the confidence of a senior woman. Employers commented that women transitioning to client-side and away from senior construction roles is common, a move that was perceived as prioritising work-life balance over career advancement.

*To try and encourage our females to take that step into more senior roles, is to make sure they're properly supported. And not throwing them in the deep end [Employer]*

*The confidence to make that step and not get to a fork in the road, where they could, with the right support, continue to grow into those senior construction roles. And not necessarily go off to consultancy or client-side, which we so often see [Employer]*

These divergent perspectives where employers often individualised the issue of lack of career growth where women acknowledged structural disadvantage was illuminating. In a study of New Zealand female engineers, the authors argued that while women perceive their inability to attain senior management and higher wages to be caused by lack of ambition or resistance to advocate for themselves, patriarchy has rendered salary negotiation inappropriate for women, thus negotiating higher wages is perceived as contradicting normative expectations of femininity (Davies et al, 2017, p. 7). Women are made to feel "grateful" if they manage to

balance work and personal life, and indeed are erroneously convinced that they have the power to obtain senior roles and equal pay if they choose, despite “offering a realistic path for women to follow” (Davies et al., 2017, p. 2). This critical analysis of the gender pay gap and how it is perpetuated through narratives of individual shortcoming obfuscates the structural glass ceiling women confront at the career growth stage. This analysis is pertinent to the divergent perspectives on this issue presented by professional women and employers.

One employer raised a strategy of mentorship to support women in senior roles and enhance their confidence; he offered the example of arranging a male senior project manager to support this female project manager in his organisation:

*She's so capable, but she's also a bit nervous about running her own project. And she's still probably a little bit down on the confidence to, run all aspects of it. So, what I do is pair her up with the senior project manager, who's got his own project somewhere else ..... basically to just mentor [Employer]*

Ensuring women are supported in senior roles through formal sponsorship programs, childcare allowances, and flexible practices, including job share roles, were suggested as strategies to overcome these barriers at the growth stage. These strategies are discussed in detail below.

### **Role of sponsorship and networking**

An industry wide lack of women in senior roles was discussed in the focus group as a contributing factor to women’s challenges in the professional sector. The focus group participants agreed that without female role models and male advocates for gender equality, progress would be slow. One participant commented that in her 15 years in the industry, she has never worked in a team with another female leader. Another observed that while men are groomed for leadership positions, women are not, despite this being essential for attaining senior roles. The notion of being “groomed” for leadership led to a discussion of the role of strategic alliances and networking. The participants agreed that to achieve career progression in this industry, one must be aligned with senior managers due to the practice of “picking your team”, that is, selectively promoting colleagues based on subjective criteria for excellence. It was raised that the difficulties surrounding this practice are compounded by the need to be aligned with senior management.

*You've got to be aligned with the senior manager in the business and they often say, "I can see the boys are all aligned. I can see the boys have got someone that's going to take them on their journey" [Focus group participant]*

The lack of transparency around criteria for promotion and policies of “picking your team” render women disadvantaged in an industry that often has male centric notions of what constitutes excellence such as being bold, aggressive and assertive – attributes that can be a double-edged sword for women who adopt them (Galea, 2018). The need for strategic

networks is intensified by these homophilic hiring and socialising practices within the workplace. Furthermore, interpersonal relationships can be a resource, and women's inability to penetrate male networks contribute to their marginalisation within the construction industry. One participant raised the important issue that men's networks often operate beyond the workplace, to the detriment of women colleagues, *"They go footy together, they go clubbing together, they have lots of similar interests,"* she said. Male networks centred on sports events have been documented to marginalise women in male-dominated industries, resulting in homophilic hiring practices (Ho, 2009; Davies et al., 2017). This practice was interpreted as hindering women's career growth by delaying their opportunities for promotion. One professional woman argued that tokenistic gestures like international women's day events do little to practically support female employees and that men *"need to come to the party in caring about this"* because it is for *"the greater good of everyone"*. One of the most junior discussion participants slightly contradicted these sentiments by arguing that in her experience, male managers who have daughters are more respectful of women professionals and *"really, really want to help you"*. This comment once again spoke to generational shifts and changes within the industry and suggests progress in industry culture.

*The buddy problem where you have young men and women entering the industry and then the young men are buddied up or they get really pally with their more senior male counterparts, and they're brought along a faster journey than their female counterparts. The only way that the girls and women can compete or participate is if they go along to all those other things that the boys do, go to the pub every Friday night, go do this, go do that" [Women's group spokesperson]*

*It's finding a link, male managers they talk about football, basketball, outside of work interests that are predominantly male [Women's group spokesperson]*

Formal sponsorship programs were raised as a strategy to aid women's strategic network development. However, it appeared that these were harder for women to penetrate.

*That network building, the analogy I've had said to me is about the slipstream. You've got someone who's senior who's advancing and if you can get into their slipstream then you'll follow up along behind them. It's a lot harder for a woman to find an appropriate slipstream than what it is for a man [Women's group spokesperson]*

Another issue of homophilic practices at the growth stage that disadvantaged women was raised by the women's organisation representatives. One said: *"men do business with men who are like them."* This was in relation to bringing new business into the company. Women find this aspect particularly difficult, especially when in new business development roles. Other women also noted that the practice of "picking your team" is alive and well in construction, and this too can hinder future opportunities as certain experiences may not be gained. There is a distinct lack of transparency around selection criteria which tends to work

in favour of the traditional incumbent: white men. This was described as the “perpetual boys club” and was an issue that was raised by all the women interviewed.

A women’s organisation spokesperson reported a dearth of options for networking, which were expensive or unwelcoming, and was the impetus in creating their organisation. Topics including ‘babyproofing’ your career, avoiding burnout and the road to leadership were said to be of the greatest concern for members of the organisation.

A senior employer in a large company affirmed the need for mentors and networks for women, emphasising the social support that may be needed when encountering bias and discrimination in the industry.

*I guess women will need their own support group and I suppose a support group that’s shall we say ..... just a practical group of people that can help manage the process because they will run into bias and different issues so there’s someone for them to talk to and I suppose the other thing, it’d be useful to have mentors*  
[Employer]

Evidently, sponsorship is crucial for career progression in an industry with highly informal promotion practices. Without access to both formal and informal male networks, women lack the necessary opportunities for networking and creating strategic alliances. Formal sponsorship programs were a commonly referenced enabler for women at the growth stage of their careers.

## **Maternity leave**

Each discussion considered the challenge of maintaining work-life balance in the construction industry, which is defined by high intensity work. The consensus from professional women and employers was that improving the well-being of employees in construction will have an enormous impact on the industry culture and increase women’s retention and advancement at the growth stage.

Both the women’s testimonies and comments from the employers considered that maternity leave severely impacts the promotional prospects of professional women. A project manager with a trades background who participated in the focus group lamented the lack of guidance for pregnant tradeswomen: “There’s nothing in there for when you get pregnant and what sort of work you can do when you get pregnant at the various stages of pregnancy”. The professional women affirmed that pregnancy is a fraught stage of a woman’s career in construction. A project manager in a large company recounted that she was effectively demoted during her pregnancy due to a perception that she could not handle the workload.

*As soon as the business found out I was pregnant someone came in over the top, and then I continued on for the next eight months as a design manager basically.*

*Still with the title, but the role that I was doing wasn't developing me [Focus group participant]*

This appeared to be a common experience. Career breaks to have children were widely agreed upon as a hindrance to career progression. This was also the understanding of even young entrants to the industry. One woman observed an internalised understanding in female professionals that parenthood will adversely impact their careers, she noted:

*A lot of the young women constantly ask it, even when they're sort of 10 years away from wanting to have kids, it's like, "I just see it. I do not actually see how you can have children and progress through the industry [Focus group participant]*

These comments reveal the persistent difficulties women face at the parental stage. Participants described feeling like they were “put on hold” during maternity leave and overlooked for promotion upon return. A senior project manager confirmed that having a family means “everything takes that little bit longer” due to assumptions made on women’s behalf, such as “if I put you into that role then you won’t be able to get home in time for your kids”. The professional women reached a consensus as to the incompatibility of flexible maternity leave policies with the industry’s current culture of total commitment and availability. Additionally, it was agreed that men in the industry do not face the same setbacks due to having families. An inequitable division of labour in the home is widely understood as a traditional support to men’s careers. One focus group participant observed:

*A lot of the senior management have been in the industry for 25 to 40 years who have wives that have never worked [Focus group participant]*

Stigma surrounding taking leave and working in flexible conditions remains pervasive in the construction industry and militates against both men's and women’s work-life balance. A professional with a trades background observed that tradeswomen must “bank up” all their leave to have a child or “accept that your partner is going to have to cover that off”. Re-entering the workforce after taking maternity leave has been documented as a difficult time transition, with academic studies confirming that women are often passed over for promotion due to this career break (Bryce, 2019). Indeed, parental leave practices in numerous industries remain shaped around the primary carer and partner, reinforcing women’s role as carers and men as breadwinners (Galea et al., 2018). The participants recognised the fundamental role destigmatising leave for men and encouraging paternity leave will play in improving women’s retention at the parental stage. Interventions at this level are desperately needed.

### **Work-life balance**

At the growth stage of the career, challenges with maintaining work-life balance are exacerbated by the rigid workplace practices and resistance to flexible working conditions



characteristic of the construction industry. The women's organisation spokespersons observed professional burnout as a catalyst for women leaving the industry.

*You're trying to put out tenders to keep 150 people of our employees in work, plus deliver the project and make money. Then you've got a sick parent that you have to tend to. There's all these things that you have to pick up in life and you've got all these balls in the air and when they start dropping ultimately that's when the women start questioning, like I can go and do an easier role now that I've gotten a certain level of on-site experience to make all the other things in my life better, because ultimately I choose my family over my work and that's where we're losing people [Women's group spokesperson]*

One women's group spokesperson observed additional burdens women face in the professional setting. They are implicitly expected to organise domestic aspects of the workplace, including catering and birthdays, which contributed to a sense of insignificance and lack of authority. These additional burdens were affirmed by the other participants as driving women's burnout and attrition.

*But that's where we have the dropout of women. They are getting five years in and going, "I cannot do this a single second more because I don't have support anywhere. I'm doing everything at home, I'm doing everything in the business, I'm doing all extra bits and bobs within the company because I'm the female. [Focus group participant]*

*I'm cleaning up after meetings, I'm ordering the catering, I remember such and such's birthday." All that stuff that goes shamefully with being a woman almost. But unless we put some support around that, we aren't going to retain women [Women's group spokesperson]*

Employers identified parenthood as a difficult stage for professional women and emphasised their existing strategies and programs to support working mothers and aid their transition back to work. It was observed that maternity leave is often taken at the exact time when male peers are being promoted, thus disadvantaging women and slowing their advancement.

*Maybe these females at work, they could've been promoted, but now they're only working a reduced three days a week or four days a week. It's very hard to do a project management or a senior role in construction remotely and in three or four days a week [Employer]*

*..... when they have children, whether you like it or not, they have to step out to do some sort of caring role. It's probably been made a little bit easier with parental sharing but clearly, it can slow their career path because they've gone for a period and they're not in keeping with their peers, because they're continuing*

*through, so that's probably the only impairment I can see to their career or people being biased towards them [Employer]*

The employers felt that slowed career growth due to career breaks is an unfortunate reality of working in construction. However, flexible working conditions were discussed and advocated for by employers. They stressed that excessive work hours and lack of work-life balance negatively impact all employees, not just working mothers. Transitioning back to work after pregnancy was observed as the crucial intervention point where companies must actively support women to ensure retention. A women's group spokesperson commented that several companies had employed initiatives including coaching and counselling programs to ensure women remain on their growth path after pregnancy.

A women's group spokesperson recounted her decision at the growth stage to move to a Tier 2 builder to regain some work-life balance that had been absent in her early career. The question of "how do you manage it all?" was again raised as the most pressing issue facing women at this stage of life. Maintaining a commitment to work as well as family and social life was said to be at odds with the construction industry, where people are "obsessed with their jobs". This unhealthy commitment to work where people "live, breathe and eat" construction was defined by brutal expectations of long hours and total availability.

The professional women interviewed reported that work-life balance issues are the key reason women leave the industry in mid to late career or transition out of management. A senior manager in a large company reported:

*I'm 21 years deep and I still have days where it's too much and I think there's plenty of women that we've seen and I know really close friends that have either left building companies, left the industry in its entirety, gone to client side, gone reduced hours, gone to consultancy, because it just gets to a point in time where it's like it can get too hard [Focus group participant]*

This comment was met with agreement, prompting a mid career woman to share her experience of currently taking a career break due to work-life balance challenges, she said:

*I have two young children. I'm actually taking a break. I'm not working this year at all and I've been contemplating whether I would go back to construction or whether I would choose to do something completely different [Focus group participant]*

It became apparent that a domestic partner's emotional and practical support is a crucial support at the career growth stage. Despite improvements in the division of labour in the home, women still shoulder the burden of domestic responsibilities, resulting in less time to commit to strategic networking (Lyness & Thompson, 2000; Bushell, 2020). A women's group spokesperson remarked that a common narrative amongst women who have succeeded in

the construction industry was the support of an understanding partner, a “cheerleader” who shares the load of domestic responsibilities equally.

Overall, several factors were raised that contribute to professional burnout and women leaving the industry at the parental stage, including a lack of organisational support, slowed career growth, and mental challenges arising from a lack of balance between work and family life. Structural interventions are desperately needed at this stage, which was unanimously said to be the most challenging in a woman’s career.

### **Flexible working conditions**

As previously discussed, numerous employers mentioned that the pressure of long hours and lack of work-life balance results in women moving to client-side project management or other sides of the industry at this stage of their careers. The employers raised flexible working practices and improved maternity policies as support strategies for women at the growth stage, reflecting the concerns of the women interviewed. While some employers argued that “*nothing is stopping them from succeeding,*” others shared insights and frustrations with the entrenched barriers women face at the growth stage. However, the employers did not speak to the “boys club” or lack of transparency in hiring practices that the women articulated as challenging.

Several employers mentioned the high remuneration for work in the industry as the factor driving extreme expectations of employees. Interestingly, this topic was not raised by the focus group participants or women’s organisers but by the employers as a justification for the commitment the industry expects from employees. Indeed, the employers emphasised the positive elements of the industry, and high wages were said to be an incentive for women to remain in the industry.

*There might be areas where it’s wrong, but it is a very well recompensed industry and people get to enjoy the best of everything in it in my view from both entertainment, corporately, it’s a very, very well serviced industry for anybody to be in, in my view now [Employer]*

*But I think what it is, you’re remunerated accordingly in the industry. It’s not like you’re earning a hundred thousand, you have to work 50 hours a week. Four years into the industry, you’re earning 120, 150 grand. It’s a big wicket. I think that’s the drawback and the attraction of the industry [Employer]*

Whilst high wages are an attractive element of the construction industry; research demonstrates that a wage gap remains (Cohen & Huffman, 2007). Indeed, the low numbers of women in senior management in construction mean women employees rarely access the highest wage band available. A younger employer at a new company acknowledged that whilst the high wages could be “*life-changing*” for women, especially those with families to support, the hours demanded are often incompatible with the parental role.

Another employer argued that the union agreements and EBAs lack adequate provisions for part-time and flexible work and effectively discourage primary carers of children by stipulating work hours that begin at 7am.

*The agreements that we have with the unions actually discourage anyone working outside of those hours, because let's be real, to be ready for work at 7 o'clock, you've got to be up at 5am and if you're the primary carer of children, that's just impossible." [Employer]*

Only one employer discussed the issue of moving to a five day week on-site calendar and its benefit to male and female employees and workers in site-based roles.

*I'd like to see the industry go to five days a week because if people got their weekends off, it'd go a long way to people maybe being able to juggle [Employer interview]*

Several employers expressed their frustration with the rigidity of the industry and an understanding that women face multifaceted challenges when negotiating flexible working conditions. Some employers advocated for each of their companies' policies and expressed a sentiment that flexibility and prioritising family are accepted and encouraged, especially during the transition back to work after maternity leave. These employers acknowledged that the onus is on organisations and senior management to create a culture that is supportive of work-life balance and pursue policies that promote flexible working arrangements to support women professionals. These strategies included job-share arrangements and flexible work hours, which surprisingly, in this day and age, are not accessed by male professionals.

*It's allowing and letting people know that if you can put a proposition forward, you can keep that talent in your business. Job sharing is massive to me. I think that's one we could look at and they need to understand that - are they ready for that? [Employer]*

*Typically speaking, males in construction do typically earn more. But we do still provide the flexibility. We're always trying to talk about it and make sure you leave early. Make sure you attend the kinder functions or the first day of Prep or whatever you have to do. Go out, leave early and do what you have to do for your personal life. But generally speaking, we would hardly ever see a male come to us and say, "I need flexibility. I want to work part-time." It just doesn't happen [Employer]*

These strategies for improving the work-life balance of construction employees recognise the structural barriers in place. In contrast to employers, women argued that there is an industry culture of resistance to flexible working conditions and a stigma surrounding prioritising well-being and balance. Securing flexible conditions was felt to be dependent on managers and

organisation culture. The professional women felt that there exists a performative promise of flexibility without a tangible commitment to implementing flexible policies.

*They just don't acknowledge it, which is quite frustrating, and they don't seem to – they bang on about making flexibility and part-time work workable, but they're actually not doing anything to change that [Focus group participant]*

*No one wants to take four months off and spend time with their children because it's frowned upon [Focus group participant]*

One women's group representative emphasised the toll rigid working practices take on all members of the industry, highlighting a high divorce rate as an unfortunate by-product of the high-intensity work and evidence of well-being being compromised.

*If we're looking at the issue as a whole, it has a very high divorce rate because traditionally it's the men who are at work too much. Obviously, people want to earn lots of money because the guys are paid per hour and their overtime brings in the higher wages. And given all of 24/7 work, how do we control the logistics around that to make it bearable for people [Women's group spokesperson]*

Overall, despite divergent perceptions of the barriers driving low representation of women in senior roles and inability to accommodate flexible working conditions, the professional women and employers were unified in their desire to improve the industry by prioritising well-being and mental health of employees. Both the women's testimonies and comments from the employers acknowledged that long hours must be reconsidered to enable flexibility and improved well-being and prevent women from transitioning out of management at the parental career stage. Evidently, interventions at this level, supported by senior management, are desperately needed.

## 5.8 Conclusions

The findings stemming from the focus groups, group interviews and employer interviews illuminate the multifaceted, complex barriers women face at each stage of their careers and the cultural overhaul needed to improve women's careers in construction. The testimonies of the professional women interviewed in the focus group revealed that the initial decision to pursue construction at a tertiary level is plagued with roadblocks, including active discouragement, lack of information, and pervasive stigma depicting the industry as macho and dangerous. Representatives from the women's group shared these concerns and emphasised that the perception of the construction industry in the media and popular imagination does a great disservice to the recruitment of women. These testimonies conflicted somewhat with the perspectives of employers, who felt strongly that a lack of information and awareness is the main roadblock, and thus if women were equipped with accurate information about the various roles and pathways available, they would eagerly

pursue the construction industry. Employers and professional women observed that familial influence is, at present, a common route for women to be exposed to a nuanced understanding of the industry and to formulate a desire in adolescence to pursue the built environment. The key takeaway from exploration stage discussions was that promoting a positive depiction of the industry through increased information, education, and exposure to the professional roles available during secondary years is necessary to attract young women.

Upon commencing a construction degree and entering the university environment, the women described experiencing relative equality and quickly overcoming the initial “shock” of being the minority gender in the educational environment. The professional women and employers commented that female applicants could be advantaged at the recruitment stage by the presence of gender equality targets and quotas that increase their likelihood of employment. Despite this being an ostensible advantage, women described being tokenised and isolated, having benefitted from recruitment targets. The international women involved in the discussion described additional hurdles, including racism and difficulties securing employment without permanent residency.

Employers felt that the education and training stage is one at which male and female construction students experience very similar challenges regardless of gender, and moreover are identical in talent and skill. Upon entering the industry, some of the women’s experiences had been marked by harassment and exclusion, reflecting the academic literature. There was a notable generational disconnect in the focus group discussions wherein older, more senior women reported an overtly masculine work culture and tolerance for harassing behaviours. In contrast, younger discussion participants described their steadfast refusal to endure patronising, sexist or harassing behaviours and their experiences of authentic organisational support. This disparity in experience perhaps spoke to a generational shift in behaviour and culture and was an optimistic insight; however, it should be remembered that the younger women’s experiences are more sheltered than those of the senior women. The employer interviews lacked many insights as to the roadblocks women face at the early career stage. A handful of employers acknowledged that entering the industry as a woman can be “intimidating”, and the absence of female role models in senior management may concern an early career woman and cast a pall over their potential career growth.

Ultimately, the growth stage of the career was the stage at which most insights were garnered from focus group discussions and interviews. Employers, women’s group representatives, and professional women raised maternity leave and work-life balance as the most challenging roadblocks in women’s careers. Professional women shared their experiences of taking maternity leave and being overlooked for promotion, with an acceptance that having children “slows” career growth. Employers similarly acknowledged that maternity leave does impact women’s careers and that challenges juggling work and

personal life often lead to women transitioning to client-side areas of the industry and away from senior management aspirations.

Significantly, professional women argued that resistance to flexible working conditions, including part-time and job sharing, as well as stigma around paternal leave, contributes to this problem. This contrasted the employer's narratives, who emphasised their commitment to supporting women at this crucial stage and endorsed flexible working conditions. One employer highlighted the role of the unions in resisting flexible working conditions by stipulating rigid work hours, thus driving long site hours.

Overall, the differing perspectives encompassed in this data paints a complicated picture of the structural issues facing women in a construction career. From adolescence to late career, women negotiate gendered expectations of work and behaviour, as well as challenges and undermining attitudes about women's capability. Simultaneously, women are navigating a masculine culture that has not fully deconstructed the traditional male breadwinner model or adapted to accommodate primary carers. Employers lacked a nuanced understanding of these hurdles but possessed a unique management perspective that acknowledged women's challenges in the industry are systemic and must be addressed by a cultural overhaul.

## 6. CURRENT STATE GOVERNMENT POLICIES AND INITIATIVES

With significant work being undertaken in this area, it is also essential to recognise the Victorian Government's current initiatives, plans, and strategies and how these may affect a new Strategy for gender equality for the industry.

The Victorian Government's recent and current commitment to diverse and inclusive workplaces are outlined in the following strategies and plans:

- Safe and Strong, Victoria's Gender Equality Strategy 2016
- Women in Construction Strategy 2019-2022
- Building Equality Policy (2021).
- Women in Transport Strategy 2021-2024
- Accessibility Action Plan 2019 to 2022
- Pride in our future: Victoria's LGBTIQ+ Strategy 2022-2032
- Absolutely Everyone: State Disability Plan 2017-2020 (new 2022 to 2026 plan to be released soon)
- Every Opportunity: Victorian economic participation plan for people with disability 2018-2020
- Everybody Matters Inclusion and Equity Blueprint 2019-2022
- Local Jobs First Policy - May 2020 PDF | 284.9 KB
- Victorian Aboriginal Affairs Framework 2018-2023
- Victoria's Multicultural Policy Statement 2017
- Ending Family Violence: Victoria's Plan for Change 2017, Ten-year plan
- Social Procurement Framework (2018)
- Social Enterprise Strategy (2021 - 2025)

In March 2021, Victoria's Gender Equality Act 2020 came into force to improve workplace gender equality in the Victorian public sector, universities, and local councils. On January 1<sup>st</sup>, 2022, the Victorian Government's Building Equality Policy (BEP) came into effect to address gender imbalance in the construction industry. The policy creates training and employment opportunities for women via government procurement within building, infrastructure, civil engineering, and other sectors other capital works projects. Further information is provided below.



In addition, to the work identified below and listed different government departments<sup>181</sup>, the Victorian Government is part of a significant initiative examining improvements to procurement and the delivery of major government infrastructure projects.

The Construction Industry Culture Taskforce (CICT)<sup>182</sup> is an initiative of the Australian Constructors Association, which represents Australia's largest construction firms and includes the Governments of New South Wales and Victoria and Australia's leading workplace researchers. The Taskforce works alongside the Construction Industry Leadership Forum (CILF)<sup>183</sup>, a forum of leaders from industry and the Victorian and NSW public sectors. Established in 2018, they have developed a new Culture Standard aimed at lifting productivity and performance of construction and addressing the major issues in the industry. These include excessive work hours, fatigue, poor mental health, and failure to attract a diverse workforce.

## **Department Premier and Cabinet**

### Women in Construction Strategy

Focussed around attracting, recruiting, and retaining women in construction the strategy began by focussed on women in trade roles with \$500,0000 initially allocated. Existing industry bodies implemented a series of pilot programs and funded other initiatives. Some initiatives included: an online jobs portal, a support program, gender violence training to create respectful construction sites, a set of recruitment standards and practices, a website for students, careers teachers and parents, a careers day for young women and research into issues affecting women's attraction, recruitment, and retention in construction. This funding was expanded and currently stands at \$2 million with some initiatives expanded and others undertaken.

### Building Equality Policy

The Building Equality Policy (BEP) came into effect on January 1<sup>st</sup>, 2022, and applies to all publicly funded construction projects at or over \$20 million. It will not apply retrospectively to contracted or invitation to supply projects issued before 1 January 2022. It mandates the representation of women is at least three per cent of each trade role, seven per cent of each non-trade construction award covered position and 35 per cent of management/supervisory and specialist positions. It also requires that four per cent of the contract works' total

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<sup>181</sup> These are listed by Department and may not be an exhaustive list of current policies and initiatives. Our thanks to the DPC and DET for assistance with this section.

<sup>182</sup> The CICT works alongside the Construction Industry Leadership Forum (CILF), a joint forum of leaders from industry and the Victorian and NSW public sectors. CILF aims to drive improved collaboration and action around procurement and delivery of major government infrastructure projects, including by addressing capability and capacity constraints. More information can be found at <https://cultureinconstruction.com.au/>

<sup>183</sup> CILF aims to drive improved collaboration and action around procurement and delivery of major government infrastructure projects, including by addressing capability and capacity constraints.

estimated labour hours for apprentices and trainees be performed by women. Principal contractors have a contractual obligation to ensure participants in their supply chains contribute to the overall targets across the project. Suppliers need to develop project-specific and organisation-wide Gender Equality Action Plans. There will be a two-year transitional implementation period and action on non-compliance will start January 1<sup>st</sup>, 2024. The BEP will be mandated through the Social Procurement Framework, with the Social Procurement Assurance Function responsible for compliance and monitoring.

## **Department of Education and Training**

### Victorian Group Training Program

This program incentivises GTOs to employ women as apprentices by payment of a higher loading for commencement, in-training and completion

### Retrenched Apprentices and Traineeships

Launched in recognition of the impact of COVID-19 on this area, this reconnects apprentices and trainees with employers through an online register. Apprentices and trainees register online and will be placed with an employer through a Group Training Organisation or placed directly. Employers are able to register their interest or job vacancies and may be eligible for federal government incentives.

### Big Build Apprenticeships (BAA)

The Big Build Apprenticeships (BBA) program was announced in the 2020-21 Budget as a transformative approach that will leverage Group Training Organisations (GTO's) and Victoria's infrastructure program to create high-quality skills pathways for apprentices and trainees. It aims to enhance the impact of the Major Projects Skills Guarantee (MPSG) and support up to 1,500 apprentices and trainees each year (once fully operational), including women and disadvantaged Victorians, and secure a pipeline of skilled workers in critical areas.

### Apprenticeship Innovation Fund

\$5 million of this fund is allocated to get more women into male-dominated trades. Ten innovative programs have been supported, including:

CareersPlus (Building, construction, civil and automotive trades), Women in Plumbing (waged pre-apprenticeship training), Women in STEM, SPRINKS (women into the fire protection industry), Women and Their Trades (electrical industry), Women on Track (women in the rail industry) and Women Only Multi-trade Pre-apprenticeship.

### Learn and Earn Pilot

To attract and place women in male-dominated trades, includes a website, information sessions and women-only try-a-trade days and pre-apprenticeships. Across a range of

industries. VTHC are piloting, Women on Site to increase the number women in traditionally male trade roles including construction.

#### Apprenticeship Support Officers Program

Apprenticeship Support Officers (ASOs) are located across Victoria and offer a free and confidential support and advice service. This means apprentices and employers can receive help with the workplace, training or personal issues that often affect apprenticeships. There are 28 ASOs working out of 12 sites across the state, providing a local service in Melbourne and in regional Victoria.

#### Rewarding Careers advertising campaign

The campaign will promote the Women in Apprenticeships initiative. It will promote careers in apprenticeships, with a focus on women and girls and other underrepresented groups

#### HeadStart

This is a new model for school-based apprenticeships and traineeships for both girls and boys. Provides support to students while they study and work. The goal is to deliver approximately 1,700 apprenticeships and traineeships across Victoria, taking place in over 100 secondary schools in ten locations

### **Department of Jobs, Regions and Precincts**

#### Jobs Victoria

Jobs Victoria supports job seekers and helps to connect employers with those looking for work. Provide information and advice via the phone, in-person and online to facilitate employment and offer support to those in need. Online hub will match employers with skilled candidates.

Jobs Victoria also subsidises employment via the Jobs Victoria Fund, which has \$250 million to help Victorian businesses to employ approximately 10,000 jobseekers. The Fund has subsidies of up to \$20,000 available to cover the cost associated with employment for a 12-month period.

#### Jobsbank

Jobsbank is a not-for-profit organisation, supported by Victorian government. Together, they work to support people who face barriers to employment, such as older Victorians, people from refugee or migrant backgrounds, and those that have left school early (DJPR, 2019). The Victorian Government committed \$2.2 million to Jobsbank in the 2019-20 Budget.

#### Inclusive Employment Framework

This aims to align efforts across government portfolios in order to reach the people and communities most in need of support into employment. It includes departmental statements

identifying how each department will contribute to inclusive employment and targeted employment plans for communities/groups facing sustained barriers to employment

#### Local Jobs First - Major Project Skills Guarantee

This policy works to create opportunities for apprentices, trainees and cadets on the state's largest construction projects valued at over \$20 million. Victorian apprentices, trainees, or cadets constitute at least 10 per cent of the total estimated labour hours.

### **Department of Transport**

#### Aboriginal Employment Targets

The Major Transport Infrastructure Authority has a 2.5 per cent Aboriginal employment target (total labour hours) for its major projects, including the:

- Level Crossing Removal Project
- Melbourne Metro Tunnel Project
- West Gate Tunnel Project
- North East Link Project
- Rail Projects Victoria.

Significant synergies exist with the current and past work of the Victorian Government, including that of the CITC, and the new Building Equality Strategy Plan.

### **Department of Families, Fairness and Housing**

Women Victoria (Victorian Government, Office of Women) conduct a number of women's leadership programs. These are for women of all ages and backgrounds and include scholarships, awards and networking opportunities. Of particular interest are four programs:

#### Victorian Honour Roll of Women Program

This celebrates outstanding contributions and acknowledges the many ways in which women have made a lasting contribution to our state.

#### Joan Kirner Young and Emerging Leaders Program

This program was established to in honour of the late Joan Kirner who was Victoria's first and only female Premier. The program provides skills, networks and experiences for women 18-40. No further information was available as the website link was not functional.

### Women's Board Leadership Program

This scholarship helps women with various levels of experience build or expand their board careers. The program has 3 streams of entry:

- 'Starting with board skills' – for applicants with no prior experience on boards or committees of management
- 'Strengthening board skills' – for applicants with up to 3 years' experience serving on Government or not-for-profit boards or committee of management.
- 'Mastering board skills' – for applications with more than 3 years' experience serving on Government or not-for-profit boards or committee of management.

In 2021 the program was delivered in partnership with the Australian Institute of Company Directors and the Office of Women. No details are available for 2022.

### Women's Board Register

This service helps promote equal representation of women on company boards. Women can search for vacant positions for women on Victorian boards. They can also register to receive alerts when new positions are available.

## 7. CONCLUSIONS

### 7.1 Introduction

Women still comprise just 1.2% of the construction trades and only represent 6 to 9% of the technical, traditionally male, professional, and managerial roles. This has been the case for a considerable period, and as the Victorian Government has realised, change is sorely needed. Change is already occurring through Victoria's Women in Construction Strategy and with the recent introduction of the Building Equality Policy mandating some minimum gender targets on larger government building projects. A longer-term Building Equality Strategy provides the opportunity for a generational shift within the Victorian construction industry. This report outlines the background information required for a robust evidence-based longer-term strategy.

The construction industry's gender problem has been described as a "leaky pipeline". This analogy refers to how the myriad of challenges women face during their construction careers reduces their representation at each career stage. Consequently, an extremely small portion of women work on construction sites or ascend to senior management roles. Supplying this pipeline in the first place is difficult, but the pipeline from education and training to career growth is permeable. Therefore, it is crucial to understand the roadblocks women face – how can we encourage them to consider construction in the first place, and how can we keep them from leaving as they proceed along these gender atypical pathways.

This report has taken a holistic approach to understanding women's experiences in construction by beginning in early adolescence when forming vocational interests and concluding in late career. At each stage of the career lifecycle, women confront the consequences of gendered attitudes formulated in childhood, garnered from the media and family, and entrenched in the construction industry. These attitudes result in women facing isolation, harassment, tokenism, and comparatively slow career growth. While these challenges are endemic to the labour force, the construction context is unique due to a traditionally masculine culture and resistance to inclusion and diversity. Promoting the construction industry to women has been highlighted to mitigate skilled labour shortages, improve productivity, and improve the economic security of countless Australian women.

### 7.2 What we know from the literature

A review of the literature identifies several significant themes that militate against diversity in the construction industry and negatively impact women's career progression in professional and on-site roles. Promoting an industry to young women, which is widely perceived as the final bastion of hegemonic workplace masculinity, remains a complex problem that requires overcoming cultural misconceptions and stigma.

The literature confirms that the career lifecycle of a woman in construction is fraught with challenges both distinct to the industry and endemic to the broader workforce. These may be mitigated by improvements in organisational support, alternative work arrangements, better management of maternity leave and increased transparency in promotional processes and recruitment practices. Ensuring the equal treatment and growth of working mothers is a challenge that organisations must embrace with authentic commitment and robust, revisable policies, including job sharing and part-time roles, supported by top-down leadership. The existing academic literature offers a plethora of strategies, policies, and interventions that organisations and policy makers can embrace to improve women's employment in an industry that provides rich pathways for career development, substantial financial remuneration, and output that has meaningful benefits for society.

### **7.3 What we know from existing programs**

The review included both local and international programs, focusing on women in the construction industry, as well as other male-dominated areas, such as STEM, mining, and transport. In total, 365 programs were identified, including 249 international programs and 116 local programs. Learning from these existing programs is crucial to help avoid mistakes and develop successful interventions for the future. Program theory was used in conjunction with the career stages literature to analyse the pool of programs, which allowed for the identification of common practices and uniquely successful approaches at each career stage. This broadly included program activities focused on awareness raising, exploration, skills building, the development of resources, support and guidance, and cultural change across the career stages.

Six programs were selected as case studies, four overseas programs and two Australian programs. These programs include: Women Can Build (Europe), Women into Construction (UK), Boss Ladies (Denmark), Frauen in Handwerk und Technik (Women in Crafts and Technology) (Austria), NAWIC Victoria mentoring program (Australia) and Supporting and Linking Tradeswomen (SALT) (Australia). Interviews with program staff were used to complement secondary data and gain first-hand insight into the programs. A common theme was the passion of the program managers and the uncertainty of funding, which often resulted in those involved in the program donating their time, energy and resources for free just so the programs could continue. Other themes included a focus on multiple career stages and engaging multiple stakeholders. They were often life changing for the women involved and successful in their interventions. These programs were successful in their mission of getting women into the industry and retaining them, achieved in part by overcoming gender schemas through exploration, training and role models, as well as the provision of support. Partnerships and ongoing financial support have proved vital to each of their success and the ongoing sustainability of their outcomes.

## 7.4 What we know from women and employers

The narratives that emerged from the focus groups with professional women and interviews with employers and women's group representatives revealed rich and often divergent insights into the roadblocks women face in a construction career. The testimonies of the professional women confirmed much of what the literature suggests. This included how cultural stigmas surrounding the construction industry and a lack of adequate information deters women from considering the built environment in adolescence. Also, how male networks and lack of sponsorship disadvantage women's professional development. Both employers and professional women suggested women possess an advantage at the recruitment stage due to targets and quotas; however, employers lacked the women's insights as to the experience of being tokenised and pigeonholed by an expectation of "feminine" skills.

Older and younger women professionals diverged significantly in their testimonies of industry culture; a generational shift became apparent as younger professionals professed a no tolerance approach to harassing behaviours. However, it appeared that the emphasis on getting women into the industry by improving the industry's public image has left mid to late career women neglected in discussions around gendered career roadblocks, despite facing an onslaught of difficulties unique to career growth. Of great concern to women was the impact of maternity leave and motherhood. Women's advancement slowed, and work-life balance became a demanding issue, leading women to question their role in contracting and subcontracting companies. Employers echoed the concerns and acknowledged that the parental stage of the career lifecycle is challenging for women, often occurring when male peers are being promoted. The women expressed frustration with an industry wide resistance to flexibility and part-time work conditions. Overall, the data illuminated the multifaceted, structural roadblocks women face in a construction career that an industry wide cultural overhaul must address.

## 7.5 Final words

This background for the Strategic Plan indicates an urgent need for clever longer-term interventions to improve the numbers of women in trades and professional roles in construction. We must make this great industry 'visible' to women (and men), focus on how we can support women through their education and training, and then help them flourish and succeed.

To improve the number of women in these roles in the longer term, it is apparent that the opportunities in construction need to be visible and attainable. The lack of information and awareness, media depictions of construction, and their own gender schemas prevent young women from considering this industry. However, the critical challenge is to ensure women are not lost along their career paths. At each stage of the career, the chance of attrition



occurs as women confront an industry ill-equipped for their integration, meaning not only a loss to women themselves but also for an industry in need of their skills and expertise.

To retain women, the construction industry must adapt to support women, which will ultimately improve conditions for all workers and their families. One of the most significant findings that emerged from this research was the pressure of the six-day working week and unrealistic demands from clients, which render work-life balance less unattainable and places enormous strain on all, especially primary carers. This is a situation experienced by the majority of individuals working in construction and also severely impacts their domestic partner's ability to work. Government can lead the way in stipulating realistic working hours within their own projects, but unions must be on board too. This radical change to the nature of the industry requires a cultural overhaul and innovative measures to continue to meet strict deadlines and maintain the quality of the work. Strategies including job sharing, flexibility, part-time roles, and combatting a culture of presenteeism must be implemented with the support of senior leadership. Top-down commitment to women workers and robust implementation of diversity policies are crucial.

Overall, we need to ensure women translate an increased underlying interest in construction into a course application. In turn, we need to retain women in the VET and higher education sectors courses until their completion. Women need to enter a respectful industry that will provide them with meaningful, stable, long-term careers that provide room for advancement as well as family life without a toll on their mental health. While we need to provide these opportunities for all workers and employees in construction, the long-term dearth of women needs to be addressed, and the opportunities of the Building Equality Policy are maximised for a longer-term gain.

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## APPENDICES

**Appendix A:** Career Stages, A1 to A3.

**Appendix B:** Program Review Methodology, B1 to B4.

**Appendix C:** Summary of National and International Programs discussed within the report. C1 to C95

# APPENDIX A

## Career stages

As noted, the literature review is structured using a career stages framework. This approach is more nuanced than the attraction, recruitment and retention framework (ARR model), which has been used previously in research and literature, particularly concerning the barriers to women's careers in male-dominated industries (e.g. Adogbo et al., 2015; Galea et al., 2018; Clarke et al., 2015). The stages used are illustrated in Figure 1 and are collectively referred to as the EEG model.

The stages were informed by Super's (1957) career stage theory, a well-established model which has guided understanding of career stages across many industries. The theory, coined the 'Life Career Rainbow', proposes individuals move through five distinct stages at approximated ages during their career (Super 1957; Smart, 1998), namely:

- Growth (Birth – 14 years)
- Exploration (15 – 24 years)
- Establishment (25 – 44 years)
- Maintenance (45 – 64 years) and
- Disengagement (65+ years).

Super's model is based on the idea that self-concept changes and develops over time due to diverse experiences. While Super's model has been criticised as simplistic and based more prominently on men's careers, the relevance of Super's theory as a framework for understanding women's careers has been reaffirmed in subsequent research (Smart, 1998; Ornstein & Isabella, 1990). Initially proposed as sequential, Super himself came to the realisation that while these simplified stages hold true, the ages and sequence could change. He also stated, "I minimized or neglected the fact that people recycle ..... For example, when a person faces retirement, she or he starts exploring again to find out what retirement is all about and how to handle it" (Freeman, 1993, p256).

Therefore, this framework was built upon and tailored to explore the career stages for women in construction. Super's Growth and Exploration stages were combined, with the last aspect of Exploration taken as a separate stage relating to Education and Training. This new stage was explicitly identified in the women in construction literature as a time of motivation or demotivation. Super's Establishment and Maintenance stages were also not considered to relate well to the literature. They were reconsidered as early experiences and growth career stages.

So while emulating Super's (1957) model to an extent, the EEG model diverges slightly to capture the nuances and terminologies from academic research within male-dominated

industries, particularly the construction industry, as well as the intention of the new strategy. It can also accommodate women who change careers and enter construction slightly later than their male counterparts. Figure 2 represents each selected career stage, associating them with the ARR model and Super's model.

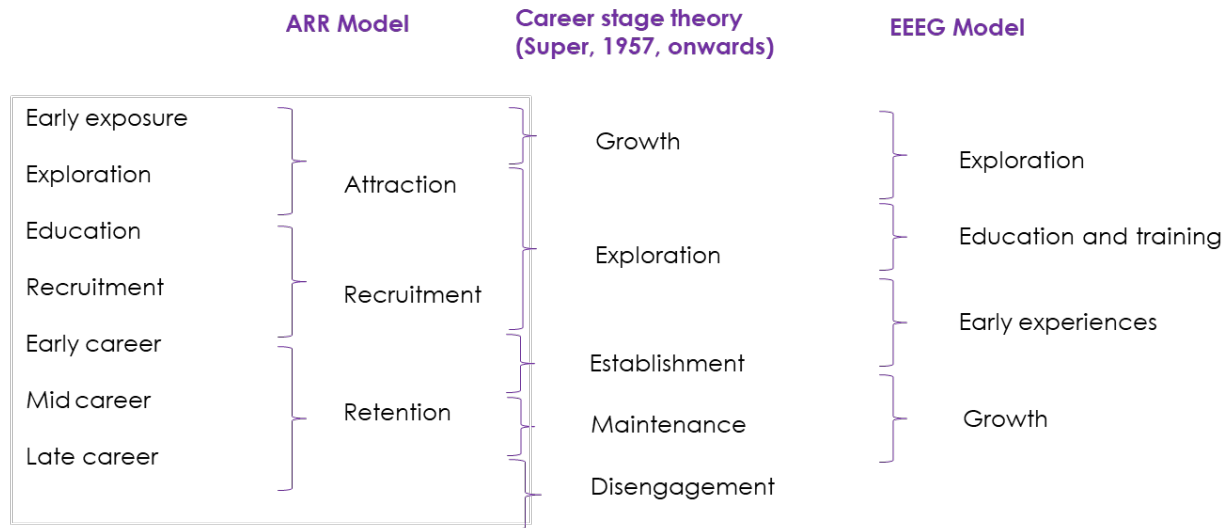


Figure A1. Comparison of existing careers stages models with the EEG model

## Exploration

In the EEG model, exploration describes the stage of exposure to different career pathways and basic experience prior to tertiary education and employment; it is the stage where individuals determine whether a career path could be a good fit. While Super (1957) describes this stage as one in which individuals establish career interests and skills and how these align with future occupations, our definition varies to encompass early conceptualisations of suitable career and educational pathways and exposure to different options. Furthermore, while Super (1957) classifies this stage as occurring from 14-24 years, we take a broader definition to include younger and older people than this bracket.

The literature suggests that children develop a gender schema of what they consider to be masculine and feminine behaviours from a young age, consequently acquiring gendered stereotypes of work (Bem 1981; Martin & Halverson 1981; Struthers & Strachan 2019). These learnt stereotypes and assumptions affect how young women view their career options. Therefore, if young girls were encouraged and supported to pursue interests in male-dominated areas from an early age, their self-efficacy for these would increase (Spearman & Watt, 2013; Struthers & Strachan, 2019).

## **Education and training**

Following exploration is the education and training stage. While Super's (1957) model includes education in the exploration stage, they are split into separate stages in our model. Literature on the construction industry indicated the importance of entry-level courses (Butler et al., 2011). It highlighted the complexity in the construction industry (and many other male-dominated industries) as two main education pathways exist, leading to trade and professional roles (Clarke et al., 2015). The education and training stage describes the choice made regarding one's career pathway and gaining knowledge and skills, which bridge the initial awareness and entry into an industry. This stage encompasses university education, vocational education, work experience and internships

## **Early experiences**

Next is the early career stage, which ranges from entry into the industry through to mid-career. This stage broadly aligns with Super's (1957) establishment stage. It includes the navigation of the recruitment process as well as one's establishment and retention in their chosen industry. While early career experiences include securing work in the industry, it also encapsulates the experiences of establishing oneself in a career. In male-dominated industries, a significant factor acting as a barrier to women's involvement is workplace culture, which affects women from their entry into the industry and throughout their establishment within it (Dainty et al., 2000).

## **Growth**

The final stage looks at staying in the industry and growing. This stage encompasses the move beyond stability and is characterised by career progression and advancement and typically includes, for some, the experience of parenthood. While Super (1957) would class this stage under establishment, it is separate in our model to highlight the nuances of progression for women in construction, the lack of growth in the industry, the higher turnover of women (often to associated industries), and the deficiency of information or programs in this area. Others have described this as the "re-inventive contribution" period in women's careers (O'Neil & Bilimoria, 2005). This is pertinent when looking at the career development of women in male-dominated industries, as prior studies have highlighted the limiting nature of these industries regarding women's progression to senior positions and the propensity to leave the industry at this stage (Dainty et al., 2000; Galea et al., 2018).



# APPENDIX B

## Program Review Methodology

The program review aimed to understand initiatives conducted locally and internationally that sought to achieve gender parity in male-dominated professions, such as construction. This will be used to inform and answer the practical problem of increasing and retaining the number of women in the construction industry. Qualitative methods using secondary data were adopted due to their ability to yield rich and detailed data (Punch, 2014). This approach aligns with the constructivist paradigm, or worldview (Creswell, 2003; Mackenzie & Knipe 2006). Constructivists typically allow a theory or pattern to emerge inductively rather than beginning with one (Creswell, 2003; Mackenzie & Knipe, 2006). This paradigm focuses on participants' views on the given situation and is normally associated with qualitative or mixed methods approaches (Mackenzie & Knipe 2006; Creswell & Clark, 2017).

The review was guided by literature on program theory to gain an understanding of program components, their target audiences and context (Chen, 2005). The usefulness of program theory has been well-documented in evaluation literature. Program theory refers to “a systematic configuration of prescriptive and descriptive assumptions underlying a program” (Chen, 2005, p. 31). It asks what makes a program valid and explains how its intended outcomes are achieved (Chen, 2005) and how an initiative enables the desired change. Chen’s (2005) ‘Conceptual Framework of Program Theory’ has been used to outline the casual assumptions of relevant programs and inform their review, documenting and analysis.

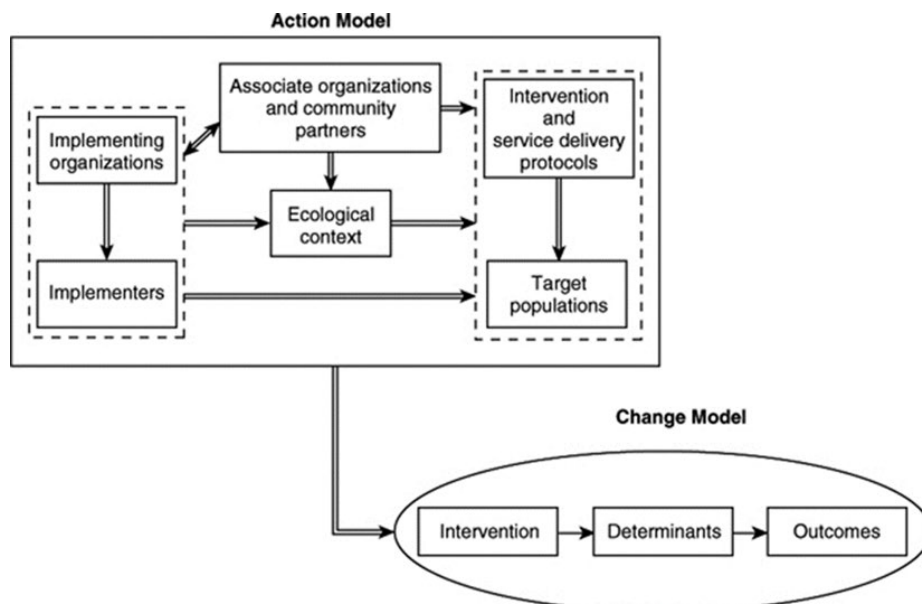


Figure 4. Conceptual Framework of Program Theory (Adapted from Figure 2.2 and 2.3 from Chen, 2005, p 31, 33)

Chen's (2005) framework includes an 'Action Model', involving the links between context, target population, implementers, and other partners (Chen, 2005). A program's stakeholders – such as implementers and partners – and context are highly influential factors in both a program's design and ultimate success. Chen (2005) has argued the importance of stakeholder input in a program's design, while Patton (1997) and Fetterman, Kaftarian, and Wandersman (1996) have seen this as vital to a program's evaluation as well. Stakeholders come with a myriad of views and beliefs that often inform the program theory of an initiative. Like program stakeholders, the target population, whom the program serves, can be key drivers in the success or failure of a program (Chen, 2005). Key to a program's success is engaging relevant participants, the effectiveness of a program in meeting their needs, and their willingness to be involved in the program (Chen, 2005).

Underscoring each of these groups is the ecological context of a program. As Chen (2005) discusses, the ecological context is the external environment that directly engages with the program. Evaluation literature emphasises the importance of situating an intervention in its broader context and understanding the impact this has on it (Stake, 1976, 1991; Guba & Lincoln, 1981; Weiss, 2000). Similarly, the focal point of systems theory provides a means of encompassing and elaborating on complex social systems and creates a direct link between the individual and their broader context (Friedman & Allen, 2011). This understanding of context is especially vital when looking at programs on gender equality (Lau et al., 2021). This approach has been used to show how women's career development is shaped by their external context (Lau et al., 2021; Kossek et al., 2017). It has also been applied to women's involvement in the construction industry to analyse the barriers to women at each societal level (Struthers & Strachan, 2019; Gyarmati et al., 2017).

These external factors then inform the 'Change Model', which is comprised of the intervention, determinants, and outcome. Chen (2005) describes interventions as the activities of a program, which aim to affect the determinant the program intends to change. An intervention is the "agent of change within the program" (p.22). For the program to have an effect, it must identify the root cause of a problem that the intervention will address, which is commonly referred to as a determinant (Chen, 2005). In the context of programs aiming for gender parity in male-dominated industries, the determinant, for example, maybe girls' self-efficacy (Bandura, 1977). With a sound program theory, this process then links to a program's outcomes and goals. While a goal can be understood as the high-level aspiration the program works to contribute to – such as gender parity in the construction industry – the program's outcomes are measurable aspects of this overall goal (Chen, 2005), for example, increased familiarity with tools. A program may have several short- and long-term outcomes, which then contribute to the big picture goal of social change (Chen, 2005). Beyond this, additional outcomes of a program may be unintended positive or negative consequences (Chen, 2005).

In conjunction with program theory, literature on career stages was also used to guide program interpretation. As was outlined in Section 2 of this report, a new model of career stages model using Exploration, Education and training, Early experiences and Growth (EEEG) has been developed. Like the literature review, it will also be used to structure the analysis.

## Methods

Secondary website data were used to garner information on a range of programs. The use of this method has also been well-documented as a means of assessing programs in other areas, with examples in the education, health and engineering sectors (Hard et al., 2018; LaVelle & Donaldson, 2010; Faraji et al., 2015; Trautvetter et al., 2011). Within this approach, specific attention is paid to the contents of each document, including words, images and alike (Bowen, 2009). Data were gathered and analysed via websites pertaining to individual programs, organisations detailing their program/s or third-party websites, which included program information and contact information. Programs analysed in this study were sourced via Google and Google Scholar. Searches used key terms to yield an array of relevant results. Searches to yield program-based information included terms such as “program”, “project”, “intervention”, “initiative”, and “strategy”. To include subject-matter information, phrases such as “women in construction”, “women in male-dominated industries”, and “women in non-traditional occupations” were used. To yield broader searches, “gender” was also used. To source information on programs focused on other male-dominated industries, specific disciplines were also searched, such as “engineering”, “mining”, and “STEM”<sup>1</sup>. Key search terms to elicit programs focused on cultural change included terms such as “cultural”, “behavioural”, “workplace”, or “organisational”. Such searches were undertaken both specific to the construction industry and for male-dominated industries more broadly. All materials reviewed were publicly available.

During this process, a framework for categorising program data by developing an excel spreadsheet of the programs found in Australia and internationally (LaVelle & Donaldson, 2010). This included categories based on Chen’s (2005) ‘conceptual framework of program theory’, to document program components and stakeholders, and the career stages model established for this report (EEEG Model)<sup>2</sup>.

Programs were included if they were related to achieving gender parity in non-traditional professions and included sufficient relevant information to develop an understanding of the program and meet the majority of the information established in the excel spreadsheet. As

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<sup>1</sup> Similar searches were also conducted with equivalent acronyms in other countries, such as “MINT”, “SET” and “STEMM”.

<sup>2</sup> Excel categories included: program name, web address, program description, exploration, education and training, early career, career growth, interventions, determinants, outcomes, goals, target audience, non-traditional field, location, implementing organisation, implementers, role, email contact, associated organisations or partners, research or evaluation output, funding source and amount, additional information, and level of importance (1 = most important, 3 = less important).

this review aims to inform program implementation based on best practice examples, a focus was placed on recent and current programs. The programs reviewed were both national and international, focusing on their relevance of these to the Australian context. Some programs were focussed specifically on girls and women, while other programs were identified that would have a direct or indirect effect by focussing on other parties (e.g. men and women) and stakeholders (e.g. industry).

## **Program analysis**

In total, 365 programs were identified, including 249 international programs and 116 local programs. The programs spanned all four career stages: exploration, education and training, and early experiences and growth. They were analysed thematically using program theory and structured by their career stage. Some programs impact multiple career stages or have multiple activities which can be classified into different career stages. The programs are listed in Appendix C.

The sample of programs was subject to a thematic analysis based on program activity (i.e., skill development, awareness, etc.). This allowed reoccurring activity themes to be identified and key themes grouped. Each career stage write-up includes specific examples of national and international interventions.

## Australian Programs

	PROGRAM	Career stage
1	<p><b>500 Women in Property</b>  <a href="https://diversity.propertycouncil.com.au/500-women-in-property">https://diversity.propertycouncil.com.au/500-women-in-property</a>                      Sponsorship program - networking and professional development</p> <p>Interventions/Activities): Networking, professional development                      Which non-traditional field: Property                      Location (country): Across Australia                      Implementing organisation: Property Council of Australia</p>	Exploration: Education & Training: Early Experiences: Growth: ✓
2	<p><b>Act@Work Program</b>  <a href="https://whg.org.au/our-work/prevention-violence-women/act-work/">https://whg.org.au/our-work/prevention-violence-women/act-work/</a>                      An organisation-wide cultural change program. It focuses on raising awareness of the prevalence and causes of violence against women, behaviour change, bystander action in the workplace, enabling organisations to support staff experiencing DV and advocate for gender equality, and developing systems to enable the sustainability of this culture/these practices in the longer term.</p> <p>Interventions/Activities): Cultural change activities, bystander workshops                      Which non-traditional field: Across industries                      Location (country): Grampians, Victoria, Australia                      Implementing organisation: Women's Health in the Grampians</p>	Exploration: Education & Training: Early Experiences: ✓ Growth:
3	<p><b>ActOnSite/See What You Can Be Program</b>  <a href="https://whg.org.au/wp-content/uploads/2021/07/ActOnSite-Consultant-2021-PD.pdf">https://whg.org.au/wp-content/uploads/2021/07/ActOnSite-Consultant-2021-PD.pdf</a>                      This new project seeks to support businesses in increasing women's recruitment and retention in construction and manufacturing. The program will include a few steps: increasing recruitment and retention through a whole-of-workplace program (ActOnSite). Next, six women in the industry will be trained up to be mentors (See What You Can Be). Lastly, a program to expand pathway options to girls, i.e. careers info (See What You Can Be). WHG has an array of connections in the area and has run organisation-wide cultural change programs before.</p> <p>Interventions/Activities): Cultural change workshops, mentoring &amp; careers sessions                      Which non-traditional field: Construction &amp; manufacturing                      Location (country): Grampians, VIC                      Implementing organisation: Women's Health in the Grampians</p>	Exploration: Education & Training: Early Experiences: ✓ Growth:
4	<p><b>Advancing Women in Building and Construction</b>  <a href="https://www.mbansw.asn.au/media/industry-news/mentoring-program-women-building">https://www.mbansw.asn.au/media/industry-news/mentoring-program-women-building</a>                      Advancing Women in Building and Construction is a mentoring program for women in the industry to aid retention. Mentors are women and men who are experienced industry practitioners with a supervisory role or who own their own business. Mentees are women with up to five years' experience in the industry, either part or full time, completing an apprenticeship or in a pre-employment program.</p> <p>Interventions/Activities): Mentoring                      Which non-traditional field: Construction                      Location (country): NSW &amp; Tasmania                      Implementing organisation: Master Builders Australia</p>	Exploration: Education & Training: ✓ Early Experiences: ✓ Growth:

	PROGRAM	Career stage
5	<p><b>Advancing Women in Construction forum</b>  <a href="https://www.cpbcon.com.au/en/news-and-media/2021/mentoring-program-supports-female-participation-in-victoria">https://www.cpbcon.com.au/en/news-and-media/2021/mentoring-program-supports-female-participation-in-victoria</a>  This program involves a forum to discuss barrier to women's advancement in the construction industry and share ideas of how to address them.</p> <p>Interventions/Activities): Forum  Which non-traditional field: Construction  Location (country):  Implementing organisation: CPB Contractors</p>	<p>Exploration:  Education &amp; Training:  Early Experiences:  Growth: ✓</p>
6	<p><b>Air Force camps for young women</b>  <a href="https://www.airforce.gov.au/our-people/our-culture/women-air-force">https://www.airforce.gov.au/our-people/our-culture/women-air-force</a>  This is an initiative aiming to increase women's recruitment and promote Air Force jobs to young women via experiential Flight Camps and Technical Camps. The participants are female students in years 10, 11 and 12 from QLD, NSW and the ACT. After the camps 100% of participants said that they wanted to join the Air Force. The camps run over a number of days and allow young women the opportunity to experience aviation, engineering and technical trade careers pathways. Participants are exposed to military aviation operations as well as the day-to-day routine of Air Force bases, and the opportunity to engage with staff and recruiting specialists to explore possible career options.</p> <p>Interventions/Activities): Careers camp  Which non-traditional field: Aviation  Location (country): QLD, NSW &amp; ACT  Implementing organisation: Air Force</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
7	<p><b>APEC Women in STEM Initiative</b>  <a href="https://www.apec.org/Publications/2017/02/APEC-Women-in-STEM-A-Framework-for-Dialogue-Learning-and-Action">https://www.apec.org/Publications/2017/02/APEC-Women-in-STEM-A-Framework-for-Dialogue-Learning-and-Action</a>  The APEC Women in STEM Initiative is run by the APEC Women in the Economy Sub-fund, and is supported by both the Australian and US governments. This project included a series of events in Australia to encourage supportive conditions for women and other vulnerable groups to enable them to make full use of their STEM and entrepreneurship skills.</p> <p>Interventions/Activities): Events  Which non-traditional field: STEM  Location (country): Across Australia  Implementing organisation: APEC</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth: ✓</p>
8	<p><b>AWIC - Awesome women in construction</b>  <a href="https://awic.org.au/">https://awic.org.au/</a>  Awesome Women in Construction (AWIC) (<a href="https://awic.org.au/">https://awic.org.au/</a>) is an NFP that seeks to support women in the construction industry via both personal support and professional development. They also run a podcast that sheds light on issues and positive. They've run events in partnership with the Queensland government and TAFE Queensland on scaffolding for example, which sought to highlight this as a career options for women and girls. This consisted on hands-on workshops, panels and training information.</p> <p>Interventions/Activities): Networking, personal &amp; professional development, careers events, workshops, panel discussions  Which non-traditional field: Construction  Location (country): Queensland  Implementing organisation: Awesome Women in Construction</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth: ✓</p>

	PROGRAM	Career stage
9	<p><b>Bring Your Daughter to Work Day</b>  <a href="https://www.qbcc.qld.gov.au/media-releases/reducing-gender-inequality-building-construction-industry">https://www.qbcc.qld.gov.au/media-releases/reducing-gender-inequality-building-construction-industry</a>            The program offers girls insight into career options in the construction industry.</p> <p>Interventions/Activities):            Which non-traditional field: Construction            Location (country): Queensland            Implementing organisation: Queensland Building and Construction Commission</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
10	<p><b>Building Futures: Pathways to Trades</b>  <a href="https://www.twacf.org/projects/">https://www.twacf.org/projects/</a>            This program was designed to support women who have experienced challenges and are looking for greater financial stability by helping them enter a career in the trades.</p> <p>Interventions/Activities): Workshops, mentoring and employment support            Which non-traditional field: Construction            Location (country): Wyndham, VIC            Implementing organisation: Tradeswomen Australia Community Foundation</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences: ✓            Growth:</p>
11	<p><b>Building Women for Construction</b>  <a href="https://www.qualitytraininginconstruction.com.au/building-women-for-construction-program/">https://www.qualitytraininginconstruction.com.au/building-women-for-construction-program/</a>            The program offers women training which results in a Certificate II in Construction. Mentoring is also provided to support women to continue in the training program and women are also offered sessions on physical and mental health, to prepare them for the demands of the industry.</p> <p>Interventions/Activities): Training, physical fitness sessions, mental health sessions, mentoring            Which non-traditional field: Construction            Location (country): ACT            Implementing organisation: Quality Training in Construction</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth:</p>
12	<p><b>Built for Women</b>  <a href="https://education.nsw.gov.au/skills-nsw/built-for-women">https://education.nsw.gov.au/skills-nsw/built-for-women</a>            This program run by the NSW Government provides 3,000 fee-free job training placements for women to help them enter careers in the construction industry. Eligible participants include women who are 16-24 years old, Jobseekers or; currently receiving Commonwealth support payments, or individuals who are at risk of unemployment due to a lack of relevant skills.</p> <p>Interventions/Activities): Training            Which non-traditional field: Construction            Location (country): NSW            Implementing organisation: NSW Government</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth:</p>

	PROGRAM	Career stage
13	<p><b>CCF NSW Women in Civil Construction</b>  <a href="https://www.cfnsw.com/A-Career-In-Civil/Women-in-Civil-Construction">https://www.cfnsw.com/A-Career-In-Civil/Women-in-Civil-Construction</a>            The WiCC program is run by CCF NSW and is now in its fourth year. Their aim is to achieve 50% women in the construction industry. Their program includes mentoring, networking through their virtual community initiative, industry events, an awards program for female 'champions', a program website with information on careers in the industry, training for supervisors on managing diversity in their organisations, a toolkit resource, legal advice services for employers looking to recruit and retain more women, pledge program employers to publicly commit to supporting their female employees and CCF NSW's 50% gender participation by 2050.</p> <p>Interventions/Activities): Mentoring, networking, industry events, awards, resource development (website), training for employers, resource development (toolkit), support services (legal advice), pledge program            Which non-traditional field: Construction            Location (country): NSW            Implementing organisation: Civil Contractors Federation (CCF) NSW</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth: ✓</p>
14	<p><b>Champions of Change Coalition - Consult Australia</b>  <a href="https://championsofchangecoalition.org/groups/consult-australia-male-champions-of-change/">https://championsofchangecoalition.org/groups/consult-australia-male-champions-of-change/</a>            Consult Australia is the industry association which represents Australia's consulting firms who work in the built and natural environment areas. The male champions of change program focuses on cultural change. CEOs were offered the opportunity to partake in the program. In the session, they focused on cultural and systemic barriers to gender equality, perceptions of men and women in the workplace, sexual harassment, and the benefits to men of a more inclusive and equal workplace.</p> <p>Interventions/Activities): Cultural change sessions            Which non-traditional field: Consulting engineering            Location (country): Australia            Implementing organisation: Consult Australia</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth:</p>
15	<p><b>CIT Construction and Engineering Bridge Challenge</b>  <a href="https://cit.edu.au/news/cit_bridge_challenge">https://cit.edu.au/news/cit_bridge_challenge</a>            A construction challenge program which is open to students in years 9 and 10 or enrolled in building and construction Certificate I or II at school</p> <p>Interventions/Activities): Competition event            Which non-traditional field: Construction            Location (country): Australia            Implementing organisation: Canberra Institute of Technology (CIT)</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>



	PROGRAM	Career stage
16	<p><b>CoRE Hi Vis</b>  <a href="https://whg.org.au/our-work/projects/core-hi-vis/">https://whg.org.au/our-work/projects/core-hi-vis/</a>.  <a href="https://hmstrust.org.au/annual-report/2019-annual-report/grants/case-study-womens-health-grampians/">https://hmstrust.org.au/annual-report/2019-annual-report/grants/case-study-womens-health-grampians/</a></p> <p>The CoRE Hi Vis project was established in 2019. It seeks to increase the number of women in construction and manufacturing. The CoRE Hi Vis project seeks to reduce the gender gap in construction and manufacturing in this region region by 5%. The long-term goal of the program is to reach a critical mass, wherein equitable roles and workplace structures are the norm. Within this program the activities are: Workshops with industries to determine the barriers and enablers to gender-diverse workplaces; The provision of training for women; The development of resources to aid employers in recruiting and retaining women; Engagement with a number of medium and large local employers to embed this in the community; Develop case studies resources of success stories as tools of best practice.</p> <p>Interventions/Activities): Workshops with industries (on barriers etc.), training for women, the development of resources (for recruitment and retention), stakeholder engagement, resource development (case studies of best practice).</p> <p>Which non-traditional field: Construction &amp; manufacturing  Location (country): Grampians, VIC  Implementing organisation: Women's Health in the Grampians</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences: ✓  Growth: ✓</p>
17	<p><b>CPB Emerging Leaders Program</b>  <a href="https://www.cpbcon.com.au/en/news-and-media/2021/mentoring-program-supports-female-participation-in-victoria">https://www.cpbcon.com.au/en/news-and-media/2021/mentoring-program-supports-female-participation-in-victoria</a></p> <p>A newly developed leadership program to develop and support women in the industry, and facilitate a greater number of women entering leadership positions.</p> <p>Interventions/Activities): Leadership sessions/mentoring  Which non-traditional field: Construction  Location (country): Across Australia  Implementing organisation: CPB Contractors</p>	<p>Exploration:  Education &amp; Training:  Early Experiences:  Growth: ✓</p>
18	<p><b>Culture in Construction</b>  <a href="https://cultureinconstruction.com.au/about-us/">https://cultureinconstruction.com.au/about-us/</a></p> <p>Culture in construction is an initiative - a research program - as a part of Construction Industry Cultural Taskforce. The focus is on work/life balance, diversity &amp; inclusion and physical/mental health.</p> <p>Interventions/Activities): Research activities, resource development  Which non-traditional field: Construction  Location (country): Australia  Implementing organisation: the Construction Industry Culture Taskforce (CICT)</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth:</p>
19	<p><b>DevelopHer Program</b>  <a href="https://www.myob.com/au/careers/graduate-program">https://www.myob.com/au/careers/graduate-program</a></p> <p>The DevelopHer program specifically caters to women who are changing careers or wanting to re-enter the workforce. It seeks to address the gender imbalance in STEM. Has been operating for 4 years now.</p> <p>Interventions/Activities): Training program  Which non-traditional field: STEM/Tech  Location (country): Sydney &amp; Melbourne  Implementing organisation: MYOB</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>

	PROGRAM	Career stage
20	<p><b>Doorways2construction</b>  <a href="https://citb.org.au/doorways2construction">https://citb.org.au/doorways2construction</a>            Doorways2construction is a VET in schools program run by CITB together with secondary schools across South Australia. The program includes training (D2C: Certificate I or II - Construction during Year 11, and D2C Plus: partial Certificate III during Year 12). It also offers 4 week work placements, career advice, site visits, career talks and sessions on White Cards, asbestos and PPE.</p> <p>Interventions/Activities): Training, career advice sessions, work experience            Which non-traditional field: Construction            Location (country): Australia            Implementing organisation: CITB</p>	<p>Exploration: ✓            Education &amp; Training: ✓            Early Experiences:            Growth:</p>
21	<p><b>Females Excelling in Engineering and Technology (FEET)</b>  <a href="https://www.transurban.com/feet">https://www.transurban.com/feet</a>            The Females Excelling in Engineering and Technology (FEET) program provides mentoring for passionate and driven female engineering and technology students. It expands their skills and knowledge through one on one mentoring and offers them a potential pathway into further Transurban programs and casual employment.</p> <p>Interventions/Activities): Mentoring, employability sessions            Which non-traditional field: Engineering            Location (country): VIC, NSW, QLD            Implementing organisation: Transurban</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth:</p>
22	<p><b>Future Trades Women Project</b>  <a href="http://www.austrg.com.au/wp-content/uploads/2019/08/Host-Brochure-Women-in-Trade.pdf">http://www.austrg.com.au/wp-content/uploads/2019/08/Host-Brochure-Women-in-Trade.pdf</a>            The Future Trades Women Project is the precursor to the current 'Women in Construction Pathways Program'. It is a school-based apprenticeship program for girls in years 10 &amp; 11. Participants will complete a Certificate II in Resources &amp; Infrastructure. During the 12-18 month program, participants rotate between different trades areas and then afterwards they are able to transition into an apprenticeship. As a part of the program, the participants and their supervisors were also provided with workshops on addressing the issues women face in non-traditional trades.</p> <p>Interventions/Activities): Training, workshops            Which non-traditional field:            Location (country):            Implementing organisation: Australian Training Company</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth:</p>

	PROGRAM	Career stage
23	<p><b>Generating Equality and Respect</b>  <a href="https://www.vichealth.vic.gov.au/~media/ResourceCentre/PublicationsandResources/PVAW/Generating%20Equality%20and%20Respect%20Full%20evaluation%20report.pdf">https://www.vichealth.vic.gov.au/~media/ResourceCentre/PublicationsandResources/PVAW/Generating%20Equality%20and%20Respect%20Full%20evaluation%20report.pdf</a></p> <p>‘Generating Equality and Respect’ was a three-and-a-half-year primary prevention program. The program identified partner organisations through which to implement "settings-based activities" to embed prevention and enable "saturation" of primary prevention in the community. The program consisted of several actions brought together in a single setting to assess the benefit of tandem, mutually reinforcing activities across a number of settings.</p> <p>Interventions/Activities): Cultural change activities  Which non-traditional field: Across industries  Location (country): Victoria, Australia  Implementing organisation: City of Monash, Link HC and VicHealth</p>	<p>Exploration:</p> <p>Education &amp; Training:</p> <p>Early Experiences: ✓</p> <p>Growth:</p>
24	<p><b>Girl Geek Academy</b>  <a href="https://girlgeekacademy.com/about/">https://girlgeekacademy.com/about/</a></p> <p>Girl geek academy run programs on games, startups, 3D printing, making, design, tech, drones, space and aviation.</p> <p>Interventions/Activities): Workshops  Which non-traditional field: Tech  Location (country): Melbourne  Implementing organisation: Girl Geek Academy</p>	<p>Exploration: ✓</p> <p>Education &amp; Training:</p> <p>Early Experiences:</p> <p>Growth:</p>
25	<p><b>Girls' Big Day Out</b>  <a href="https://www.nationalskillsweek.com.au/event/girls-big-day-out-2/">https://www.nationalskillsweek.com.au/event/girls-big-day-out-2/</a></p> <p>Girls Big Day Out is a yearly event that offers year 9 girls insight into careers in trades. It gives girls from high schools in the Geelong area the opportunity for hands on experience.</p> <p>Interventions/Activities): Workshop event  Which non-traditional field: Construction  Location (country): Geelong, VIC  Implementing organisation: National Skills Week -SkillsOne</p>	<p>Exploration: ✓</p> <p>Education &amp; Training:</p> <p>Early Experiences:</p> <p>Growth:</p>
26	<p><b>Girls Engineering Tomorrow</b>  <a href="https://engage.curtin.edu.au/schools-teachers-advisors/education-outreach/stem-outreach/girls-in-stem/">https://engage.curtin.edu.au/schools-teachers-advisors/education-outreach/stem-outreach/girls-in-stem/</a></p> <p>The Girls Engineering Tomorrow (GET) program engages senior secondary students who are studying high-level maths and provides mentoring, and insight into engineering courses, role models and careers.</p> <p>Interventions/Activities): Workshops, mentoring, tutoring, careers sessions  Which non-traditional field: Engineering  Location (country): WA  Implementing organisation: Curtin University</p>	<p>Exploration: ✓</p> <p>Education &amp; Training:</p> <p>Early Experiences:</p> <p>Growth:</p>

	PROGRAM	Career stage
27	<p><b>Girls Focus on Mining Camp</b>  <a href="https://engage.curtin.edu.au/schools-teachers-advisors/education-outreach/stem-outreach/girls-in-stem/">https://engage.curtin.edu.au/schools-teachers-advisors/education-outreach/stem-outreach/girls-in-stem/</a>            The Girls Focus on Mining Camp is a five-day camp for girls in high school gain an insight into study and work in the mining industry in WA. During the camp they are able to take part in mine sites tours, participate in hands-on workshops and have a tour of Curtin's Kalgoorlie School of Mines campus. The program engages girls in Year 10, 11 or 12 who are interested in science or engineering, want to know more about the mining sector.</p> <p>Interventions/Activities): Summer camp - site tours, workshops            Which non-traditional field: Mining            Location (country): WA            Implementing organisation: Curtin University</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
28	<p><b>Girls in Cyber Security Advancing (GiCSA) Program</b>  <a href="https://bjbs.csu.edu.au/schools/computing-and-mathematics/gicsa/the-project">https://bjbs.csu.edu.au/schools/computing-and-mathematics/gicsa/the-project</a>            The Girls in Cyber Security Advancing (GiCSA) Program addresses the need to involve women in the cyber security by focusing on education of girls in high school. Girls in years 9-10 girls are engaged to attend a series of cyber security training and awareness workshops, a cyber security challenge, and a leadership and entrepreneurship workshop. This aims to inform their subject selection in years 11 &amp; 12.</p> <p>Interventions/Activities): Workshops            Which non-traditional field: Cyber Security            Location (country): Wagga Wagga, Albury, Bathurst, Dubbo, Orange and Port Macquarie            Implementing organisation: Charles Sturt University</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
29	<p><b>Girls in Property</b>  <a href="https://diversity.propertycouncil.com.au/victoria-girls-in-property">https://diversity.propertycouncil.com.au/victoria-girls-in-property</a>            Full day program to give high school-aged girls insight into opportunities in the property industry.</p> <p>Interventions/Activities): Careers sessions            Which non-traditional field: Property            Location (country): Across Australia            Implementing organisation: Property Council of Australia</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
30	<p><b>Girls Invent</b>  <a href="https://www.girlsinvent.com.au">https://www.girlsinvent.com.au</a>            The Girls Invent program is a schools-based initiative focused on inventing and business development. Through workshops, girls are able to create their own original product or service idea and are then shown how to progress the idea into a business as entrepreneurs would. This works to motivate girls to pursue STEM.</p> <p>Interventions/Activities): Workshops            Which non-traditional field: STEM/Business            Location (country): Australia wide            Implementing organisation: Girls Invent</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>

	PROGRAM	Career stage
31	<p><b>Girls' Programming Network (GPN)</b>  <a href="https://eng.unimelb.edu.au/engage-with-us/schools/gpn">https://eng.unimelb.edu.au/engage-with-us/schools/gpn</a>            The Girls' Programming Network (GPN) has been developed by and run for girls. It is managed by a group of female information technology (IT) university students and engages high school girls who are interested in IT, and learning software development skills in particular. Workshops are run for one weekend day each term for girls to get hands-on experience.</p> <p>Interventions/Activities): Workshops            Which non-traditional field: IT            Location (country): Melbourne            Implementing organisation: The University of Melbourne</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
32	<p><b>Go Girl, Go for IT</b>  <a href="https://www.gogirl.org.au/about-go-girl">https://www.gogirl.org.au/about-go-girl</a>            Go Girl, Go for IT works to challenge views and stereotypes and aims to inspire and engage female school giving them insight into IT. They run a one-day event with role model speakers, who give them insight into the industry and careers within it, as well as including hands-on workshops and discussions.</p> <p>Interventions/Activities): Workshops, careers sessions            Which non-traditional field: IT            Location (country): Across Australia            Implementing organisation: The Victorian ICT for Women network</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
33	<p><b>Grad Girls</b>  <a href="https://www.vicictforwomen.com.au/programmes/grad-girls/">https://www.vicictforwomen.com.au/programmes/grad-girls/</a>            Grad Girls is a 1 year pathway program run by Vic ICT for Women. The program is offered to female STEM University and TAFE students to enable them to discover pathways available and connect with other students and professional in the technology and digital industry.</p> <p>Interventions/Activities): Workshops, careers sessions            Which non-traditional field: IT            Location (country): VIC            Implementing organisation: The Victorian ICT for Women network</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth:</p>
34	<p><b>GROW (Generating Regionally Outstanding Women)</b>  <a href="https://www.agskilled.org.au/courses/grow">https://www.agskilled.org.au/courses/grow</a>            GROW (Generating Regionally Outstanding Women) is a professional development program for emerging female leaders in the NSW cotton, grains, rice, production horticulture and viticulture industries. The program covers time management, planning and organisation skills, and also offers networking opportunities.</p> <p>Interventions/Activities): Professional development sessions, networking            Which non-traditional field: Agriculture            Location (country): NSW            Implementing organisation: AgSkilled</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>

	PROGRAM	Career stage
35	<p><b>Hi Vis Women Australia</b>  <a href="https://www.hvwa.com.au/?fbclid=IwAR0y6-t66Kg604_QU96x4U4hca8MvRfxFJGVusK6iHiBLS3qmHESwjFFaQc">https://www.hvwa.com.au/?fbclid=IwAR0y6-t66Kg604_QU96x4U4hca8MvRfxFJGVusK6iHiBLS3qmHESwjFFaQc</a>  Hi-Vis Women Australia advocate for cultural change in the construction industry. They are a social enterprise which seeks to enable positive change and celebrate women in building and construction.</p> <p>Interventions/Activities): Advocacy community, mentoring, industry engagement  Which non-traditional field: Construction  Location (country): Perth  Implementing organisation: Hi Vis Women Australia</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
36	<p><b>IGNITED Scholarship Program</b>  <a href="https://www.deakin.edu.au/study/fees-and-scholarships/scholarships/find-a-scholarship/ignited-scholarship-igniting-female-interest-in-engineering-information-technology-and-construction-management">https://www.deakin.edu.au/study/fees-and-scholarships/scholarships/find-a-scholarship/ignited-scholarship-igniting-female-interest-in-engineering-information-technology-and-construction-management</a>  The IGNITED Scholarship aims to spark women's interest in engineering, information technology and construction management.</p> <p>Interventions/Activities): Financial support for university education, mentoring  Which non-traditional field: Engineering, information technology and construction management  Location (country): VIC  Implementing organisation: Deakin University</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>
37	<p><b>Inspiring Future Women Leaders in STEM' program</b>  <a href="https://hudson.org.au/latest-news/door-to-science-opened-for-nine-young-women/">https://hudson.org.au/latest-news/door-to-science-opened-for-nine-young-women/</a>  Hudson Institute of Medical Research's 'Inspiring Future Women Leaders in STEM' program provides a laboratory experience for female secondary school students, with the aim of sparking their interest in science. It is a two week immersion program which includes exploring a scientific research project in the laboratory, seminars, events, exposure to technologies and forums where girls can gain insight and career advice from scientists and postgraduate students.</p> <p>Interventions/Activities): Workshops, mentoring  Which non-traditional field:  Location (country): Clayton, VIC  Implementing organisation: Hudson Institute of Medical Research</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
38	<p><b>Maintenance Associate Diversity Pathway Program</b>  <a href="https://www.southmetrotafe.wa.edu.au/maintenance-associate-diversity-pathway-program">https://www.southmetrotafe.wa.edu.au/maintenance-associate-diversity-pathway-program</a>  The Maintenance Associate Diversity Pathway Program is aimed at increasing the number of Aboriginal people and women in the workforce. To do so, it provides training for participants, where they complete a Certificate II in Construction Pathways - Building Maintenance.</p> <p>Interventions/Activities): Training program  Which non-traditional field: Construction  Location (country): Fremantle, WA  Implementing organisation: South Metropolitan TAFE WA &amp; BHP</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>

	PROGRAM	Career stage
39	<p><b>MBA Women in Construction</b>  <a href="https://mba.org.au/event/women-in-construction/">https://mba.org.au/event/women-in-construction/</a>            Founded in 2018, the Master Builders Women in Construction has sought to create avenues for our female members to connect with other women who are in similar roles. They provide information and advice for women, recognise them for their achievements and assist them achieving personal and professional success.</p> <p>Interventions/Activities): Networking, professional development events            Which non-traditional field: Construction            Location (country): ACT            Implementing organisation: Master Builders Australia ACT</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>
40	<p><b>Mentor(SHE:)</b>  <a href="https://www.vicictforwomen.com.au/programmes/mentoring/">https://www.vicictforwomen.com.au/programmes/mentoring/</a>            This program runs every year, and takes place over a 10-month period. It provides events and educational resources for participants as well as mentoring. Mentors are experts in tech professions and are keen to nurture future female talent. Mentees range from graduates to women re-entering the tech workforce after a period out.</p> <p>Interventions/Activities): Mentoring            Which non-traditional field: IT            Location (country): VIC            Implementing organisation: The Victorian ICT for Women network</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth:</p>
41	<p><b>Monash Engineering Girls</b>  <a href="https://www.monash.edu/engineering/meg/how-it-works">https://www.monash.edu/engineering/meg/how-it-works</a>            The Monash Engineering Girls (MEG) program works with young women to increase their knowledge of career options in engineering. Participants can join the program in year 9 and stay until year 12. In that time, they get to take part in a range of activities and events, including hands-on experience, online activities, workshops, tours and presentations.</p> <p>Interventions/Activities): Workshops, online engagement activities, tours, careers sessions            Which non-traditional field: Engineering            Location (country): VIC            Implementing organisation: Monash University</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
42	<p><b>NAWIC - AUS</b>  <a href="https://nawic.com.au">https://nawic.com.au</a>            In addition to specific educational programs run by each state-based chapter of NAWIC in Australia, they also offer networking and events to members.</p> <p>Interventions/Activities): Networking, events            Which non-traditional field: Construction            Location (country): Across Australia            Implementing organisation: NAWIC</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth: ✓</p>

	PROGRAM	Career stage
43	<p><b>NAWIC Male Allies Program</b>  <a href="https://www.nawic.com.au/common/Uploaded%20files/BLOG%202020/NAWIC_BLOG_June_Male_Allies_Program.pdf">https://www.nawic.com.au/common/Uploaded%20files/BLOG%202020/NAWIC_BLOG_June_Male_Allies_Program.pdf</a>  <a href="https://www.youtube.com/watch?v=g5HA-W-xGtK">https://www.youtube.com/watch?v=g5HA-W-xGtK</a></p> <p>This program focuses on engaging men to enable cultural change within the industry. The program includes 5 sessions of 30 mins each over 10 weeks, and working group discussions. The program helps men become confident in being advocates and equips them with the skills to encourage change in others. The pilot program launched on the 31st of March 2021.</p> <p>Interventions/Activities): Online training, discussion workshops  Which non-traditional field: Construction  Location (country): Queensland, Australia  Implementing organisation: NAWIC QLD</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth:</p>
44	<p><b>NAWIC ACT Mentoring Program</b>  <a href="https://www.nawic.com.au/web/chapters/ACT/ACT_Mentoring.aspx">https://www.nawic.com.au/web/chapters/ACT/ACT_Mentoring.aspx</a></p> <p>NAWIC ACT have sought to inspire women in the construction industry to seek out guidance and pursue higher levels of performance in order to achieve their career aspirations. The mentoring program is offered to women in all stages of their construction careers. It is a means of connecting students, trades people, graduates and professionals with NAWIC members offering their specialised advice and support.</p> <p>Interventions/Activities): Mentoring  Which non-traditional field:  Location (country): ACT  Implementing organisation: NAWIC ACT</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences: ✓  Growth: ✓</p>
45	<p><b>NAWIC NSW Mentoring Program</b>  <a href="https://www.nawic.com.au/web/chapters/NSW/NSW_Mentoring.aspx">https://www.nawic.com.au/web/chapters/NSW/NSW_Mentoring.aspx</a></p> <p>This program has run for over nine years. It is available to women of all ages and levels in their construction careers and matches them with an industry professional for a a mentoring partnership that will generally last between 9-12 months and will involve approx. 1-2 hours of face-to-face/online meetings each month.</p> <p>Interventions/Activities): Mentoring  Which non-traditional field:  Location (country): NSW  Implementing organisation: NAWIC NSW</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences: ✓  Growth: ✓</p>
46	<p><b>NAWIC QLD Executive Leadership Program</b>  <a href="https://www.nawic.com.au/Web/Chapters/QLD/QLD_Exec_Leadership.aspx">https://www.nawic.com.au/Web/Chapters/QLD/QLD_Exec_Leadership.aspx</a></p> <p>NAWIC partner with industry to run this program comprising of events to support women in becoming prepared for board roles in the construction industry.</p> <p>Interventions/Activities): Leadership sessions  Which non-traditional field: Construction  Location (country): Queensland  Implementing organisation: NAWIC QLD</p>	<p>Exploration:  Education &amp; Training:  Early Experiences:  Growth: ✓</p>



	PROGRAM	Career stage
47	<p><b>NAWIC QLD Mentoring Program</b>  <a href="https://www.nawic.com.au/Web/Chapters/QLD/Mentoring.aspx">https://www.nawic.com.au/Web/Chapters/QLD/Mentoring.aspx</a>            The mentoring program is offered to women in all stages of their construction careers. It is a means of connecting students, trades people, graduates and professionals with NAWIC members offering their specialised advice and support.</p> <p>Interventions/Activities): Mentoring            Which non-traditional field: Construction            Location (country): Queensland            Implementing organisation: NAWIC QLD</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences: ✓            Growth: ✓</p>
48	<p><b>NAWIC QLD University Engagement Program</b>  <a href="https://www.nawic.com.au/Web/Chapters/QLD/QLD_uni.aspx">https://www.nawic.com.au/Web/Chapters/QLD/QLD_uni.aspx</a>            Similar to their engagement programs with schools, NAWIC run programs to engage university students to go on to pursue roles in the construction industry. These consist of panel discussions, webinars, and site visits.</p> <p>Interventions/Activities): panel discussions, webinars, and site visits            Which non-traditional field: Construction            Location (country): Queensland            Implementing organisation: NAWIC QLD</p>	<p>Exploration: ✓            Education &amp; Training: ✓            Early Experiences:            Growth:</p>
49	<p><b>NAWIC SA Leadership Development Program</b>  <a href="https://www.nawic.com.au/web/chapters/SA/SA_Mentoring.aspx">https://www.nawic.com.au/web/chapters/SA/SA_Mentoring.aspx</a>            A leadership development program for women in the construction industry. It takes place over the course of 6 months and is designed to develop women's leadership skills and capacity.</p> <p>Interventions/Activities): Leadership sessions            Which non-traditional field:            Location (country):            Implementing organisation:</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>
50	<p><b>NAWIC SA Mentoring Program</b>  <a href="https://www.nawic.com.au/web/chapters/SA/SA_Mentoring.aspx">https://www.nawic.com.au/web/chapters/SA/SA_Mentoring.aspx</a>            A mentoring program to assist women to pursue individual career goals and guide them meeting the challenges of careers in the construction industry.</p> <p>Interventions/Activities): Mentoring            Which non-traditional field:            Location (country): South Australia            Implementing organisation: NAWIC SA</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences: ✓            Growth: ✓</p>
51	<p><b>NAWIC VIC CEO Shadow Program</b>  <a href="https://www.nawic.com.au/Web/Chapters/VIC/CEO_Shadow_Program_And_Mentoring/CEO_SHADOW_PROGRAM.aspx">https://www.nawic.com.au/Web/Chapters/VIC/CEO_Shadow_Program_And_Mentoring/CEO_SHADOW_PROGRAM.aspx</a>            A leadership program where participants, who are in middle or senior management, have the opportunity to shadow a CEO for a day.</p> <p>Interventions/Activities): Leadership sessions/mentoring            Which non-traditional field: Construction            Location (country): Victoria            Implementing organisation: NAWIC VIC</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>

	PROGRAM	Career stage
52	<p><b>NAWIC VIC Mentoring Program</b>  <a href="https://www.nawic.com.au/Web/Chapters/VIC/CEO_Shadow_Program_And_Mentoring/Mentoring_Program.aspx">https://www.nawic.com.au/Web/Chapters/VIC/CEO_Shadow_Program_And_Mentoring/Mentoring_Program.aspx</a>            A mentoring program to assist career development in the construction industry.</p> <p>Interventions/Activities): Mentoring            Which non-traditional field: Construction            Location (country): Victoria            Implementing organisation: NAWIC VIC</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>
53	<p><b>NAWIC WA Mentoring Program</b>  <a href="https://www.nawic.com.au/web/chapters/WA/WA_Mentoring.aspx">https://www.nawic.com.au/web/chapters/WA/WA_Mentoring.aspx</a>            A mentoring program for women in the construction industry.</p> <p>Interventions/Activities): Mentoring            Which non-traditional field:            Location (country):            Implementing organisation:</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences: ✓            Growth: ✓</p>
54	<p><b>Operation Protect and Preserve</b>  <a href="https://tradeswomenustralia.com.au/operation-protect-and-preserve/">https://tradeswomenustralia.com.au/operation-protect-and-preserve/</a>            Tradewomen Australia's Operation Protect and Preserve ran a range of industry engagement events, careers workshops, wellbeing workshops and developed resources in order to support female apprentices during the pandemic. These were conducted online.</p> <p>Interventions/Activities): Industry engagement events, careers workshops, resources            Which non-traditional field: Construction            Location (country): Online            Implementing organisation: Tradeswomen Australia</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth:</p>
55	<p><b>Passport to Diversity</b>  <a href="https://www.buildaustralia.com.au/news_article/partnership-building-solid-foundations-for-diversity-and-inclusion-in-construction/">https://www.buildaustralia.com.au/news_article/partnership-building-solid-foundations-for-diversity-and-inclusion-in-construction/</a>            An online training program on diversity and inclusion. The training covers key barriers impacting women's increased participation in trades and provides employers with resources and tools to help them to foster inclusive workplace cultures to a greater extent. This program also included "Toolbox Talk sessions" delivered to TAFE Queensland apprentices across various campuses.</p> <p>Interventions/Activities): Online training program, educational sessions at TAFEs            Which non-traditional field: Construction            Location (country): Australia            Implementing organisation: National Association for Women in Construction (NAWIC) and TAFE Queensland</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth:</p>

	PROGRAM	Career stage
56	<p><b>Power Careers</b>  <a href="https://www.cdu.edu.au/launchpad/student-stories/powering-our-careers-male-dominated-industry">https://www.cdu.edu.au/launchpad/student-stories/powering-our-careers-male-dominated-industry</a>  The all-female program, Power Careers, provides tailored and intensive training to women in the NT to train them to enter the electrical, refrigeration and air conditioning industry. The program is delivered by GTNT, CDU VET, and the NT Department of Trade, Business and Innovation. The program includes training, work experience and employment support. As an example of the program's success - in 2018, 12 out of the 14 women trained were taken as apprentices with local electrical companies.</p> <p>Interventions/Activities): Training, work experience, employment support  Which non-traditional field:  Location (country): NT  Implementing organisation: GTNT, CDU VET, and the NT Department of Trade, Business and Innovation</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences: ✓  Growth:</p>
57	<p><b>POWERfulWOMEN project</b>  <a href="https://apiforms.wufoo.com/forms/z1isvexh01d0nmr/">https://apiforms.wufoo.com/forms/z1isvexh01d0nmr/</a>  The Australian Power Institute Limited's POWERfulWOMEN project is designed to support women to build careers in engineering and secure leadership roles in the Australian power sector via a 12 month program. The program includes in-person and online activities, skill building and mentoring.</p> <p>Interventions/Activities): Mentoring, networking, professional development sessions, leadership sessions  Which non-traditional field:  Location (country):  Implementing organisation:</p>	<p>Exploration:  Education &amp; Training:  Early Experiences:  Growth: ✓</p>
58	<p><b>Qbuild Cannon Hill Social Housing Pilot Project</b>  <a href="https://www.epw.qld.gov.au/about/initiatives/women-in-construction">https://www.epw.qld.gov.au/about/initiatives/women-in-construction</a>  This project used government procurement to increase the number of women on site from 2% to potentially 30%.</p> <p>Interventions/Activities): Recruitment practices  Which non-traditional field: Construction  Location (country): Queensland  Implementing organisation: Queensland Government</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth:</p>
59	<p><b>QRC/WIMARQ Mentoring Program</b>  <a href="https://womeninminingqueensland.com/mentoring-program/">https://womeninminingqueensland.com/mentoring-program/</a>  Now in its eighth year, this program responds to the need for formal mentoring for women working in Queensland's minerals and energy sectors, works to improve retention and progression of women in these sectors.</p> <p>Interventions/Activities): Mentoring  Which non-traditional field: Mining/resources sector  Location (country): Queensland  Implementing organisation: Women in Mining and Resources Queensland</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth: ✓</p>

	PROGRAM	Career stage
60	<p><b>Raise it! Program</b>  <a href="https://www.humanrights.vic.gov.au/static/a0ac50f642ea9f8b76da222c53436700/Resource-Report-Raise_it_Evaluation_insights_and_enhancements-Jun19.pdf">https://www.humanrights.vic.gov.au/static/a0ac50f642ea9f8b76da222c53436700/Resource-Report-Raise_it_Evaluation_insights_and_enhancements-Jun19.pdf</a>  The Raise It! Pilot program aimed to raise awareness about sexual harassment in the workplace regarding pregnancy, parental leave and access to flexible working arrangements. It sought to build the confidence and abilities of participants to raise conversation on this topic. To do so, Raise It! involved preparation, education and resources. The program focused on developing bystander and manager's skills. The resources provided are three online chatbots to build skills and confidence.</p> <p>Interventions/Activities): Bystander workshops, resource development  Which non-traditional field: Across industries  Location (country): Australia  Implementing organisation: the Victorian Equal Opportunity and Human Rights Commission (the Commission)</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth:</p>
61	<p><b>Robogals</b>  <a href="https://robogals.org">https://robogals.org</a>  Engaging young women in engineering and related areas. Robogals run outreach and the educational workshops and initiatives for children in Australia and overseas. Major initiatives have included: The Science Challenge (Australia), Pathways into Engineering/PIE (Australia), Engineering Challenge (UK), Robogals Regional &amp; Rural (RRR)  Ambassadors program (Australia) &amp; National Curriculum (Australia).</p> <p>Interventions/Activities): Workshops  Which non-traditional field: Engineering  Location (country): Across Australia  Implementing organisation: Robogals</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
62	<p><b>Science in Australia Gender Equity Project (SAGE)</b>  <a href="https://www.sciencegenderequity.org.au">https://www.sciencegenderequity.org.au</a>  SAGE is an accreditation program. After a three-year Pilot program, SAGE has facilitated 45 institutions to commit to their Athena Swan Awards pathway. SAGE has now become an NFP. Their work with institutions includes administering ATHENA SWAN, accredits an grants awards for advancing gender equality and diversity and collaborates with institutions to promote gender equality and diversity.</p> <p>Interventions/Activities): Accreditation program, stakeholder engagement  Which non-traditional field: Science  Location (country): Australia wide  Implementing organisation: SAGE</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth:</p>
63	<p><b>Skillset TradeUp</b>  <a href="https://skillset.com.au/employment-career-development/tradeup/">https://skillset.com.au/employment-career-development/tradeup/</a>  A trade careers program engaging high school students in Orange and Dubbo NSW</p> <p>Interventions/Activities): School visits, careers expos, employment skills sessions, mentoring, work experience support  Which non-traditional field: Construction  Location (country): Australia  Implementing organisation: Skillset</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>

	PROGRAM	Career stage
64	<p><b>St Barbara</b>  <a href="https://www.wgea.gov.au/sites/default/files/documents/WGEA-St-Barbara.pdf">https://www.wgea.gov.au/sites/default/files/documents/WGEA-St-Barbara.pdf</a>  St Barbara sought to improve the recruitment, retention and advancement of women in the resources sector. This included recruitment campaigns, mentoring and networking.</p> <p>Interventions/Activities): Recruitment campaign, mentoring, networking,  Which non-traditional field: Mining/resources sector  Location (country):  Implementing organisation: St Barbara</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth: ✓</p>
65	<p><b>STEM Choice in Female High-School Students: In-School Experience Outreach Initiative</b>  <a href="https://www.nawic.com.au/Web/Chapters/QLD/QLD_Schools.aspx">https://www.nawic.com.au/Web/Chapters/QLD/QLD_Schools.aspx</a>  The In-School Experience Program engages female high school students, and particularly those in regional areas. The program has sought to demystify the careers in the construction industry via panel discussions with industry professionals. They hope that the program will spark female students' interest in STEM when choosing VET or school subjects. This project provides high-school students with hands-on experience to build their understanding of career opportunities in construction and engineering. The aim is to increase female enrolment in construction related post-secondary education, ultimately bridging the gender gap in the construction industry. The project has a strong alignment with QUT and National Association of Women in Construction's (NAWIC) strategic direction, commitment to diversity and gender equality.</p> <p>Interventions/Activities): Workshops, school visits, careers webinars  Which non-traditional field:  Location (country): Queensland  Implementing organisation: NAWIC QLD &amp; Queensland University of Technology (QUT)</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
66	<p><b>STEM Women</b>  <a href="https://www.stemwomen.org.au/">https://www.stemwomen.org.au/</a>  An online directory to promote women in STEM</p> <p>Interventions/Activities): Resource development (Online directory)  Which non-traditional field: STEM  Location (country): Across Australia/Online  Implementing organisation: Australian Academy of Science</p>	<p>Exploration:  Education &amp; Training:  Early Experiences:  Growth: ✓</p>
67	<p><b>Superstars of STEM</b>  <a href="https://scienceandtechnologyaustralia.org.au/wp-content/uploads/2021/06/Appendix-3_Superstars-program-impact-to-31-Dec-2020.pdf">https://scienceandtechnologyaustralia.org.au/wp-content/uploads/2021/06/Appendix-3_Superstars-program-impact-to-31-Dec-2020.pdf</a>  Superstars of STEM aims to put an end to society's gendered assumptions about scientists and increase the visibility of women in STEM professions. STA aim to enable a critical mass of "celebrity" Australian female scientists and technologists to act as role models for young women and girls. STA hope to work towards equal representation of women and men in STEM in the media.</p> <p>Interventions/Activities): Advocacy campaign  Which non-traditional field: STEM  Location (country): Across Australia  Implementing organisation:</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>

	PROGRAM	Career stage
68	<p><b>Supporting And Linking Tradeswomen (SALT)</b>  <a href="https://saltaustralia.org.au">https://saltaustralia.org.au</a>            SALT's aims are to provide support, mentoring, and avenues for networking, promote diversity and the work of women in the industry to the public, and advocate for a change of attitude towards women working in the trades and for changes to facilitate women's involvement. They provide skills workshops to increase the number of women entering apprenticeships. They offer one workshop to develop basic skills, and another one with larges groups to run give exposure to tools.</p> <p>Interventions/Activities): Workshops, networking, mentoring            Which non-traditional field: Construction            Location (country): Across Australia            Implementing organisation: Supporting and Linking Tradeswomen (SALT)</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences: ✓            Growth:</p>
69	<p><b>Take a Stand</b>  <a href="https://womenshealthvic.com.au/resources/WHV_Publications/Factsheet_2019_01.15_Take-A-Stand-against-domestic-violence_2019_(Fulltext).pdf">https://womenshealthvic.com.au/resources/WHV_Publications/Factsheet_2019_01.15_Take-A-Stand-against-domestic-violence_2019_(Fulltext).pdf</a>            The Take a Stand program was the first of its kind to take place in Australia. It took place between 2007 and 2011. It involved a whole of workplace approach, which worked to engage all levels of the organisation and conduct training with staff in bystander approaches in order to prevent violence against women.</p> <p>Interventions/Activities): Bystander workshops            Which non-traditional field: Across industries            Location (country): Australia            Implementing organisation: Women's Health Victoria</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth:</p>
70	<p><b>Techgirls</b>  <a href="https://www.techgirlsmovement.org/competition/about/">https://www.techgirlsmovement.org/competition/about/</a>            Originally called the Search for the Next Tech Girl Superhero, the program is now called Techgirls and has been operating for the past 8 years. It seeks to engage girls in STEM through a hands-on competition program. The award-winning program has engaged more than 10,000 girls , hundreds of teachers and 1000+ industry mentors. The program includes careers sessions, workshops and mentoring for girls aged 7 to 17. The program hihglights career pathways and provides role models, while helping girls to build skills and confidence.</p> <p>Interventions/Activities): Competition - careers sessions, workshops, mentoring            Which non-traditional field: STEM            Location (country): Australia wide            Implementing organisation: The Tech Girls Movement Foundation</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
71	<p><b>Techtrails</b>  <a href="https://www.techtrails.org.au/about-techtrails/">https://www.techtrails.org.au/about-techtrails/</a>            Tech trails targets WA high school students in years 9 and 10 to increase their awareness of careers in STEM and provide female role models.</p> <p>Interventions/Activities): School outreach sessions, online engagement activities            Which non-traditional field: STEM            Location (country): Bibra Lake, WA            Implementing organisation: Women in Technology WA (Inc.)</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>

	PROGRAM	Career stage
72	<p><b>The Expanding Horizons project</b>  <a href="https://www.grants.gov.au/Ga/Show/0e197ca7-bb7c-3fb2-6d5b-70465531f022">https://www.grants.gov.au/Ga/Show/0e197ca7-bb7c-3fb2-6d5b-70465531f022</a>            The Expanding Horizons is offered to girls (aged 13-14) from low socioeconomic backgrounds to take part in an experiential learning program, involving STEM-related activities and career development interventions. From this, the results of the project will be compiled to inform resources for teachers, career development professionals and families.</p> <p>Interventions/Activities): Workshops, careers sessions            Which non-traditional field:            Location (country): Port Adelaide, SA            Implementing organisation: Employment Options Inc</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
73	<p><b>The Gateway to Industry Schools Program</b>  <a href="https://www.csq.org.au/gateways/">https://www.csq.org.au/gateways/</a>            "The Gateway to Industry Schools Program (Gateways) is a Queensland Government initiative which aims to transition young people from school to work while completing school and gaining formal qualifications. Key activities include; working with enterprises to understand their para-professional skill requirements, facilitate work experience placement opportunities for students, and partnering with industry to support their role connecting students to work experience opportunities." provides toolkits resources on professions for students and for teachers</p> <p>Interventions/Activities): Employability skills workshops, work experience, resource development            Which non-traditional field: Construction            Location (country): Australia            Implementing organisation: Queensland Government</p>	<p>Exploration: ✓            Education &amp; Training: ✓            Early Experiences:            Growth:</p>
74	<p><b>The Lady Tradies</b>  <a href="http://www.theladytradies.com.au">www.theladytradies.com.au</a>            The Lady Tradies Australia provides an avenue for tradeswomen and apprentices to connect with other women in the industry and provide support to them. They also facilitate recruitment, where employers are able to advertise opportunities, women are able to connect with employers regarding these and sole traders are able to advertise their businesses. Beyond this, they also conduct outreach with schools to engage young girls in careers in construction.</p> <p>Interventions/Activities): Networking, recruitment support, school outreach activities/careers sessions            Which non-traditional field: Construction            Location (country): Across Australia            Implementing organisation: The Lady Tradies</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences: ✓            Growth: ✓</p>

	PROGRAM	Career stage
75	<p><b>The Martu Women in Science project</b>  <a href="https://www.grants.gov.au/Ga/Show/480CA9C3-98E8-A518-0F3D-50C3213D0F87">https://www.grants.gov.au/Ga/Show/480CA9C3-98E8-A518-0F3D-50C3213D0F87</a>            The Martu Women in Science project engages female Indigenous Rangers from the Matuwa Kurrara Kurrara (MKK) Indigenous Protected Area in Western Australia. This is a two-way science program, combining modern scientific principles and traditional knowledge, to engage Indigenous women and students in STEM pathways.</p> <p>Interventions/Activities): Training, work experience, mentoring            Which non-traditional field: STEM            Location (country): Wiluna, WA            Implementing organisation: Desert Support Services</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth: ✓</p>
76	<p><b>The Sparkettes</b>  <a href="https://www.facebook.com/DarwinSparkettes">https://www.facebook.com/DarwinSparkettes</a>            Connecting women in electrical trades and developing mentoring opportunities</p> <p>Interventions/Activities): Mentoring, networking            Which non-traditional field: Construction industry - Electrical trades            Location (country): Darwin            Implementing organisation: The Sparkettes</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>
77	<p><b>The STEAMPunk Girls project</b>  <a href="https://www.uts.edu.au/partners-and-community/initiatives/entrepreneurship/programs-and-opportunities/steampunk-girls">https://www.uts.edu.au/partners-and-community/initiatives/entrepreneurship/programs-and-opportunities/steampunk-girls</a>            The STEAMPunk Girls project is focused on increasing female students' (Year 7-10) interest in STEAM (science, technology, engineering, arts and math) and encourages them to pursue study and careers in these areas. This program works collaboratively with girls to help them to identify issues in their communities, and develop entrepreneurial skills and STEAM-based solutions these problems.</p> <p>Interventions/Activities): Workshops            Which non-traditional field: STEAM            Location (country): Ultimo, NSW            Implementing organisation: University of Technology Sydney (UTS)</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
78	<p><b>The STEM Sisters project</b>  <a href="https://bawbawlatrobellen.com.au/programs/">https://bawbawlatrobellen.com.au/programs/</a>            The STEM Sisters project was developed in response to low numbers of girls in STEM subjects. Their aim is to increase the awareness of young women of the opportunities in STEM. The program engages girls in Year 10 as STEM Sisters. This is them connected to the STEM Sister Ambassador Program. The STEM Sister Ambassadors are volunteers who offer their time and support to promote STEM to young girls.</p> <p>Interventions/Activities): Careers sessions, ambassador program            Which non-traditional field: STEM            Location (country): Gippsland, VIC            Implementing organisation: Baw Baw Latrobe LLEN, South Gippsland Bass Coast LLEN and Gippsland East LLEN</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>



	PROGRAM	Career stage
79	<p><b>The Tradeswomen Australia Community Foundation Schools Program</b>  <a href="https://www.twacf.org/school-programs/">https://www.twacf.org/school-programs/</a> ,  <a href="https://tradeswomenustralia.com.au/2021/06/01/tradeswomen-australia-launch-schools-program-girls-urged-to-follow-the-money/">https://tradeswomenustralia.com.au/2021/06/01/tradeswomen-australia-launch-schools-program-girls-urged-to-follow-the-money/</a></p> <p>TWACF's school program visits schools across Victoria and gives presentations and runs activities highlight the range of career options in the trades to girls.</p> <p>Interventions/Activities): Careers sessions  Which non-traditional field: Construction  Location (country): Victoria, Australia  Implementing organisation: Tradeswomen Australia Community Foundation</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
80	<p><b>The Women Building Surveyors Program</b>  <a href="https://www.localgovernment.vic.gov.au/_data/assets/pdf_file/0028/168337/Women-Building-Surveyors-Program-Guidelines.pdf">https://www.localgovernment.vic.gov.au/_data/assets/pdf_file/0028/168337/Women-Building-Surveyors-Program-Guidelines.pdf</a></p> <p>The Women Building Surveyors Program takes place over two years to give 40 women opportunities to become building surveyors, working for councils across Victoria. All 79 councils in Victoria have been able to nominate one of their female staff members or recruit a a new female staff member to participate in the program.</p> <p>Interventions/Activities): Training program  Which non-traditional field: Construction  Location (country): Victoria  Implementing organisation: Local Government Victoria</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>
81	<p><b>The Women in Trades Network</b>  <a href="http://www.facebook.com/groups/womenintradessocialnetwork">www.facebook.com/groups/womenintradessocialnetwork</a></p> <p>The Women in Trades Network connects tradeswomen with one another via social media</p> <p>Interventions/Activities): Networking  Which non-traditional field: Construction  Location (country): Across Australia  Implementing organisation: The Women in Trades Network</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth: ✓</p>
82	<p><b>Trade Ready</b>  <a href="https://www.csq.org.au/school-students-career-seekers/">https://www.csq.org.au/school-students-career-seekers/</a></p> <p>Trade Ready targets people who have some entry level experience working in the building and construction industry and provides them with additional skills and experiences to build their job readiness help them to transition into a career in the industry.</p> <p>Interventions/Activities): Employability skills workshops, work experience, training  Which non-traditional field: Construction  Location (country): Australia  Implementing organisation: Construction Skills Queensland (CSQ)</p>	<p>Exploration: ✓  Education &amp; Training: ✓  Early Experiences:  Growth:</p>

	PROGRAM	Career stage
83	<p><b>Trade Start</b>  <a href="https://www.csq.org.au/courses/trade-start-general/">https://www.csq.org.au/courses/trade-start-general/</a>            CSQ's Trade Start initiative is a pre-employment program aiming to attract those individuals interested in building and construction are not at school or in the industry have have an interest in a career in the sector. Trade Start allows them to gain an entry-level qualification and real work experience. The Trade Start program offers a mix of classroom-based learning and 160 hours of work experience. This allows participants to develop job-ready skills and gain a Certificate I or II.</p> <p>Interventions/Activities): Training, work experience, employability sessions, employment support            Which non-traditional field: Construction            Location (country): Australia            Implementing organisation: Construction Skills Queensland (CSQ)</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences: ✓            Growth:</p>
84	<p><b>Trade Taster Program</b>  <a href="https://tafeqld.edu.au/information-for/school-students/trade-tasters.html">https://tafeqld.edu.au/information-for/school-students/trade-tasters.html</a>,  <a href="https://thegapshs.eq.edu.au/supportandresources/formsanddocuments/documents/curriculum/senior%20schooling/year%2010%20trade%20taster%20program.pdf">https://thegapshs.eq.edu.au/supportandresources/formsanddocuments/documents/curriculum/senior%20schooling/year%2010%20trade%20taster%20program.pdf</a>            The Trade Taster Program delivers training to year 10 students for one day per week for nine weeks. This helps to inform students understanding of the further courses available for them to pursue in the future.</p> <p>Interventions/Activities): Workshops            Which non-traditional field: Construction            Location (country): Australia            Implementing organisation: TAFE Queensland</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
85	<p><b>Trade Up Australia</b>  <a href="https://www.facebook.com/tradeupaustalia/">https://www.facebook.com/tradeupaustalia/</a> .  <a href="http://tradeupaustalia.com.au/?fbclid=IwAR3mmUuk2R5S0Gfo4zp83ptDibMmg_hmv4zOGRGnzx2nDpvYHGR10FEWdMw">http://tradeupaustalia.com.au/?fbclid=IwAR3mmUuk2R5S0Gfo4zp83ptDibMmg_hmv4zOGRGnzx2nDpvYHGR10FEWdMw</a>            TradeUP Australia advocate for women in the trades by conducting talks with businesses and community groups and promote the industry to women and girls. They also work to connect women with one another by running events for networking and facilitating mentoring. Beyond this, they also work to empower women through workshops allowing them to develop practical skills.</p> <p>Interventions/Activities): Mentoring, networking, advocacy            Which non-traditional field: Construction            Location (country): WA            Implementing organisation: TradeUP Australia</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences: ✓            Growth: ✓</p>

	PROGRAM	Career stage
88	<p><b>Try A Trade program</b>  <a href="https://www.premier.sa.gov.au/news/media-releases/news/female-students-encouraged-to-explore-trades">https://www.premier.sa.gov.au/news/media-releases/news/female-students-encouraged-to-explore-trades</a>            Try a Trade is a program for female high school students to allow to them to explore careers in trades which are typically dominated by men. The progrma takes place at TAFE SA's Tonsley Campus and allows participants, whose schools are a part of the doorway2construction VET program, an opportunity for hands on experience. Run with CITB, the program takes place over four days and covers carpentry, tiling, painting and decorating, as well as White Card activities.</p> <p>Interventions/Activities): Workshops            Which non-traditional field: Construction            Location (country): South Australia            Implementing organisation: CITB</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
87	<p><b>Try'a Trade</b>  <a href="https://www.csq.org.au/school-students-career-seekers/">https://www.csq.org.au/school-students-career-seekers/</a>            CSQ runs Try'a Trade events to raise awareness among school students about careers options in construction. Every year a group of schools are invited to send students to attend an interactive, hands-on workshop where they are able to try out a range of trades, like carpentry, plumbing, painting, electrical, plastering, tiling or bricklaying. Participants are also able to gain career advice from apprentices, local employers and industry representatives.</p> <p>Interventions/Activities): Workshops            Which non-traditional field: Construction            Location (country): Australia            Implementing organisation: Construction Skills Queensland (CSQ)</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
88	<p><b>Try'a Skill</b>  <a href="https://www.csq.org.au/school-students-career-seekers/">https://www.csq.org.au/school-students-career-seekers/</a>            CSQ runs Try'a Skill with high schools to raise awareness about paraprofessional career options in construction. The Try'a Skill program generally takes place on a construction site, to show the blended working environment of most paraprofessionals.</p> <p>Interventions/Activities): Workshop, site tour            Which non-traditional field: Construction            Location (country): Australia            Implementing organisation: Construction Skills Queensland (CSQ)</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
89	<p><b>University of Canberra Biomedical Engineering program</b>  <a href="https://www.canberra.edu.au/about-uc/media/newsroom/2021/june/uc-led-biomechanics-mentorship-project-seeks-to-build-diversity-in-stem">https://www.canberra.edu.au/about-uc/media/newsroom/2021/june/uc-led-biomechanics-mentorship-project-seeks-to-build-diversity-in-stem</a>            This program aims to engage and inspire school girls and mentors in the engineering field of biomechanics. It works with girls and early career biomechanists to support both attraction and retention.</p> <p>Interventions/Activities): Workshops, mentoring, networking            Which non-traditional field: Engineering            Location (country): ACT, VIC and QLD            Implementing organisation:</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth: ✓</p>

	PROGRAM	Career stage
90	<p><b>UWA Girls in Engineering (GiE) outreach program</b>  <a href="https://starportal.edu.au/program/uwa-girls-in-engineering">https://starportal.edu.au/program/uwa-girls-in-engineering</a>            The UWA Girls in Engineering (GiE) outreach program to inspire female students to pursue STEM study and careers. Current UWA students and industry partners give presentations to girls in years 7–12 students about engineering career options. The GiE program also hosts on-campus Discovery Days, with activities, clubs, and speakers and alumni sharing their experiences.</p> <p>Interventions/Activities): Careers sessions            Which non-traditional field: Engineering            Location (country): WA            Implementing organisation: University of Western Australia</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
91	<p><b>Virtual Construction Site (VCS) Tour</b>  <a href="https://www.dropbox.com/s/165llbr14r4yux/NAWIC_VCSReport_FionaLamari_R3.pdf?dl=0">https://www.dropbox.com/s/165llbr14r4yux/NAWIC_VCSReport_FionaLamari_R3.pdf?dl=0</a>            Virtual Construction Site (VCS) Tour project is a new approach to engage female high school students in the opportunities of the construction industry via virtual reality. The VCS Tour shows students the diversity of site-based roles, demonstrated to them on a real construction site.</p> <p>Interventions/Activities):            Which non-traditional field:            Location (country):            Implementing organisation:</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
92	<p><b>White Ribbon Workplace Accreditation Programme</b>  <a href="https://www.whiteribbon.org.au/Workplaces-and-Schools/Workplace-Accreditation">https://www.whiteribbon.org.au/Workplaces-and-Schools/Workplace-Accreditation</a>            An accreditation program to demonstrate an organisation's commitment gender equality.</p> <p>Interventions/Activities): Accreditation program            Which non-traditional field: Across industries            Location (country): Australia            Implementing organisation: White Ribbon</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth:</p>
93	<p><b>Women and Their Trade (WaTT)</b>  <a href="https://necaeducation.com.au/neca-education-and-careers-launches-women-and-their-trade/">https://necaeducation.com.au/neca-education-and-careers-launches-women-and-their-trade/</a>            The Women and Their Trade (WaTT) initiative aims to provide career opportunities for women in the electrical industry. With funding from the Victorian Government's Apprenticeship Innovation Fund through the Apprenticeships Victoria 'Women in Apprenticeships' Project, Women and Their Trade project will support women through electrical apprenticeships. This includes 'Try-a-trade' days, mentoring, qualification training, soft skills training in resilience, uncovering strengths, and financial guidance.</p> <p>Interventions/Activities): Workshops, mentoring, qualification training, soft skills training            Which non-traditional field:            Location (country): VIC            Implementing organisation: NECA Education &amp; Careers and Apprenticeships Victoria</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth:</p>

	PROGRAM	Career stage
94	<p><b>Women Building Australia</b>  <a href="https://www.womenbuildingaustralia.com.au/about-women-building-australia">https://www.womenbuildingaustralia.com.au/about-women-building-australia.</a>  <a href="https://masterbuilders.com.au/MediaLibraries/MB/Women-Building-Australia/WBA_mentoring-booklet_1.pdf">https://masterbuilders.com.au/MediaLibraries/MB/Women-Building-Australia/WBA_mentoring-booklet_1.pdf</a></p> <p>This program has been rebranded from previously being the WinBac Program. Provides careers expos, mentoring, coaching, harassment and discrimination support phone line, a "Female led Business Register" and a dedicated website to act as a portal for program information. Case studies from prior years highlight program success. This year's program finishes in November.</p> <p>Interventions/Activities): Careers Expos, mentoring, coaching, harassment and discrimination support line, a business register and website.  Which non-traditional field: Construction  Location (country):  Implementing organisation: Master Builders Australia</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth:</p>
95	<p><b>Women in Agri-Tech: Increasing participation in the future of farming</b>  <a href="http://agri-techeducation.com/wp-content/uploads/2020/07/Women-in-Agri-Tech-Best-Practice-Guide.pdf">http://agri-techeducation.com/wp-content/uploads/2020/07/Women-in-Agri-Tech-Best-Practice-Guide.pdf</a></p> <p>This program aims to develop a strong network of female teachers to then become leaders in digital literacy, STEM and entrepreneurship in regional, rural and remote areas. Taking part in a symposium program guided by researchers, participants will develop skills and gain resources to inform their classroom practices and inspire future generations of girls.</p> <p>Interventions/Activities): Educational/Professional development sessions  Which non-traditional field: Agriculture  Location (country): North Rockhampton, QLD  Implementing organisation: CQUniversity Australia</p>	<p>Exploration:  Education &amp; Training:  Early Experiences:  Growth: ✓</p>
96	<p><b>Women in Civil Construction</b>  <a href="https://mba.org.au/mbas-women-in-civil-program-creating-a-diverse-workforce-in-the-civil-construction-industry/">https://mba.org.au/mbas-women-in-civil-program-creating-a-diverse-workforce-in-the-civil-construction-industry/</a></p> <p>A 9-week civil construction program. It has run for 3 years and has been described as an innovative and has seen over 70 per cent of its participants secure full time employment after the program.</p> <p>Interventions/Activities): Training program  Which non-traditional field: Construction  Location (country): ACT  Implementing organisation: MBA &amp; SPARK</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>

	PROGRAM	Career stage
97	<p><b>Women in Construction Industry Coordination Project</b>  <a href="https://www.cmtedd.act.gov.au/open_government/inform/act_government_media_releases/yvette-berry-mla-media-releases/2021/progressing-gender-equality-in-construction">https://www.cmtedd.act.gov.au/open_government/inform/act_government_media_releases/yvette-berry-mla-media-releases/2021/progressing-gender-equality-in-construction</a></p> <p>The Industry Coordination Project works to develop practical strategies to create safer and more inclusive workplaces. The project focuses on the retention of women in the industry by improving industry's culture and fostering respectful relationships in the workplace.</p> <p>The project will work with both employees and employers to gain an understanding of the factors that are impacting women's participation and inclusion in the construction industry and means of addressing this.</p> <p>Interventions/Activities): Research activities, stakeholder engagement  Which non-traditional field: Construction  Location (country): ACT, Australia  Implementing organisation: CFMEU ACT</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth:</p>
98	<p><b>Women in Construction Pathways Program</b>  <a href="https://www.linkedin.com/posts/nawic---national-association-of-women-in-construction-australia-national-nawic-in-conjunction-with-the-australian-activity-6737132387593003008-fWu0/?fbclid=IwAR2FNnN71ypnXvjmOod9yfYRF_TMSeht0WjCsexkQU5CVu8TmbXNNjXRqbY">https://www.linkedin.com/posts/nawic---national-association-of-women-in-construction-australia-national-nawic-in-conjunction-with-the-australian-activity-6737132387593003008-fWu0/?fbclid=IwAR2FNnN71ypnXvjmOod9yfYRF_TMSeht0WjCsexkQU5CVu8TmbXNNjXRqbY</a></p> <p>NAWIC and the Australian Training Company (ATC) offered year 10 and 11 girls the opportunity to gain skills and experience in the construction industry through this school-based apprenticeships program. The 18-month program allows girls to rotate across a variety of trades every 10-12 weeks. This hands-on exploration is coupled with the opportunity of mentoring from established mentors and NAWIC members.</p> <p>Interventions/Activities): Training, mentoring  Which non-traditional field: Construction  Location (country): ACT  Implementing organisation: NAWIC ACT &amp; the Australian Training Company (ATC)</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>
99	<p><b>Women in Construction Strategy Program</b>  <a href="https://www.vic.gov.au/victorias-women-construction-strategy">https://www.vic.gov.au/victorias-women-construction-strategy</a></p> <p>The WICS program included a number of interventions to increase women and girls' attraction, recruitment and retention. This included a careers' day with students, the Building Futures website which provides information and resources for students, parents/guardians, employers and teachers/careers counsellors, support for women jobseekers, an evaluation of industry recruitment standards, safe and respectful workplaces training and an overview of procurement strategies.</p> <p>Interventions/Activities): Careers outreach session, resource development (Online directory), recruitment practices, cultural change activities, research/evaluation activities  Which non-traditional field: Construction  Location (country): Online  Implementing organisation:</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences: ✓  Growth:</p>

	PROGRAM	Career stage
100	<p><b>Women in Construction, Engineering &amp; Infrastructure Leadership Summit</b>  <a href="https://wic.womenleadersummit.com">https://wic.womenleadersummit.com</a>            Industry leaders discuss best practice for inclusivity and diversity, sponsorship and mentorship, and leadership skills. The goal of the program is to enhance participants' leadership potential to succeed in a male dominated industry and develop a network of like-minded people.</p> <p>Interventions/Activities): Leadership sessions, cultural change sessions, networking sessions            Which non-traditional field:            Location (country): Sydney            Implementing organisation: Advantedge</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth: ✓</p>
101	<p><b>Women in Information and Technology</b>  <a href="https://www.industry.gov.au/sites/default/files/March%202020/document/australian-government-stem-initiatives-for-women-and-girls-2019.docx">https://www.industry.gov.au/sites/default/files/March%202020/document/australian-government-stem-initiatives-for-women-and-girls-2019.docx</a>            Established in 2018, Women in Information and Technology is an internal mentoring and leadership development program that aims to increase the number of women in technology leadership roles in the Department of Home Affairs.</p> <p>Interventions/Activities): Mentoring, leadership development            Which non-traditional field: Technology            Location (country):            Implementing organisation: Department of Home Affairs</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>
102	<p><b>Women in IT Executive Mentoring (WITEM) EL1 &amp; EL2 Coaching Program</b>  <a href="https://digitalprofession.gov.au/women-it-executive-mentoring-0">https://digitalprofession.gov.au/women-it-executive-mentoring-0</a>            WITEM is a coaching program is for EL1 and EL2 women in the Australian Public Service (APS), sponsored by Dell. It is 12 month program providing executive coaching to develop women's leadership skills. They senior executive mentors with EL2 women from across government, and mentors and mentees meet once a month. The program also includes introductory, mid-program and wrap up sessions as well as networking events.</p> <p>Interventions/Activities): Mentoring, networking            Which non-traditional field: IT            Location (country):            Implementing organisation: APS &amp; Dell</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>
103	<p><b>Women in Leadership Development project</b>  <a href="https://www.mrcf.com.au/internship-program/women-in-leadership-development-program/">https://www.mrcf.com.au/internship-program/women-in-leadership-development-program/</a> , <a href="https://wildforstem.com">https://wildforstem.com</a>            The Women in Leadership Development project works to tackle common barriers to retention and career progression faced by women in STEM by providing women with the qualifications, skills, confidence and networks to gain senior leadership and Board positions.</p> <p>Interventions/Activities): Networking, mentoring, leadership sessions, professional development sessions            Which non-traditional field: STEM            Location (country): VIC &amp; NSW            Implementing organisation: Medical Research Commercialisation Fund Pty Ltd</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>

	PROGRAM	Career stage
104	<p><b>Women in Male Dominated Industries</b>  <a href="https://www.facebook.com/WIMDOI">https://www.facebook.com/WIMDOI</a>  WIMDOI is a network of union women in male-dominated occupations and industries, which has been operating for over 20 years.</p> <p>Interventions/Activities): Networking  Which non-traditional field: Male dominated industries  Location (country): Australia  Implementing organisation: WIMBOD</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth: ✓</p>
105	<p><b>Women in Solar Program</b>  <a href="https://www.chandlermacleod.com/blog/2019/11/women-in-solar-program-offers-pathways-into-the-booming-solar-industry">https://www.chandlermacleod.com/blog/2019/11/women-in-solar-program-offers-pathways-into-the-booming-solar-industry</a>  Program to increase participation of women in male-dominated solar industry. The participants consisted of women who identified as Aboriginal or Torres Straight Islanders, single mothers or were long-term unemployed. The outcomes of the program were TAFE accreditation for the women and all participants secured jobs with Beon Energy.</p> <p>Interventions/Activities): Training program  Which non-traditional field: Solar/Construction of renewable energy  Location (country): Wagga Wagga  Implementing organisation: Chandler Macleod and Beon Energy Solutions</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences: ✓  Growth:</p>
106	<p><b>Women in STEM and Entrepreneurship (WiSE)</b>  <a href="https://www.industry.gov.au/news/the-wise-way-to-improving-gender-equity-in-stem">https://www.industry.gov.au/news/the-wise-way-to-improving-gender-equity-in-stem</a>  A grants program that funds a range of STEM projects</p> <p>Interventions/Activities): Grants program  Which non-traditional field: STEM  Location (country): Across Australia  Implementing organisation: Department of Industry, Science, Energy and Resources</p>	<p>Exploration: ✓  Education &amp; Training: ✓  Early Experiences: ✓  Growth: ✓</p>
107	<p><b>Women in Technology (WIT)</b>  <a href="https://wit.org.au/careers/">https://wit.org.au/careers/</a>  Networking, mentoring and careers programs for women in technology</p> <p>Interventions/Activities): Networking, mentoring, careers sessions  Which non-traditional field: Science &amp; Technology  Location (country): Queensland  Implementing organisation: Women in Technology</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth: ✓</p>
108	<p><b>Women in Technology and Innovation</b>  <a href="https://www.industry.gov.au/sites/default/files/March%202020/document/australian-government-stem-initiatives-for-women-and-girls-2019.docx">https://www.industry.gov.au/sites/default/files/March%202020/document/australian-government-stem-initiatives-for-women-and-girls-2019.docx</a>  Established in 2016, Women in Technology &amp; Innovation works to support, mentor and retain women within technology and innovation, as well as to raise awareness of workplace issues and culture, encourage change and champion women.</p> <p>Interventions/Activities): Mentoring, cultural change activities  Which non-traditional field: Technology &amp; innovation  Location (country):  Implementing organisation: Australian Federal Police</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth: ✓</p>



	PROGRAM	Career stage
109	<p><b>Women in Technology Community of Practice</b>  <a href="https://www.industry.gov.au/sites/default/files/March%202020/document/australian-government-stem-initiatives-for-women-and-girls-2019.docx">https://www.industry.gov.au/sites/default/files/March%202020/document/australian-government-stem-initiatives-for-women-and-girls-2019.docx</a>            Women in Technology Community of Practice is an internal program to develop connectedness among women at the department's Adelaide ICT campus, to foster support and encourage women to enter into ICT careers.</p> <p>Interventions/Activities): Networking            Which non-traditional field: ICT            Location (country): Adelaide            Implementing organisation: Department of Human Services</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth:</p>
110	<p><b>Women in Transport Mentoring Program</b>  <a href="https://levelcrossings.vic.gov.au/careers/training-for-the-future/women-in-transport-mentoring-program">https://levelcrossings.vic.gov.au/careers/training-for-the-future/women-in-transport-mentoring-program</a>            The Victorian Government's Women in Transport Mentoring Program is a six-month, industry-wide program which offers offering professional development and networking opportunities. Program participants are women with at least one year of experience in the transport industry. Mentors can be male or female and must have at least five years of experience in their field.</p> <p>Interventions/Activities): Mentoring            Which non-traditional field: Transport            Location (country): Victoria            Implementing organisation: The Level Crossing Removal Project</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>
111	<p><b>Women in White</b>  <a href="https://painters.edu.au/Business-Development/Women-in-White.htm">https://painters.edu.au/Business-Development/Women-in-White.htm</a>            Women in White aim to promote painting and decorating to girls as a potential career path. They support women in the industry by connecting them with one another and facilitating mentoring opportunities.</p> <p>Interventions/Activities): Mentoring, networking, advocacy            Which non-traditional field: Construction industry - painting and decorating            Location (country): National            Implementing organisation: National Institute for Painting and Decorating</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences: ✓            Growth:</p>
112	<p><b>Women OnSite</b>  <a href="https://www.womenonsite.org.au/about-women-onsite/">https://www.womenonsite.org.au/about-women-onsite/</a>            Women Onsite project is run by Victorian Trades Hall Council and funded by the Victorian Government. The goal of the Women Onsite project is to support women to enter apprenticeships or traineeships in historically male dominated industries.</p> <p>Interventions/Activities): Workshops, advocacy campaign, training, support services            Which non-traditional field: Construction            Location (country): VIC            Implementing organisation: Victorian Trades Hall Council</p>	<p>Exploration: ✓            Education &amp; Training: ✓            Early Experiences:            Growth:</p>

	PROGRAM	Career stage
113	<p><b>Women Who Weld</b>  <a href="https://www.qldmanufacturinginstitute.org.au/news/qmis-women-who-weld-program-increase-participation-in-trades">https://www.qldmanufacturinginstitute.org.au/news/qmis-women-who-weld-program-increase-participation-in-trades</a>            The “Women Who Weld” program seeks to expose girls to careers in male dominated industries. The program participants were grade 10 students from schools participating in the “Gateway to Industry Program (GISP) in the Surat Basin. The program looks to encourage increased female involvement in the male-dominated areas of manufacturing and trades.</p> <p>Interventions/Activities): Workshops            Which non-traditional field: Manufacturing &amp; Trades - Welding            Location (country): Queensland            Implementing organisation: Queensland Manufacturing Institute</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
114	<p><b>Women's Integrated Networking Groups (WINGS)</b>            The Women's Integrated Networking Group (WINGS) program women together across the industry to support career retention in the Air Force. Along with connecting with other women, they have the opportunity to listen to guest speakers both from within Defence and external organisations about barriers to women in the industry. The WINGS is 10-month long and is a locally delivered program for women in the Air Force. This involves 2-hour sessions approximately every 6-8 weeks, from February-November.</p> <p>Interventions/Activities): Networking, guest speaker sessions            Which non-traditional field: Aviation            Location (country): Across Australia            Implementing organisation:</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth: ✓</p>
115	<p><b>Workplace Diversity Program</b>  <a href="https://tradeswomenustralia.com.au/workplace-diversity-project/">https://tradeswomenustralia.com.au/workplace-diversity-project/</a>            The Workplace Diversity Program aims to prevent mental injuries and improve mental health through diversity and inclusion. Focus groups to identify barriers for diversity, The development of a workplace review resource (internal audit) on diversity measures, the development of resources (tools and a platform) to support workplaces to increase diversity, workshops focused on supervisor coaching on change management, unconscious bias and diversity.</p> <p>Interventions/Activities): Focus groups, resource development, workshops on change management, unconscious bias and diversity.            Which non-traditional field: Automotive industry            Location (country): Victoria            Implementing organisation: Tradeswomen Australia</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth:</p>

	PROGRAM	Career stage
116	<p><b>Y Respect Gender Project</b>  <a href="https://www.vichealth.vic.gov.au/-/media/ResourceCentre/PublicationsandResources/Economic-participation/2015-workplace/Creating-Healthy-Workplaces_Preventing-violence-against-women_Final-Report.pdf?la=en&amp;hash=458A27EA9B4B30C063C55E673EDC8EBCE67B09C6">https://www.vichealth.vic.gov.au/-/media/ResourceCentre/PublicationsandResources/Economic-participation/2015-workplace/Creating-Healthy-Workplaces_Preventing-violence-against-women_Final-Report.pdf?la=en&amp;hash=458A27EA9B4B30C063C55E673EDC8EBCE67B09C6</a></p> <p>Y Respect Gender Project was a whole-of-organisation change program. This involved trainings, education, resources, as well as a review of existing policies and practices. The evaluation of the program considered it effective at encouraging greater cultural change in the organisation.</p> <p>Interventions/Activities): Cultural change activities, resource development  Which non-traditional field: Community not-for-profit  Location (country): Victoria, Australia  Implementing organisation: VicHealth</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth:</p>

## International Programs

	PROGRAM	Career stage
1	<p><b>#BuildAKL campaign</b>  <a href="http://www.buildakl.co.nz/about">http://www.buildakl.co.nz/about</a>                      "The #BuildAKL campaign is an initiative that aims to get Auckland's young people into employment in the thriving construction and infrastructure industry. #BuildAKL is for all Aucklanders aged 16-24, with a particular focus on attracting more young women, Māori and Pasifika into the sector."</p> <p>Interventions/Activities): Awareness campaign                      Which non-traditional field: Construction                      Location (country): NZ                      Implementing organisation: Auckland Unlimited</p>	Exploration: ✓ Education & Training: Early Experiences: Growth:
2	<p><b>#JaiChoisiLeBatiment</b>  <a href="http://www.lebatiment.fr">http://www.lebatiment.fr</a>                      A campaign to promote careers in the building industry. The campaign slogan is "I've chosen the building industry". It seeks to break down any prejudices about the construction sector. The aim is to help both those in the industry to recruit staff and to encourage as many people as possible to pursue a career in the building industry.                      The campaign showcases men and women, apprentices, and managers, in a range on industry settings.</p> <p>Interventions/Activities): Awareness campaign                      Which non-traditional field: Building/Construction                      Location (country): France                      Implementing organisation: FFB - Fédération Française du Bâtiment</p>	Exploration: ✓ Education & Training: Early Experiences: Growth:
3	<p><b>'CyberMentor' program</b>  <a href="https://www.cybermentor-de.translate.google/? x tr sl=de&amp; x tr tl=en&amp; x tr hl=en-GB&amp; x tr pto=nui,sc">https://www.cybermentor-de.translate.google/? x tr sl=de&amp; x tr tl=en&amp; x tr hl=en-GB&amp; x tr pto=nui,sc</a>                      The 'CyberMentor' program allows female students and mentors to interact online through chats, forums and via email.</p> <p>Interventions/Activities): Mentoring                      Which non-traditional field: STEM                      Location (country): Germany                      Implementing organisation: Cyber mentor</p>	Exploration: ✓ Education & Training: Early Experiences: Growth:
4	<p><b>100 Years of Women in Transport (YOWIT) campaign</b>  <a href="https://cms.uitp.org/wp/wp-content/uploads/2020/08/WISE-II-Brochure-English.pdf">https://cms.uitp.org/wp/wp-content/uploads/2020/08/WISE-II-Brochure-English.pdf</a>                      The 100 Years of Women in Transport (YOWIT) campaign launched in November 2014 with the aim of inspiring, engaging and motivating both women in the industry as well as future generations. Program activities included: industry speakers, debates and panel discussions, as well as networking workshops, speed mentoring sessions, bring-your-daughter-to-work day, outreach to schools and informal networking opportunities.</p> <p>Interventions/Activities): Industry events, networking, Speed mentoring, schools outreach events, resource development (toolkit), advocacy campaign                      Which non-traditional field: Transport                      Location (country): London, England                      Implementing organisation: Transport for London (TfL)</p>	Exploration: ✓ Education & Training: Early Experiences: ✓ Growth: ✓

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5	<p><b>Advancing Women in Engineering and Technology Project</b>  <a href="https://womeninengtech.ca/about-us/">https://womeninengtech.ca/about-us/</a>  This two-year project works to implement diverse and inclusive initiatives to recruit, retain, and support women's career development. This includes creating a network of stakeholders to implement diversity and inclusion strategies and encourage a cultural shift in women's representation within the applied science and engineering sector. Activities include developing resources for actionable steps for individuals, employers, high schools and tertiary institutions, awareness raising of the project activities and benefits of D&amp;I, and develop a network of 'champions'.</p> <p>Interventions/Activities): Resource development, advocacy, pledge program  Which non-traditional field: Engineering and Technology  Location (country): British Columbia, Canada  Implementing organisation: Applied Science Technologists and Technicians of BC (ASTTBC)</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth: ✓</p>
6	<p><b>Affinity Networks</b>  <a href="https://www.balfourbeatty.com/how-we-work/diversity-and-inclusion/affinity-networks/?month=5&amp;year=2019&amp;parentId=1212">https://www.balfourbeatty.com/how-we-work/diversity-and-inclusion/affinity-networks/?month=5&amp;year=2019&amp;parentId=1212</a>  "Affinity networks" for gender equality, LGBT+, multicultural and ability work to foster understanding around diversity and inclusion and work towards long-term cultural change. Within these networks, employees are able to encourage change in the organisation. For example, the gender equality affinity network includes a reverse mentoring program in which employees are paired with those in senior leadership positions. They also run leadership training for senior leaders to better enable them to incorporate diversity and inclusion in the workplace.</p> <p>Interventions/Activities): Networking, mentoring, training  Which non-traditional field: Construction  Location (country): UK  Implementing organisation: Balfour Beatty</p>	<p>Exploration:  Education &amp; Training:  Early Experiences:  Growth: ✓</p>
7	<p><b>Apprenticeship Readiness Program</b>  <a href="https://www.wistmichigan.org/apprenticeship-readiness-program-1">https://www.wistmichigan.org/apprenticeship-readiness-program-1</a>  WIST ARP is a 15-week program to develop basic skills and kick-start women's careers in construction via hands on classes. Graduates are guaranteed an interview with a Building Trades Union which sponsors the program, to be a part of their Apprenticeship Program.</p> <p>Interventions/Activities): Training program  Which non-traditional field: Construction  Location (country): Michigan, US  Implementing organisation: Women in Skilled Trades (WIST)</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences: ✓  Growth:</p>

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8	<p><b>ASCENT</b>  <a href="https://mpowir.org/ascent-atmospheric-science-collaborations-and-enriching-networks/">https://mpowir.org/ascent-atmospheric-science-collaborations-and-enriching-networks/</a>            Atmospheric Science Collaborations and Enriching NeTworks (ASCENT) was a workshop program which was designed to bring female scientists in this field together as a means of retaining female junior scientists. In workshops, participants can hear from successful senior women scientists who discuss their career and life paths. They also run seminars on tools, resources, and methods that can help early career scientists. Networking and mentoring were also large parts of the program. This program helped to establish and expand women's personal and research-related networks, and gain new skills and confidence.</p> <p>Interventions/Activities): Networking, mentoring, careers sessions, employment support            Which non-traditional field: STEM            Location (country): US            Implementing organisation: National Science Foundation (NSF)</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth:</p>
9	<p><b>Azubi am Bau/apprentice in the building sector</b>  <a href="http://www.construction-for-youth.eu/en/initiatives/de---azubi-am-bau.aspx">http://www.construction-for-youth.eu/en/initiatives/de---azubi-am-bau.aspx</a>            This initiative was launched in 2013 and is targets young people who have left school as well as unemployed people with an interest in training in the building industry. The program has developed promotional materials to show young people that the building industry represents an attractive career option. They also invite students and teachers to their training centre for open days.</p> <p>Interventions/Activities): Awareness campaign, open days            Which non-traditional field: Construction            Location (country): Germany            Implementing organisation: ZDB - Zentralverband des Deutschen Baugewerbes</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
10	<p><b>Azubi-Portal der Bauverbände (Apprentice portal of the Construction Federation)</b>  <a href="http://www.construction-for-youth.eu/en/initiatives/de---azubi-portal-der-bauverbände.aspx">http://www.construction-for-youth.eu/en/initiatives/de---azubi-portal-der-bauverbände.aspx</a>            This initiative involves an advertising campaign and training and employment opportunities. People seeking jobs and apprenticeships can post their CVs and get matched with relevant opportunities.</p> <p>Interventions/Activities): Resource development (employment portal)            Which non-traditional field: Construction            Location (country): Germany            Implementing organisation: ZDB - Zentralverband des Deutschen Baugewerbes</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth:</p>
11	<p><b>Balfour Beatty Civil Engineering Mentoring Program</b>  <a href="https://blog.dundee.ac.uk/one-dundee/new-mentoring-scheme-helps-female-students-unlock-their-potential-in-engineering/">https://blog.dundee.ac.uk/one-dundee/new-mentoring-scheme-helps-female-students-unlock-their-potential-in-engineering/</a>            Balfour Beatty worked with the University of Dundee's to implement a civil engineering mentoring scheme which pairs female engineers with students. This works to support and empower these female students in their transition through University and into their careers.</p> <p>Interventions/Activities): Mentoring            Which non-traditional field: Engineering            Location (country): London, England            Implementing organisation: Balfour Beatty</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>

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12	<p><b>Baltic Gender project</b>  <a href="https://www.baltic-gender.eu">https://www.baltic-gender.eu</a>            Baltic Gender was an EU-funded project that has brought together scientific institutions in Baltic countries to work together to reduce gender inequality in Marine Science and Technology. The project was funded for 4 years and started in September 2016. The project ran workshops and gender-awareness training across partner institutions, after which they disseminated 'Best practices for structural changes' information, which encouraged institutions to introduce a number of new gender equality measures. Meanwhile the project also worked to support the individual careers of female marine scientists, technicians and the ship's crew. Blogs were published to increase the visibility of their achievements, and an international mentoring programme was established to further the careers of female postdoc researchers.</p> <p>Interventions/Activities): Resource development, gender equality workshops, mentoring, networking            Which non-traditional field: STEM            Location (country): Germany, Sweden, Finland, Lithuania &amp; Estonia            Implementing organisation: GEOMAR Helmholtz Centre for Ocean Research Kiel</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth: ✓</p>
13	<p><b>Bâti Femina</b>  <a href="https://constructionblueprint.eu/2021/07/16/france-bati-femina-ffb-nouvelle-aquitaine/">https://constructionblueprint.eu/2021/07/16/france-bati-femina-ffb-nouvelle-aquitaine/</a>            In April 2021, The FFB Nouvelle-Aquitaine launched a campaign about women in the construction industry. It sought to promote the industry and thereby attract a greater number of women. The campaign included a film, video and photo portraits, all of which were posted online and on social media.</p> <p>Interventions/Activities): Advocacy campaign            Which non-traditional field: Construction            Location (country): Bruges, France            Implementing organisation: FFB Nouvelle-Aquitaine</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
14	<p><b>BAU Dein Ding (Construction – your thing)</b>  <a href="https://www.bau-dein-ding.de/bundesweit-de">https://www.bau-dein-ding.de/bundesweit-de</a>            The Bau Dein Ding initiative offers a virtual experience of the construction site through a construction game – BauSimulator. The initiative has aimed to promote construction as a career choice to students through the media as well as outreach at schools using the 'Construction Bus' (BauBus).</p> <p>Interventions/Activities): Online resource development and school visits            Which non-traditional field: Construction            Location (country): Germany            Implementing organisation:</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
15	<p><b>Bau Helden (The Construction Heroes)</b>  <a href="https://bauhelden.ch/de/#die-story">https://bauhelden.ch/de/#die-story</a>            The Swiss Master Builders' Association has developed a docusoap titled "The Construction Heroes", as part of a campaign - "Build Your Future". The show gives insight into life on the building site. The objective of the campaign to improve the image of construction industry.</p> <p>Interventions/Activities): Advocacy campaign and tv show developed and promoted            Which non-traditional field: Construction            Location (country): Switzerland            Implementing organisation: SBV - Schweizerischer Baumeisterverband</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>

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16	<p><b>Bauberufe.ch</b>  <a href="http://www.bauberufe.ch">www.bauberufe.ch</a>            SBV have developed a website to raise awareness about careers in the construction trades to students and showcases professional profiles to inspire young people to pursue a career in the industry.</p> <p>Interventions/Activities): Resource development (website)            Which non-traditional field: Construction            Location (country): Switzerland            Implementing organisation: SBV - Schweizerischer Baumeisterverband</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
17	<p><b>BauCamp (Building Camp)</b>  <a href="http://www.construction-for-youth.eu/en/initiatives/de--baucamp.aspx">http://www.construction-for-youth.eu/en/initiatives/de--baucamp.aspx</a>            A one-day "camp" exposing students to dual vocational training and the reality of work in the construction industry. Participants shadow construction apprentices for a day of their training and assist them in construction related tasks. The participants are also able to explore and demonstrate their skills. Afterwards this session, participants who are interested in the industry are able to receive support on finding training in the construction industry.</p> <p>Interventions/Activities): Skills workshop            Which non-traditional field: Construction            Location (country): Germany            Implementing organisation: HDB - Hauptverband der Deutschen Bauindustrie</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
18	<p><b>Baumeister gesucht (Builders Wanted)</b>  <a href="http://www.construction-for-youth.eu/en/initiatives/de--builders-wanted-baumeister-gesucht.aspx">http://www.construction-for-youth.eu/en/initiatives/de--builders-wanted-baumeister-gesucht.aspx</a>            This program offers practical experience kindergarten-aged children and allow them to discover the construction careers. Boys and girls enjoy exposed to construction by making wooden and stone objects. Construction professions are therefore able to be communicated in a playful way. The Kindergartens also receive a package including a workbench, tools, a manual and a training course staff. This is followed by second training course was for the children run by educational professionals, titled "Harry Hammer and Nicki Nagel". The aim is to normalise the use of working benches and construction tools in kindergartens day-to-day.</p> <p>Interventions/Activities): Education and skills workshop            Which non-traditional field: Construction            Location (country): Germany            Implementing organisation: HDB - Hauptverband der Deutschen Bauindustrie</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
19	<p><b>Bau-Sommercamp (Building Summer Camp)</b>  <a href="http://www.construction-for-youth.eu/en/initiatives/de--building-summer-camp.aspx">http://www.construction-for-youth.eu/en/initiatives/de--building-summer-camp.aspx</a>            This program allows young people to spend a week getting to know the different construction trades in a hands-on capacity. They provide information on apprenticeships and career opportunities, as well as allowing participants to practice manual and technical skills the training workshop.</p> <p>Interventions/Activities): Education and skills workshop summer camp            Which non-traditional field: Construction            Location (country): Germany            Implementing organisation: ZDB - Zentralverband des Deutschen Baugewerbes</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>



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20	<p><b>BCITO Gateway Support Program</b>  <a href="https://www.bconstructive.co.nz/sites/default/files/2021-02/BCITO%20Gateway%20Programmes_Guide%20for%20Schools%202021.pdf">https://www.bconstructive.co.nz/sites/default/files/2021-02/BCITO%20Gateway%20Programmes_Guide%20for%20Schools%202021.pdf</a>            BCITO's Gateway is a government initiative offered to provide a workplace learning program year 11 and 12 students on construction trades. This provides them with skills and theory and allows them to transition into an apprenticeship upon completion.</p> <p>Interventions/Activities): Training program            Which non-traditional field: Construction            Location (country): NZ            Implementing organisation: BCITO</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth:</p>
21	<p><b>Be FaIR framework</b>  <a href="https://www.citb.co.uk/standards-and-delivering-training/be-fair-framework/what-is-the-be-fair-framework/">https://www.citb.co.uk/standards-and-delivering-training/be-fair-framework/what-is-the-be-fair-framework/</a>            The Be FaIR Framework works to embed equality throughout construction companies and especially at the site level. Tailored to the construction industry, it includes modeules to help on leadership, recruitment, management, monitoring, training and procurement.</p> <p>Interventions/Activities): Cultural change activities/resource development            Which non-traditional field: Construction            Location (country): UK            Implementing organisation: CITB</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth:</p>
22	<p><b>Be OnSite</b>  <a href="https://www.beonsite.org.uk">https://www.beonsite.org.uk</a>            Be OnSite is a not-for-profit established by international construction company, Lend Lease, in 2009. It aims to help disadvantaged people gain training and secure work. The Be OnSite program, which specifically targets individuals who are from BAME backgrounds, people with disabilities, long-term unemployed, homeless, ex-offenders, or current prisoners. Be OnSite involves a pre-employment program, including employability training, health and safety and industry-specific education, followed by on-the-job training. After this, Be OnSite employs participants and provides support, both emotionally and socially – including housing, probation support and other social services. Since its inception it has placed more than 650 people in jobs, across 60 occupations.</p> <p>Interventions/Activities): Employability training, training, support services            Which non-traditional field:            Location (country): UK            Implementing organisation: Be OnSite - Lend Lease</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences: ✓            Growth:</p>

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23	<p><b>Berufsstart Bau (Career Start in Construction)</b>  <a href="http://www.construction-for-youth.eu/en/initiatives/de---career-start-construction-berufsstart-bau.aspx">http://www.construction-for-youth.eu/en/initiatives/de---career-start-construction-berufsstart-bau.aspx</a></p> <p>The "Berufsstart Bau" project was launched in 2013 and is a pathway into work in the industry. The project enables applicants who, for different reasons, are not initially eligible for a training course, the ability to begin training in the industry. The program lasts between six to twelve months. Following which participants are then guaranteed the possibility of undertaking a training course. The project takes place across Germany. Over 200 participants have already taken part in the first iteration.</p> <p>Interventions/Activities): Training program  Which non-traditional field: Construction  Location (country): Germany  Implementing organisation: HDB - Hauptverband der Deutschen Bauindustrie</p>	<p>Exploration:</p> <p>Education &amp; Training: ✓</p> <p>Early Experiences:</p> <p>Growth:</p>
24	<p><b>Blue Collar Prep</b>  <a href="https://www.new-nyc.org/programs">https://www.new-nyc.org/programs</a></p> <p>Blue collar prep is a full-time, seven-week program aimed at giving women hands-on experience in the trades and allows them to explore using tools.</p> <p>Interventions/Activities): Training program  Which non-traditional field: Construction  Location (country): New York, US  Implementing organisation: Nontraditional Employment for Women</p>	<p>Exploration:</p> <p>Education &amp; Training: ✓</p> <p>Early Experiences:</p> <p>Growth:</p>
25	<p><b>Boot Camp</b>  <a href="https://www.new-nyc.org/programs">https://www.new-nyc.org/programs</a></p> <p>Boot camp is a condensed two-week preapprenticeship program</p> <p>Interventions/Activities): Training program  Which non-traditional field: Construction  Location (country): New York, US  Implementing organisation: Nontraditional Employment for Women</p>	<p>Exploration:</p> <p>Education &amp; Training: ✓</p> <p>Early Experiences:</p> <p>Growth:</p>
26	<p><b>Boss Ladies Project</b>  <a href="https://www.boss-ladies.dk/new-page-78">https://www.boss-ladies.dk/new-page-78</a></p> <p>The Boss Ladies project seeks to inspire young women to foster their talents and pursue careers in the building and construction industry. The program includes six different activities. One of the major activities is the Boss Ladies Ambassadors, where young female builders and craftswomen who act as role models for young girls through visits to schools and guidance centres. To develop women as ambassadors, they provide a camp, workshops, and mentoring. Beyond this, they also offer internships for girls, learning labs for teachers, and a media campaign to change the image of what someone in the building and construction industry looks like. Finally, they run a "reversed recruitment" activity, which involves requiring employers to make their businesses more attractive to young women. To do so, they collaborate with vocational schools to run events with employers and young female apprentices to facilitate networking and allow women to secure an apprenticeship.</p> <p>Interventions/Activities): Ambassador program, internship, reversed recruitment, workshops, media advocacy, professional development &amp; mentoring  Which non-traditional field: Building and Construction  Location (country): Copenhagen, Denmark  Implementing organisation: Divers</p>	<p>Exploration: ✓</p> <p>Education &amp; Training: ✓</p> <p>Early Experiences: ✓</p> <p>Growth:</p>

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27	<p><b>Budding Brunels</b>  <a href="https://www.constructionyouth.org.uk/budding-brunels">https://www.constructionyouth.org.uk/budding-brunels</a>  The Budding Brunels program is an "Open College Network accredited schools engagement programme" seeking to educate young students from disadvantaged backgrounds about education and career options in the construction industry. This takes the form of a 3-day workshop. In these they have the opportunity to interact with professionals in the industry as well as take part in individual and team assignments to apply their knowledge and skills. The program also includes visits to a university or a technology centre. Finally, there is also the opportunity for students to pursue post-programme work placements to gain experience that might increase employability.</p> <p>Interventions/Activities): Training workshop, school visit, work experience  Which non-traditional field: Construction  Location (country): UK  Implementing organisation: Construction Youth Trust</p>	<p>Exploration: ✓  Education &amp; Training: ✓  Early Experiences:  Growth:</p>
28	<p><b>Budding Builders</b>  <a href="https://www.constructionyouth.org.uk/budding-builders/how-it-works">https://www.constructionyouth.org.uk/budding-builders/how-it-works</a>  The Budding Builders initiative involved the delivery of construction-related training and careers advice to young people in their communities. It introduced them to training, apprenticeships, work-experience and career options and worked to engage participants in further education or training opportunities with local employers in the industry. The program included the use of The Mobile Classroom, which is a vehicle which for delivering tools, materials and a trainer, to enable the program to be run across the country. Participants took part in trades such as carpentry, tiling, plumbing, and painting. Participants were also given the opportunity to take part in "practical community projects", which sought to provide participants with work experience in their communities.</p> <p>Interventions/Activities): Training, career advice sessions, work experience  Which non-traditional field: Construction  Location (country): UK  Implementing organisation: Construction Youth Trust</p>	<p>Exploration: ✓  Education &amp; Training: ✓  Early Experiences:  Growth:</p>
29	<p><b>BUILD Inc.</b>  <a href="https://buildinc.ca/about-build-inc/">https://buildinc.ca/about-build-inc/</a>  BUILD stands for Building Urban Industries for Local Development and is a social enterprise non-profit contractor and a training program targeting people who are facing barriers to employment. Many of these participants have not completed schooling and many have been in contact with the criminal justice system. Some are overcoming addictions and others have unstable home environments. They offer a paid training program and work experience, as well as other supports to help their transition into the industry, such as trades-based tutoring (maths, etc.), money management training, a parenting program (if needed), cultural programming, and driver training.</p> <p>Interventions/Activities): Training, employability training, support services, work experience  Which non-traditional field: Construction  Location (country): Canada  Implementing organisation: BUILD Inc.</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>

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30	<p><b>Build Like a Girl</b>  <a href="https://mironbuildlikeagirl.com">https://mironbuildlikeagirl.com</a>  Hands on workshop program for female school students</p> <p>Interventions/Activities): Skills workshops  Which non-traditional field: Construction  Location (country): Neenah, Wisconsin, US  Implementing organisation: Miron</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
31	<p><b>Build Together, Women of the Building Trades</b>  <a href="http://buildtogether.ca/about/">http://buildtogether.ca/about/</a>  Build Together is a workforce development program aiming to increase diversity in the construction industry. To do so, it is focused on the recruitment and retention of underrepresented groups. Namely, women, indigenous people, youth, older workers and immigrants. Within this program they run projects to address each of these groups. Catering specifically to women is the Women of Building Trades project. It was first started in 2013 and the program has now become a national initiative for Canada's Building Trades Unions (CBTU) since. It has focused on challenging existing myths and stereotypes and enabling space for a rigorous conversation on means of engaging women in the industry . As part of their outreach process, tradeswomen have attended tradeshow, career fairs, schools, mentorship events, and networking functions across Canada.</p> <p>Interventions/Activities): outreach/advocacy events (tradeshow, careers fairs, school visits), mentoring sessions, and networking events.  Which non-traditional field: Construction  Location (country): Canada  Implementing organisation: Canada's Building Trades Unions (CBTU)</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth: ✓</p>
32	<p><b>Build Up Your Future</b>  <a href="https://www.fundacionlaboral.org/en/projects/training/exchange-programs/build-your-future-2020-2020-2021-erasmus-programme">https://www.fundacionlaboral.org/en/projects/training/exchange-programs/build-your-future-2020-2020-2021-erasmus-programme</a>  "Build Up your Future" is a European mobility program for VET students in energy restoration. It is designed to bolster European cooperation and integration and aid the development and improvement of VET the construction industry. The focus of the program is on the need for the construction industry to adapt and for students to develop "green skills". A two week training for students takes place in Italy and France in the area of energy efficiency and renovation. A one-week of workshops for managers takes place in Belgium, on best practice and mutual learning on the topic of energy efficiency and Dual Vocational Training.</p> <p>Interventions/Activities): Training program, workshops  Which non-traditional field: Construction  Location (country): Italy, France, Spain, Belgium  Implementing organisation: Fundación Laboral de la Construcción, Scuola Costruzioni Vicenza Andrea Palladio (Italy), Comité de Concertation et de Coordination de l'Apprentissage du Batiment et des Travaux Publics -CCCA-BTP- (France) and Centre IFAPME Liege-Huy-Verviers ASBL (Belgium)</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>

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33	<p><b>Building Equality campaign</b>  <a href="https://cif.ie/building-equality/">https://cif.ie/building-equality/</a>  A campaign to increase the visibility of women in the construction industry. In the #BuildingEquality campaign, women shared their stories and billboards were used to increase visibility.</p> <p>Interventions/Activities): Advocacy campaign  Which non-traditional field:  Location (country): Dublin, Ireland  Implementing organisation: CIF</p>	<p>Exploration:  Education &amp; Training:  Early Experiences:  Growth:</p>
34	<p><b>Building Futures</b>  <a href="https://ccsbestpractice.org.uk/entries/revealing-careers-in-construction-to-young-women/">https://ccsbestpractice.org.uk/entries/revealing-careers-in-construction-to-young-women/</a>  Building Futures is an educational programme aiming expose young people to job roles at every stage of construction.  It gives participants hand on experience and insight into the industry.</p> <p>Interventions/Activities): Workshops, careers sessions  Which non-traditional field: Construction  Location (country): Leeds, England  Implementing organisation: Mace</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
35	<p><b>Building Hereos</b>  <a href="https://www.facebook.com/buildingheroeswallonie/">https://www.facebook.com/buildingheroeswallonie/</a>  Constructiv organised this prgram with the aim of making young people more aware of the construction trades. 2,000 children and parents/guardians were invited to the event. The event educates grade 6 students about construction trades via a craft village, an interactive game and a site visit. During this program, the implementers sought to combat the prejudices that are often associated with the construction industry and damage its image.</p> <p>Interventions/Activities): Education event and site visit  Which non-traditional field: Construction  Location (country): Belgium  Implementing organisation: Constructiv</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
36	<p><b>Building Pathways</b>  <a href="https://buildingpathwaysboston.org">https://buildingpathwaysboston.org</a>  Building Pathways is a six-week pre-apprenticeship training program which was established by the Boston Building Trades Unions in 2011. Since it its inception, over 40 percent of its participants have been women, nearly 90 percent have been people of color, and almost 80 percent of its graduates have gone on to enter apprenticeships or industry-related employment.</p> <p>Interventions/Activities): Training, outreach activities  Which non-traditional field: Construction  Location (country): US  Implementing organisation: Boston Building Trades Unions</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>

	PROGRAM	Career stage
37	<p><b>Building Up</b>  <a href="https://www.buildingup.ca/about-us/">https://www.buildingup.ca/about-us/</a>            Building Up was developed in Toronto in a bid to improve the city's environmental efficiency, affordable housing, and most importantly – to create pathways for people who are experiencing barriers to enter apprenticeships and careers in the trades. They work with housing providers to give them an opportunity to link work that needs to get done in their buildings with the people in their buildings who need work. They also work with construction unions to help meet their need for skilled labour through supplying them with people who are looking for secure careers in the industry.</p> <p>Interventions/Activities): Training program            Which non-traditional field: Construction            Location (country): Canada            Implementing organisation: Building Up</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth:</p>
38	<p><b>Canadian Construction Women</b>  <a href="https://constructionwomen.org">https://constructionwomen.org</a>            CCW provide members with support, mentoring, networking, community involvement, and professional development to grow their careers in the industry.</p> <p>Interventions/Activities): Mentoring, networking, outreach, professional development session, support sessions            Which non-traditional field: Construction            Location (country): Vancouver, Canada            Implementing organisation: Canadian Construction Women</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences: ✓            Growth: ✓</p>
39	<p><b>Career Building programme</b>  <a href="https://www.femtec.org/en/programmes/career-building-programme/">https://www.femtec.org/en/programmes/career-building-programme/</a>            FEMTEC works to identify STEM talents while female students are still in school and offers them advice and insight into career pathways with the Career-Building Program. This complemented by career advice from professionals and personal advice from women in the industry, as well as mentoring.</p> <p>Interventions/Activities): Careers sessions, mentoring            Which non-traditional field: STEM            Location (country): Berlin, Germany            Implementing organisation: FEMTEC</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
40	<p><b>Career Development</b>  <a href="https://bccwitt.ca/whatwedo/careers/">https://bccwitt.ca/whatwedo/careers/</a>            Training and employment support for women entering the industry</p> <p>Interventions/Activities): Skills training and employment support            Which non-traditional field: Construction            Location (country): British Columbia, Canada            Implementing organisation: BC Centre for Women in the Trades (BCCWITT)</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences: ✓            Growth:</p>

	PROGRAM	Career stage
41	<p><b>Career Exploration Program</b>  <a href="https://www.womenunlimitedns.ca/">https://www.womenunlimitedns.ca/</a>            The Career Exploration Program (CEP) works to assist diverse, unemployed and underemployed women. In doing so, it allows them to explore careers in the industry and prepares for obtaining and maintaining employment in the trades and technology.</p> <p>Interventions/Activities): 14-week training program            Which non-traditional field: Trades and technology            Location (country): Nova Scotia, Canada            Implementing organisation: Women Unlimited</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth:</p>
42	<p><b>Career Mentoring Network</b>  <a href="https://www.vtworksforwomen.org/programs">https://www.vtworksforwomen.org/programs</a>            A career mentoring program working to connect women in the construction industry. In this program, volunteer career mentors from a range of backgrounds are paired with women looking for work and/or career advice.</p> <p>Interventions/Activities): Mentoring sessions            Which non-traditional field: Non-traditional occupations            Location (country): Vermont, US            Implementing organisation: Vermont Works For Women</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth: ✓</p>
43	<p><b>CAWIC</b>  <a href="https://cawic.ca/about/">https://cawic.ca/about/</a>            CAWIC has its roots as a chapter of NAWIC in the US but has since become independent, while maintaining affiliation to NAWIC. It is member-based and focuses on helping women in the industry and those looking to enter, at all career stages, via mentoring, leadership coaching and events.</p> <p>Interventions/Activities): Mentoring, leadership coaching, events            Which non-traditional field: Construction            Location (country): Canada            Implementing organisation: CAWIC</p>	<p>Exploration: ✓            Education &amp; Training: ✓            Early Experiences: ✓            Growth: ✓</p>
44	<p><b>Chicks with Bricks</b>  <a href="https://www.chickswithbricks.com">https://www.chickswithbricks.com</a>            Chicks with Bricks is a network connecting emerging and professional women in the construction industry</p> <p>Interventions/Activities): Networking            Which non-traditional field: Construction            Location (country): UK            Implementing organisation: Chicks with Bricks</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth: ✓</p>
45	<p><b>Connected Women</b>  <a href="https://electricityhr.ca/resources/connected-women-mentorship-program/">https://electricityhr.ca/resources/connected-women-mentorship-program/</a>            Connected women is a mentoring program to aid the attraction, retention and progression of women in electricity.</p> <p>Interventions/Activities): Mentoring sessions            Which non-traditional field: Electricity            Location (country): Ottawa, Canada            Implementing organisation: Electricity Human Resources Canada's (EHRC)</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>

	PROGRAM	Career stage
46	<p><b>Considerate Constructors Scheme (CCS) Spotlight on Initiative</b>  <a href="https://ccsbestpractice.org.uk/spotlight-on/equality-diversity-and-inclusion/">https://ccsbestpractice.org.uk/spotlight-on/equality-diversity-and-inclusion/</a>            Considerate Constructors Scheme's 'spotlight on' initiative seeks to improve the image of construction, and aims to raise awareness among sites, companies and suppliers as to their roles &amp; steps they can take. They place a focus on recruiting the next generation and women in construction and both provide templates and guidance on practical ways to do so at a site level. CCS hope that industry employers will use this resource to inform or enhance their own initiatives.</p> <p>Interventions/Activities): Resource development            Which non-traditional field: Construction            Location (country): UK            Implementing organisation: Considerate Contractors Scheme</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth:</p>
47	<p><b>Construction For Youth</b>  <a href="http://www.construction-for-youth.eu/en/about-us-1966.aspx">http://www.construction-for-youth.eu/en/about-us-1966.aspx</a>            The objective of this project was to develop a joint FIEC-EFBWW website, showcase national best practices initiatives focused on youth employment in the construction industry.            They believe that the exchange of best practices is highly beneficial in the development of new initiatives - Showing how others have addressed similar issues.</p> <p>Interventions/Activities): Resource development (website on best practice)            Which non-traditional field: Construction            Location (country): Europe            Implementing organisation: FIEC (European Construction Industry Federation) and the EFBWW (the European Federation of Building and Wood Workers), the EU sectoral social partners for the construction industry</p>	<p>Exploration: ✓            Education &amp; Training: ✓            Early Experiences:            Growth:</p>
48	<p><b>Construction Youth Trust</b>  <a href="http://www.constructionyouth.org.uk/about-us/about-trust/our-history">http://www.constructionyouth.org.uk/about-us/about-trust/our-history</a>            The Construction Youth Trust's focus is on promoting construction as a beneficial leisure activity for young people. They run workshops targeting young people to introduce them to the industry.</p> <p>Interventions/Activities): Workshops            Which non-traditional field: Construction            Location (country): London, UK            Implementing organisation: Construction Youth Trust</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
49	<p><b>Construction: tomorrow is invented with us</b>  <a href="https://laconstruction.fr/">https://laconstruction.fr/</a>            The campaign "Construction: tomorrow is invented with us" sought to present the diversity of construction trades to young people via the internet and social media. The campaign included several communication materials, such as movies, a social media campaign, a website and partnerships with youtubers, to enable young people to discover training and job opportunities, as well as testimonies from professionals in the industry.</p> <p>Interventions/Activities): Awareness campaign            Which non-traditional field: Construction            Location (country): France            Implementing organisation: CCCA-BTP</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>



	PROGRAM	Career stage
50	<p><b>CSOWISE Healthcare Science Leadership Development Programme</b>  <a href="https://www.wisecampaign.org.uk/what-we-do/wise-projects/the-csowise-healthcare-science-leadership-development-programme/">https://www.wisecampaign.org.uk/what-we-do/wise-projects/the-csowise-healthcare-science-leadership-development-programme/</a>            From the success of the 'CSO WISE Fellowship', the WISE Campaign has developed the 'CSOWISE HCS Leadership Programme'. The program has been developed by taking the most successful elements of the previous program and bringing them together in this new iteration. In the program, they offered 32 women, who are mid-career female healthcare scientists in the NHS, the opportunity to develop upon their leadership skills. The program was open to healthcare scientists in any discipline and offers them training focused on personal branding and peer coaching. The participants were able to develop support networks through the program's Action Learning Sets, and received mentoring from leaders working in healthcare, academia and industry. They were also offered speaking and ambassadorial opportunities through WISE and CSO.</p> <p>Interventions/Activities): Professional development sessions, leadership sessions, coaching, networking, industry events            Which non-traditional field: STEM            Location (country): Leeds, England            Implementing organisation: The Office of the Chief Scientific Officer and WISE</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>
51	<p><b>Culture of CARE</b>  <a href="https://buildculture.org/about/#">https://buildculture.org/about/#</a>            Culture of CARE has been created in a partnership between the Associated General Contractors of America (AGC) and the AGC of Washington with the aim of promoting the construction industry as the industry of choice for diverse and skilled workers through building inclusive workplaces. The initiative asks companies to take a public step in their commitment towards this and pledge that their workplaces will be free harassment, hazing, and bullying.</p> <p>Interventions/Activities): Pledge program            Which non-traditional field: Construction            Location (country): US            Implementing organisation: The Associated General Contractors of America</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth:</p>
52	<p><b>Day of Discovery</b>  <a href="https://boltonline.org/day-of-discovery/">https://boltonline.org/day-of-discovery/</a>            BOT's Day of Discovery is offered to 17-29 year olds to give them insight into careers into the construction industry through a one-day site tour program. BOLT was established to assist under-resourced young people and give them access to education, training and employment in the construction industry.</p> <p>Interventions/Activities): Site tour            Which non-traditional field: Construction            Location (country): Canada            Implementing organisation: BOLT</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>

	PROGRAM	Career stage
53	<p><b>Deine Baustelle (Your Building Site)</b>  <a href="http://www.darauf-kannst-du-bauen.de">www.darauf-kannst-du-bauen.de</a></p> <p>The Bavarian Construction Industry Association launched "Deine Baustelle" in 2012. The main aspect of the campaign is the "training course finder", which is an online tool to help future trainees search for companies and get in contact with them. Training opportunities, application guidance, examples of stand-out construction projects, stories, and portraits working in the industry are featured on the website.</p> <p>Interventions/Activities): Resource development (employment portal)  Which non-traditional field: Construction  Location (country): Germany  Implementing organisation: HDB - Hauptverband der Deutschen Bauindustrie</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
54	<p><b>DiveIN</b>  <a href="https://www.cs-ic.org/innovationcentre/future-skills/divein-training-and-development-programme/">https://www.cs-ic.org/innovationcentre/future-skills/divein-training-and-development-programme/</a></p> <p>The DiveIN initiative is a training and development program to equip businesses the tools and skills they need to increase their diversity and inclusion practices. It involves workshops over the course, discussion forums and virtual events of the course of 12 months and focuses on raising awareness among businesses and encouraging the sharing of best practice.</p> <p>Interventions/Activities): Diversity and inclusion workshops, discussion forums and virtual events  Which non-traditional field: Construction  Location (country): UK  Implementing organisation: Construction Scotland Innovation Centre</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth:</p>
55	<p><b>Diversity in Construction</b>  <a href="https://www.constructionaccord.nz/news/news-stories/diversity-in-construction-initiative-great-news-for-women-in-construction-minister/">https://www.constructionaccord.nz/news/news-stories/diversity-in-construction-initiative-great-news-for-women-in-construction-minister/</a></p> <p>The Construction Accord has partnered with Diversity Works New Zealand, who are the national body for workplace diversity and inclusion, with the aim of encouraging greater diversity in the employees entering the construction industry. The Diversity in Construction initiative is building a roadmap to outline ways to better invest in and promote diversity, equity and inclusion in the sector. This includes in-depth research on diversity and inclusion practices across the sector, to gain an understanding of how best to implement initiatives to address this. The assessment tools developed are then to be used by organisations as a means by which to measure themselves against and help them to develop initiatives to transform their workplaces.</p> <p>Interventions/Activities): Research activities, resource development  Which non-traditional field: Construction  Location (country): NZ  Implementing organisation: The Construction Accord &amp; Diversity Works New Zealand</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth:</p>

	PROGRAM	Career stage
56	<p><b>Earth Science Women's Network (ESWN)</b>  <a href="https://eswnonline.org">https://eswnonline.org</a>            The Earth Science Women's Network (ESWN) aims to promote career development, foster community, and facilitate professional collaborations for women across geosciences disciplines. ESWN is a peer-mentoring network of women, many of whom are early in their careers.</p> <p>Interventions/Activities): professional development sessions, networking            Which non-traditional field: STEM            Location (country): US            Implementing organisation:</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth: ✓</p>
57	<p><b>EBC campaign 'Involving women and young people for more inclusive construction SMEs'</b>  <a href="https://constructionblueprint.eu/2021/08/25/eu-ebc-campaign-involving-women-and-young-people-for-more-inclusive-construction-smes/">https://constructionblueprint.eu/2021/08/25/eu-ebc-campaign-involving-women-and-young-people-for-more-inclusive-construction-smes/</a>            EBC ran a photographic campaign focused on the inclusion of women and young people with the aim of making SMEs more inclusive. The program's main activities were a conference event and a photo exhibition. The portraits used showed the stories of women and young people working in the construction industry, including how they got to where they are and their outlook on the future.</p> <p>Interventions/Activities): Advocacy campaign            Which non-traditional field: Construction            Location (country): Belgium            Implementing organisation: Economic and Social Committee (EESC)</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
58	<p><b>El Portal De Empleo (Employment Portal)</b>  <a href="http://www.construyendoempleo.com">www.construyendoempleo.com</a>            An employment website for the construction sector developed by FLC. It is a tool for both jobseekers and employers. Jobseekers can register their CVs and apply for industry jobs. A user survey showed that this tool was efficient and easy.</p> <p>Interventions/Activities): Resource development (employment portal)            Which non-traditional field: Construction            Location (country): Spain            Implementing organisation: the Fundación Laboral de la Construcción (FLC)</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth:</p>
59	<p><b>Employment &amp; Careers Service Program</b>  <a href="https://www.vtworksforwomen.org/programs">https://www.vtworksforwomen.org/programs</a>            This program works to help women develop employability skills that can assist them in finding meaningful work and economic stability. The program targets women in transition: women with a history of poverty, women with histories of substance use or incarceration; women who are transitioning between careers; and women seeking to advance in their careers. The program is typically held in community and classroom settings, but has since been offered in a remote capacity during the pandemic.</p> <p>Interventions/Activities): Employment &amp; careers sessions            Which non-traditional field: Non-traditional occupations            Location (country): Vermont, US            Implementing organisation: Vermont Works For Women</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth:</p>

	PROGRAM	Career stage
60	<p><b>emPOWER Women in Trades</b>  <a href="http://www.empowerab.ca">http://www.empowerab.ca</a>  emPOWER: Women in Trades designed to support unemployed or underemployed women with an interest in beginning a career in the trades. The program provides skills training and support for women to enter the industry and to secure entry-level roles.</p> <p>Interventions/Activities): 1 week employment skills training, 10 week industry skills training in a range of trades, 4 weeks of local trades placement, employment support sessions and apprenticeship exam support sessions  Which non-traditional field: Construction  Location (country): Alberta, Canada  Implementing organisation: Manpower Alberta</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences: ✓  Growth:</p>
61	<p><b>Empowering Female Entrepreneurs in Engineering (EMERGE)</b>  <a href="https://www.emergeengineers.eu/project-partners/">https://www.emergeengineers.eu/project-partners/</a>  EMERGE's goal is to increase the number of female entrepreneurs in engineering by improving their access to and the quality of the training they receive at Entrepreneurship, VET &amp; HEI institutions.  The program has developed educational resources, for managers, teachers and trainers in VET &amp; HEI institutions to help to eliminate gendered bias, further their skills and teaching abilities so that they can create inclusive environments to support high growth engineering enterprises.</p> <p>Interventions/Activities): Stakeholder engagement activities, resource development  Which non-traditional field: Engineering  Location (country): Poland, Denmark, Norway, Turkey and Ireland  Implementing organisation:</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>
62	<p><b>Empowerment and Recognition of Women in Construction Awards (ERWIC Awards)</b>  <a href="https://erwicawards-cidb.co.za">https://erwicawards-cidb.co.za</a>, <a href="http://www.cidb.org.za/wp-content/uploads/2021/04/Concrete-Newsletter-Issue-19.pdf">http://www.cidb.org.za/wp-content/uploads/2021/04/Concrete-Newsletter-Issue-19.pdf</a>  The Empowerment and Recognition of Women in Construction Awards (ERWIC Awards) aims to encourage excellence among women and commitment from stakeholders to support women's professional growth and development in the construction industry. It also aims to showcase these women as role models for women considering entering the industry or early in their careers.</p> <p>Interventions/Activities): An awards programme to showcase achievements of women in the construction industry.  Which non-traditional field: Construction  Location (country): South Africa  Implementing organisation: The Construction Industry Development Board (CIDB)</p>	<p>Exploration:  Education &amp; Training:  Early Experiences:  Growth: ✓</p>

	PROGRAM	Career stage
63	<p><b>Encouraging Full Female Engagement in Construction Training (EFFECT)</b>  <a href="https://myga.org/workforce-development/effect/">https://myga.org/workforce-development/effect/</a>            EFFECT provides non-traditional skills training in the construction &amp; building trades to equip women to become apprenticeships and pursue non-traditional occupations. In this program, women have access to a free diploma course in construction, as well as onsite child-care support, navigational case management, work readiness and job placement assistance.</p> <p>Interventions/Activities): Training, support services (childcare), employability sessions, employment support            Which non-traditional field: Construction            Location (country): Miami, Florida, US            Implementing organisation: Gang Alternatives Inc</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences: ✓            Growth:</p>
64	<p><b>Engenheiras por um dia (Women engineers for a day)</b>  <a href="https://www-engenheirasporumdia-pt.translate.google/?x_tr_sl=pt&amp;x_tr_tl=en&amp;x_tr_hl=en&amp;x_tr_pto=nui,sc">https://www-engenheirasporumdia-pt.translate.google/?x_tr_sl=pt&amp;x_tr_tl=en&amp;x_tr_hl=en&amp;x_tr_pto=nui,sc</a>            The Engineers for a Day Project engages non-higher education students to promote engineering and technology and deconstruct the idea that they are male domains. Since it was established in 2017, it has reached 10,411 young people from primary and secondary education, through 460 activities, which include laboratory practices, role model sessions and mentoring. In 2020, the project moved to an online format, which enabled it to reach a greater audience. The following iterations have since combined these two formats to reach the greatest number of participants.</p> <p>Interventions/Activities): Workshops, careers sessions            Which non-traditional field: Engineering            Location (country): Guimarães and Lisbon, Portugal            Implementing organisation: the Commission for Citizenship and Gender Equality (CIG), in conjunction with the Charter Portuguese for Diversity (APPDI), the Instituto Superior Técnico and the Ordem dos Engenheiros</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
65	<p><b>ENGIE</b>  <a href="https://www.engieproject.eu/about-the-project/">https://www.engieproject.eu/about-the-project/</a>            The ENGIE project aims to spark 13-18 years old girls' interest in studying geosciences and related engineering disciplines. This involves an awareness-raising strategy and international stakeholder collaboration network, to enable it to run family science events, outdoor programmes, school science clubs, mine visits, mentoring programmes, international student conferences, publication and awarding opportunities, summer courses for science teachers and development of educational materials. The project is being carried out in more than twenty countries across Europe.</p> <p>Interventions/Activities): Industry events, outreach events, resource development and workshops for teachers, advocacy campaigns            Which non-traditional field: Geosciences/ Engineering            Location (country): Spain, Italy, Hungary, Sweden, Belgium &amp; Croatia            Implementing organisation: University of Miskolc, Luleå University of Technology, University of Zagreb, La Palma Research Centre, National Research Council of Italy, and European Federation of Geologists</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>

	PROGRAM	Career stage
66	<p><b>Ente Senese Scuola Edile</b>  <a href="http://www.construction-for-youth.eu/en/initiatives/it---ente-senese-scuola-edile.aspx">http://www.construction-for-youth.eu/en/initiatives/it---ente-senese-scuola-edile.aspx</a></p> <p>This program provides 15 young people who have left school with a training pathway that will allow them to develop traditional building techniques as well as the new knowledge and skills required for in-demand work in the energy efficiency of buildings. The aim the program is to shape these young people into fully-fledged professionals who can meet the needs of the current labour market.</p> <p>Interventions/Activities): Training program  Which non-traditional field: Construction  Location (country): Italy  Implementing organisation: Formedil</p>	<p>Exploration:</p> <p>Education &amp; Training: ✓</p> <p>Early Experiences:</p> <p>Growth:</p>
67	<p><b>Equate Scotland</b>  <a href="https://equatescotland.org.uk">https://equatescotland.org.uk</a></p> <p>Equate offers training programs for young women, training for employers and assistance with recruiting women into STEM, as well as running a student network for women studying STEM at college or university to connect them with one another, and they offer an award, "The Equate STEMInist Awards", to address the stereotypes about women in STEM.</p> <p>Interventions/Activities): Training for women, training for employers, recruitment support for employers, student network, career development and awards program  Which non-traditional field: STEM  Location (country): Edinburgh, Scotland  Implementing organisation: Equate Scotland</p>	<p>Exploration:</p> <p>Education &amp; Training: ✓</p> <p>Early Experiences: ✓</p> <p>Growth: ✓</p>
68	<p><b>Erfolg mit MINT - Neue Chancen für Frauen (Success with STEM - New Chances for Women)</b>  <a href="https://www.bmbf.de/bmbf/shareddocs/downloads/files/201110_bmbf_management-summary_6seiten_a4_en_bf_214.pdf;jsessionid=DCFC569359A8A6FC902CFBECC0772899.live381?_blob=publicationFile&amp;v=1">https://www.bmbf.de/bmbf/shareddocs/downloads/files/201110_bmbf_management-summary_6seiten_a4_en_bf_214.pdf;jsessionid=DCFC569359A8A6FC902CFBECC0772899.live381?_blob=publicationFile&amp;v=1</a></p> <p>As part of the Der Nationale Pakt für Frauen in MINT-Berufen Komm, mach MINT (the National Pact for Women in STEM-careers - Go, STEM!), the German Federal Ministry of Education and Research (BMBF) funded the Erfolg mit MINT - Neue Chancen für Frauen (Success with STEM - New Chances for Women) program. The program partnered with STEM organisations to run 55 projects, with the aim of increasing gender equality in STEM professions and supporting women and girls in their STEM career paths. The outcomes of the program were presented at the "Success with STEM – Shaping Careers, Unlocking Potential" conference in November 2019.</p> <p>Interventions/Activities): Grants program  Which non-traditional field: STEM  Location (country): Germany  Implementing organisation: the German Federal Ministry of Education and Research (BMBF)</p>	<p>Exploration: ✓</p> <p>Education &amp; Training: ✓</p> <p>Early Experiences: ✓</p> <p>Growth: ✓</p>

	PROGRAM	Career stage
69	<p><b>Ethics Stops</b>  <a href="https://group.skanska.com/media/articles/working-toward-a-gender-equal-skanska-in-sweden/">https://group.skanska.com/media/articles/working-toward-a-gender-equal-skanska-in-sweden/</a>            Skanska run ethics stops in a bid to alter workplace culture and make it more inclusive of women. In ethics stops, employees are tasked with scenarios to work through and must draw conclusions on the appropriate course of action in the given scenario. This type of session is preventative in nature, requiring employees to think through how they would deal with an ethical dilemma before it potentially arises. In doing so, Skanska hopes to promote awareness and reduce biases and harassment.</p> <p>Interventions/Activities): Ethics Stops sessions            Which non-traditional field: Construction            Location (country): Sweden            Implementing organisation: Skanska</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth:</p>
70	<p><b>EUMENTORSTEM</b>  <a href="https://www.eumentorstem.eu/about-2/">https://www.eumentorstem.eu/about-2/</a>            Operating in 5 countries, EUMENTORSTEM aims to foster the performance, learning and development of women with migrant background further their careers in STEM in Europe. Approximately 400 participants were directly engaged in project activities via focus groups, training for trainers, Learner's Kits resources, 'mentoring circles' and 'integration circles', as well as national events, conference, and a VirtualHub for training and fostering online community.</p> <p>Interventions/Activities): Mentoring, resource development, train the trainer            Which non-traditional field: STEM            Location (country): Italy, Greece, Hungary, Sweden &amp; UK            Implementing organisation:</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>
71	<p><b>EuroSkills campaign</b>  <a href="https://euroskills2021.com/en/communication-campaign-launched-with-great-success/">https://euroskills2021.com/en/communication-campaign-launched-with-great-success/</a>            EuroSkills is a vocation skills campaign which brings young people across Europe together to compete for the European title in vocational skills. The initiative aims to raise awareness about vocational career paths, spark interest in these as future career options and promote the quality of VET training.</p> <p>Interventions/Activities): Vocational skills campaign            Which non-traditional field: VET areas            Location (country): Europe            Implementing organisation: WorldSkills Europe</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
72	<p><b>Faithful + Gould</b>  <a href="https://www.fgould.com/uk-europe/articles/women-construction-professional-networking/">https://www.fgould.com/uk-europe/articles/women-construction-professional-networking/</a>            Gender specific professional networking events and 'learn &amp; lunch'</p> <p>Interventions/Activities): Networking and educational (best practice) sessions            Which non-traditional field: Construction            Location (country): London, UK            Implementing organisation: Faithful + Gould</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>

	PROGRAM	Career stage
73	<p><b>Federation of Women Contractors</b>  <a href="https://fwcchicago.com">https://fwcchicago.com</a>  Networking for women in the construction industry. FWC advocates for women-owned businesses and women executives in construction.</p> <p>Interventions/Activities): Networking  Which non-traditional field: Construction  Location (country):  Implementing organisation:</p>	<p>Exploration:  Education &amp; Training:  Early Experiences:  Growth: ✓</p>
74	<p><b>Female Empowerment in Science, Technology, Engineering and Mathematics in Higher Education (FeSTEM)</b>  <a href="https://festemproject.eu">https://festemproject.eu</a>  This program works to showcase female role models in STEM and encourage the development of networking opportunities for women to develop a peer support system.</p> <p>Interventions/Activities): Workshops, networking, careers sessions  Which non-traditional field: STEM  Location (country): Cyprus, Greece, Italy, Slovenia, Spain  Implementing organisation: The Cyprus University of Technology (CUT)</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>
75	<p><b>Females project</b>  <a href="https://www.femalesproject.eu/about-description/">https://www.femalesproject.eu/about-description/</a>  The Female project aims to promote the vital role women play in STEM, address stereotypes and inspire young girls through seeing role models' career paths. In turn, young boys learn to respect their female classmates, who may later be their co-workers in STEM. STEM teachers are able to enhance their skills and gain professional development through utilising these educational resources.</p> <p>Interventions/Activities): Resource development  Which non-traditional field: STEM  Location (country): Turkey, Italy, Greece, Spain &amp; Romania  Implementing organisation:</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
76	<p><b>Femmes de metier</b>  <a href="http://www.femmesdemetier.be/fr">http://www.femmesdemetier.be/fr</a>  Femmes de metier is an online portal which is dedicated to the recruitment of women who are wanting to pursue a career in the construction sector. It provides information on training and testimonials of women in the sector.</p> <p>Interventions/Activities): Resource development  Which non-traditional field:  Location (country): Jambes, Belgium  Implementing organisation: Femmes De Metier</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth:</p>
77	<p><b>FemSTEM</b>  <a href="https://femstem.eu">https://femstem.eu</a>  The FemSTEM Coaching project works to bridge the soft skills gender gap in STEM, by equipping women with tools and techniques to build their confidence and soft skills via online training and peer-support 'Coaching Circles'.</p> <p>Interventions/Activities): Online training, coaching  Which non-traditional field: STEM  Location (country): UK, Italy, Spain, Greece &amp; Luxembourg  Implementing organisation: Inova Consultancy</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth: ✓</p>



	PROGRAM	Career stage
78	<p><b>Fit for Construction/ Talents for Austria</b>  <a href="https://ec.europa.eu/docsroom/documents/35982?locale=fr">https://ec.europa.eu/docsroom/documents/35982?locale=fr</a>  'Talents for Austria' ('Talente für Österreich') begun in 2015 as an initiative to assist the integration of unaccompanied minor refugees (UMRs). Under the umbrella of Talents for Austria, 'Fit for Construction' (Fit für den Bau) was then run between 2016-2018 to help unaccompanied minor refugees in completing an apprenticeship. Participants take part in a 12-18 month training process, which also includes employability training, such as foundational and cultural education to aid their transition to working as an apprentice in a local construction company. The program received a good reception from the construction industry and local population and was welcomed by the refugee participants. The program prepared participants for work in the industry and was instrumental in their placement in local apprenticeships.</p> <p>Interventions/Activities): Apprenticeship training in construction industry, incl. basic, cultural and job-specific training  Which non-traditional field: Construction  Location (country): Austria  Implementing organisation: Landesinnung Bau Steiermark (Federal Economic Chamber); BauAkademie; Talenteentwicklung Missethon GmbH (Talent Development Missethon GmbH)</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>
79	<p><b>Frauen in Handwerk und Technik (FiT) (Women in Crafts and Technology)</b>  <a href="https://ec.europa.eu/social/BlobServlet?docId=15231&amp;langId=en">https://ec.europa.eu/social/BlobServlet?docId=15231&amp;langId=en</a>  The program engaged women from high school age and above (no age restrictions after that), who are unemployed, who are interested in a manual or technical profession. It sought to support women in foundational levels of training and support them to enter male dominated professions, and thereby also improve the labour shortage of qualified workers in crafts and mechanical professions. It did so by an initial 10 week training in a range of crafts, and then a vocational preparation course, followed by a vocational course (including apprenticeships and vocational schools). Participants' involvement in these training courses are financially supported by the public employment service (AMS) and participants receive a qualification upon completion. The evaluation of the program highlighted its success in meeting its objectives. Two thirds of program participants have gone on to find work in their fields.</p> <p>Interventions/Activities): Training program, employment support  Which non-traditional field: Trades and technology  Location (country): Austria  Implementing organisation: the Austrian public employment service (AMS)</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences: ✓  Growth:</p>
80	<p><b>GEM - Empowering girls to embrace their digital and entrepreneurial potential</b>  <a href="https://icse.eu/international-projects/gem/">https://icse.eu/international-projects/gem/</a>  GEM (2020-2022) is a European Union co-funded pilot project, which aims to foster girls' interest in STEM and ICT subjects and encourage them to choose careers. To achieve this, the project offers cost-free summer camps for girls aged 12-18. In addition to this, they have created a broad network of schools, higher education institutions, companies and policy makers, to work together to support girls pursuing STEM.</p> <p>Interventions/Activities): Summer Camp  Which non-traditional field: STEM and ICT  Location (country): Germany, Cyprus, Czech Republic, Spain, Greece, Malta, the Netherlands, Norway, Sweden, Slovakia  Implementing organisation: International Centre for STEM Education</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>

	PROGRAM	Career stage
81	<p><b>Gender Balance Initiative</b>  <a href="https://majorprojects.org/about/our-priority-themes/">https://majorprojects.org/about/our-priority-themes/</a>  The Major Projects Association recognised that member organisations were struggling to achieve gender balance in major projects. Due to this, in 2015, it launched its Gender Balance Initiative to identify and share best practice in this area. As part of this initiative MPA has undertaken a research to determine where successful practices and gaps for research. Furthermore, the Gender Balance initiative includes the endorsement of the WISE Ten Steps for diversity and inclusion, the sharing of best practice at events, awareness raising via blogs and support for research on the topic of Women in Major Project Leadership.</p> <p>Interventions/Activities): Research activities, workplace diversity and inclusion activities, advocacy  Which non-traditional field: Construction  Location (country): Oxford, England  Implementing organisation: Major Projects Association</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth: ✓</p>
82	<p><b>Gender Equality Action Plan program</b>  <a href="https://cms.uitp.org/wp/wp-content/uploads/2020/08/WISE-II-Brochure-English.pdf">https://cms.uitp.org/wp/wp-content/uploads/2020/08/WISE-II-Brochure-English.pdf</a>  Transdev France partners with Femmes &amp; Pouvoir, who to provide networking and professional development opportunities to female staff to improve gender equality.</p> <p>Interventions/Activities): Networking, professional development  Which non-traditional field: Transport  Location (country): France  Implementing organisation: Transdev France</p>	<p>Exploration:  Education &amp; Training:  Early Experiences:  Growth: ✓</p>
83	<p><b>Gender Equity in Mining Works (GEM Works)</b>  <a href="https://mihr.ca/inclusion-diversity/gender-equity-in-mining-works-gem-works/">https://mihr.ca/inclusion-diversity/gender-equity-in-mining-works-gem-works/</a>  GEM Works is a training program to develop mining executives as 'Change Agents' within their organisations to eliminate barriers which prevent women's involvement.</p> <p>Interventions/Activities): 12-month training, resource development (GEM Works Toolbox &amp; online training modules)  Which non-traditional field: Mining  Location (country): Canada  Implementing organisation: Mining Industry Human Resources Council (MiHR)</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth:</p>
84	<p><b>Get into Construction</b>  <a href="https://www.princes-trust.org.uk/help-for-young-people/get-job/get-experience">https://www.princes-trust.org.uk/help-for-young-people/get-job/get-experience</a>  The 'Get into Construction' program offers training that can lead to apprenticeships on site and assist unemployed young people develop skills and experience. This includes a 2-6 week training program for 16-25 year olds, to build skills and experience in construction. After this, successful participants undertake a 12 week paid placement, leading into further college-level training or work on site.</p> <p>Interventions/Activities): Training, work placement  Which non-traditional field: Construction  Location (country): UK  Implementing organisation: The Prince's Trust</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>

	PROGRAM	Career stage
85	<p><b>Girls and STEAM</b>  <a href="https://www.scienceworld.ca/girls-and-steam/">https://www.scienceworld.ca/girls-and-steam/</a>  A one-day event which runs careers sessions/industry panels for young girls to encourage them to pursue careers in STEAM.</p> <p>Interventions/Activities): Careers sessions/industry panels  Which non-traditional field: STEM  Location (country): Vancouver, British Columbia, Canada  Implementing organisation: Science World</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
86	<p><b>Girls' Day</b>  <a href="https://cms.uitp.org/wp/wp-content/uploads/2020/08/WISE-II-Brochure-English.pdf">https://cms.uitp.org/wp/wp-content/uploads/2020/08/WISE-II-Brochure-English.pdf</a>  In partnership with schools, Keolis organises open day for students to raise awareness among girls of career opportunities in the transport sector.</p> <p>Interventions/Activities): School visits  Which non-traditional field: Transport  Location (country): Paris, France  Implementing organisation: Keolis</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
87	<p><b>Girls' Day, Boys' Day</b>  <a href="https://www.girls-day.de/fakten-zum-girls-day/der-girls-day-wirkt/evaluation-und-statistiken/evaluationsergebnisse">https://www.girls-day.de/fakten-zum-girls-day/der-girls-day-wirkt/evaluation-und-statistiken/evaluationsergebnisse</a>  The program consists of a "girls' day" and a "boys' day" where they are introduced to non-traditional career options for both genders. The evaluation of which highlighted that participants felt that had more career options than they previously thought.</p> <p>Interventions/Activities): Careers days  Which non-traditional field: Non-traditional careers  Location (country):  Implementing organisation:</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
88	<p><b>Girls Experiencing Engineering (GER)</b>  <a href="https://www.memphis.edu/gee/whatisgee/index.php">https://www.memphis.edu/gee/whatisgee/index.php</a>  Summer program for high school girls to engage them in STEM as a potential career</p> <p>Interventions/Activities): A summer program  Which non-traditional field: Engineering  Location (country): Memphis, US  Implementing organisation: The University of Memphis</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
89	<p><b>Girls Exploring Trades and Technology (GETT) summer camps</b>  <a href="https://saskpolytech.ca/programs-and-courses/resources/women-in-trades-and-technology/girls-exploring-trades-and-technology.aspx">https://saskpolytech.ca/programs-and-courses/resources/women-in-trades-and-technology/girls-exploring-trades-and-technology.aspx</a>  GETT camps introduce young girls to future career options in trades and technology. This empowers them and demystifies tools and technology. As a result, girls can envisage themselves working in non-traditional occupations which may have previously been overlooked.</p> <p>Interventions/Activities): Summer Camp  Which non-traditional field: construction &amp; technology  Location (country): Saskatchewan, Canada  Implementing organisation: Saskatchewan Polytechnic</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>

	PROGRAM	Career stage
90	<p><b>Girls Go Circular project</b>  <a href="https://eit-girlsgocircular.eu">https://eit-girlsgocircular.eu</a>  The Girls Go Circular Project aims engage 50,000 school-aged girls (14-18) across Europe and help them to develop digital and entrepreneurial skills by 2027 via an online learning program about the circular economy.</p> <p>Interventions/Activities): Workshop  Which non-traditional field: STEM  Location (country): Portugal, Italy, Serbia, Greece, Hungary, Romania, Bulgaria &amp; Poland  Implementing organisation: EIT RawMaterials</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
91	<p><b>Girls Who Code</b>  <a href="https://girlswhocode.com/2019report/#download">https://girlswhocode.com/2019report/#download</a>  Clubs, college-level programs and summer immersion programs to increase the number of women in tech.</p> <p>Interventions/Activities): Club, summer camps, immersion program.  Which non-traditional field: Tech  Location (country): US  Implementing organisation: Girls Who Code</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
92	<p><b>Girls with Hi-Vis</b>  <a href="https://www.connexis.org.nz/girls-with-hi-vis/">https://www.connexis.org.nz/girls-with-hi-vis/</a>  Girls in Hi-Vis offers female students the opportunity to gain hands-on experience and hear from experts to gain insight into careers in the infrastructure's civil, energy, telco and water industries. Additional activities include having a go on an excavator, climbing a power-line pole, water testing, virtual Reality Traffic Management simulations, and power station, water treatment, and construction site tours. This program operates as a part of Connexis' 'Ultimit: Women in Infrastructure' initiative</p> <p>Interventions/Activities): Workshops, site tour, careers sessions  Which non-traditional field: Construction  Location (country): New Zealand  Implementing organisation: Connexis</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
93	<p><b>Go Construct</b>  <a href="https://www.goconstruct.org/why-choose-construction/diversity-in-construction/">https://www.goconstruct.org/why-choose-construction/diversity-in-construction/</a>  Provides resources for those looking to begin a career in the construction industry.</p> <p>Interventions/Activities): Resource development  Which non-traditional field: Construction  Location (country): UK  Implementing organisation: Go Construct</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
94	<p><b>High Heels: Building opportunities for women in the construction sector</b>  <a href="https://ksb.bg/wp-content/uploads/2019/03/high-heels-press-release-5-bg.pdf">https://ksb.bg/wp-content/uploads/2019/03/high-heels-press-release-5-bg.pdf</a>  This project took place between 2013-2015 and was funded by the EU. It focused on increasing women's soft skills to improve their participation in the construction industry. It has had mixed responses.</p> <p>Interventions/Activities): Soft skills training  Which non-traditional field: Construction  Location (country): Bulgaria, Greece, Romania and Cyprus  Implementing organisation: European Commission</p>	<p>Exploration:  Education &amp; Training:  Early Experiences:  Growth: ✓</p>

	PROGRAM	Career stage
95	<p><b>HOY campaign</b>  <a href="https://constructionblueprint.eu/2020/01/31/spain-fundacion-laboral-de-la-construccion-helps-youth-to-integrate-into-the-labour-market-with-the-hoy-campaign/">https://constructionblueprint.eu/2020/01/31/spain-fundacion-laboral-de-la-construccion-helps-youth-to-integrate-into-the-labour-market-with-the-hoy-campaign/</a></p> <p>The HOY campaign is an employment orientation programme focused on developing the skills and abilities young people under 30 and to facilitate their entry into the construction industry.</p> <p>The students learned CV writing and interview skills, among other job-ready skills. The program included personalised sessions for the students to cater to their individual situations and develop a tailored plan. This was also coupled with individualised socio-educational support, collaborative group networking activities, employment workshops, visits to companies, and coaching sessions for entrepreneurship and business development.</p> <p>Interventions/Activities): Job preparation skills, careers support sessions, socio-educational support sessions, networking, employment workshops, company visits and coaching sessions.</p> <p>Which non-traditional field: Construction</p> <p>Location (country): Spain</p> <p>Implementing organisation: Fundación Laboral de la Construcción</p>	<p>Exploration: ✓</p> <p>Education &amp; Training:</p> <p>Early Experiences:</p> <p>Growth:</p>
96	<p><b>Hypatia</b>  <a href="https://www.hypatia-network.de/ueber-uns">https://www.hypatia-network.de/ueber-uns</a></p> <p>Hypatia provides networking opportunities for women in the renewable energy and cleantech sector. It was founded in order for women to exchange knowledge, contacts, experiences and expertise. They also provide resources on their website and promote women in the industry, as well as run events.</p> <p>Interventions/Activities): Networking, events</p> <p>Which non-traditional field: Renewable Energy</p> <p>Location (country): Germany</p> <p>Implementing organisation: Hypatia</p>	<p>Exploration:</p> <p>Education &amp; Training:</p> <p>Early Experiences:</p> <p>Growth: ✓</p>
97	<p><b>Hypatia</b>  <a href="http://www.expecteverything.eu/hypatia/">http://www.expecteverything.eu/hypatia/</a></p> <p>Hypatia works to change the way that schools, science museums, research institutions and industry engage teenage girls in STEM across Europe. They have brought together stakeholders, gender experts and teenagers, to pilot and disseminate a toolkit of activities and advice for engaging teenagers in STEM in a gender-inclusive way. The project has worked to inspire young girls and facilitate dialogue among policymakers, industry and schools on the issue of gender inclusion in STEM.</p> <p>Interventions/Activities): Resource development, advocacy campaigns</p> <p>Which non-traditional field: STEM</p> <p>Location (country): Austria, Denmark, Estonia, France, Greece, Ireland, Israel, Italy, Poland, Serbia, Spain, Sweden, the Netherlands and the United Kingdom</p> <p>Implementing organisation: STICHTING NATIONAAL CENTRUM VOOR WETENSCHAPS- EN TECHNOLOGIECOMMUNICATIE</p>	<p>Exploration: ✓</p> <p>Education &amp; Training:</p> <p>Early Experiences:</p> <p>Growth:</p>

	PROGRAM	Career stage
98	<p><b>I Can Build Also</b>  <a href="http://www.construction-for-youth.eu/en/initiatives/bg---i-can-build.aspx">http://www.construction-for-youth.eu/en/initiatives/bg---i-can-build.aspx</a>  This program aimed to increase participants' familiarisation with the construction industry. The "I can build also" Project sought to restore the relationships between older and younger generations and between those entering the industry and construction companies. This involves a training program for young people where they learn hard and soft skills, and apply these to a design assignment.</p> <p>Interventions/Activities): Training program  Which non-traditional field: Construction  Location (country): Bulgaria  Implementing organisation: BCC - Bulgarian Construction Chamber</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>
99	<p><b>Icaro</b>  <a href="http://www.icaroproject.eu">http://www.icaroproject.eu</a>  The Icaro program is a part of the Erasmus+ project, which seeks to train a new generation of in the construction industry.  The program involve an awareness campaign (website, social media) to attract more women and young people to the industry. A series of interviews with professionals, trainers and students in the industry also took place. The program culminated in a video resource being developed to promote the industry.</p> <p>Interventions/Activities): Awareness campaign  Which non-traditional field: Construction  Location (country): Rome, Italy  Implementing organisation: Formedil</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
100	<p><b>Inclusive Value</b>  <a href="https://inclusivevalue.mtcserver.com">https://inclusivevalue.mtcserver.com</a>  This project is aimed at increasing the recruitment, retention and progression of women across the construction industry. Inclusive Value is a resource for employers and training providers in construction, to support them to develop more inclusive workplaces.</p> <p>Interventions/Activities): Resource development  Which non-traditional field: Construction  Location (country): Glasgow, Scotland  Implementing organisation: City of Glasgow College, Equate Scotland, Sir Robert McAlpine, Construction Scotland Innovation Centre</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth: ✓</p>
101	<p><b>Inflow Campaign</b>  <a href="https://ec.europa.eu/docsroom/documents/44165">https://ec.europa.eu/docsroom/documents/44165</a>  Bouwend Nederland's inflow campaign is aimed at engaging new people in construction sector through reskilling. The initiative includes success stories by young people who have pursued careers in construction. The campaign aims to improve the image of the industry and to expose people to reskilling opportunities and new careers.</p> <p>Interventions/Activities): Awareness campaign  Which non-traditional field: Construction  Location (country): The Netherlands  Implementing organisation: Bouwend Nederland</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>

	PROGRAM	Career stage
102	<p><b>Infotag Bauausbildung (the Construction Training Info Day)</b>  <a href="http://www.construction-for-youth.eu/en/initiatives/de---infotag-bauausbildung-construction-training-info-day.aspx">http://www.construction-for-youth.eu/en/initiatives/de---infotag-bauausbildung-construction-training-info-day.aspx</a>            This program involves an information day for students, parents and vocational counsellors where they can learn more about several trades in the construction sector. 18 training centres opened their doors give insight into apprenticeship options and future pathways in the construction industry. They also offer practical activities for the students for them to try out their skills.</p> <p>Interventions/Activities): Information/open day            Which non-traditional field: Construction            Location (country): Germany            Implementing organisation: ZDB - Zentralverband des Deutschen Baugewerbes</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
103	<p><b>International Women in Resources Mentorship Programme</b>  <a href="https://internationalwim.org/iwrmp-2018-update/">https://internationalwim.org/iwrmp-2018-update/</a>            Mentoring program for women in mining/resources.</p> <p>Interventions/Activities): Mentoring sessions            Which non-traditional field: Resources/mining            Location (country): Worldwide            Implementing organisation: International Women in Mining (IWIM)</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>
104	<p><b>IWiMSpeakUp</b>  <a href="https://internationalwim.org/iwimspeakup/">https://internationalwim.org/iwimspeakup/</a>            Facilitating speaking/panellist opportunities for women in mining</p> <p>Interventions/Activities): Speaking opportunities            Which non-traditional field: Mining            Location (country): Worldwide            Implementing organisation: International Women in Mining (IWIM)</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>
105	<p><b>Job My Friend (Amico Lavoro)</b>  <a href="http://www.amicolavoro.it/filca/chi-siamo/">http://www.amicolavoro.it/filca/chi-siamo/</a>            The portal Job my friend (Amico Lavoro), launched by the Italian Federation of Construction and Related Workers, provides an online service aiming to match demand and supply in the construction labour market. It offers advice and guidance to potential candidates, helping them identify the most appropriate jobs improve their skills and knowledge through good training, create CVs and prepare for selection processes"</p> <p>Interventions/Activities): Resource development (employment portal)            Which non-traditional field: Construction            Location (country): Italy            Implementing organisation: FILCA CISL</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth:</p>
106	<p><b>Job Shadowing program</b>  <a href="https://boltonline.org/job-shadowing/">https://boltonline.org/job-shadowing/</a>            This is a 2-week program allowing young people insight into the construction industry. Participants shadow skilled trades and management professionals to observe and learn about the career options in the industry. Afterwards, participants have the opportunity to have a plan of action developed to aid them in transitioning to training and/or employment.</p> <p>Interventions/Activities): Job shadowing, career guidance sessions            Which non-traditional field: Construction            Location (country): Canada            Implementing organisation: BOLT</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>

	PROGRAM	Career stage
107	<p><b>Justice-Involved Women Program</b>  <a href="https://www.vtworksforwomen.org/programs">https://www.vtworksforwomen.org/programs</a>            This program works with women while they are incarcerated to help them develop skills for employability and education to aid their successful re-entry into the community. In 2020, 53% of clients continued their engagement with VWW for reentry support after their release.</p> <p>Interventions/Activities): Hard skills training, soft skills training and employment support sessions            Which non-traditional field: Non-traditional occupations            Location (country): Vermont, US            Implementing organisation: Vermont Works For Women</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences: ✓            Growth:</p>
108	<p><b>Kit Découverte (Discovery Kit)</b>  <a href="http://www.construction-for-youth.eu/en/initiatives/fr---kit-decouverte-discovery-kit.aspx">http://www.construction-for-youth.eu/en/initiatives/fr---kit-decouverte-discovery-kit.aspx</a>            A resource for school teachers in charge of teaching the vocational subject matter. The kit includes of a set of educational resources, which allow teachers to teach school students about construction trades.</p> <p>Interventions/Activities): Resource development (kit) and development and dissemination of Internet/Website,            Brochure/flyer/poster/magazine            Which non-traditional field: Construction            Location (country): France            Implementing organisation: FNTP - Fédération Nationale des Travaux Publics</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
109	<p><b>Komm, mach MINT</b>  <a href="https://www-komm--mach--mint-de.translate.google/? x tr sl=de&amp; x tr tl=en&amp; x tr hl=en&amp; x tr pt=de">https://www-komm--mach--mint-de.translate.google/? x tr sl=de&amp; x tr tl=en&amp; x tr hl=en&amp; x tr pt=de</a>            Germany has been home to the 'Komm mach MINT' initiative since 2008. The program works to connect more than 250 partners from the field of politics, business, science and the media and provide guidance for women and girls looking to pursue careers in STEM by offering resources and running careers events.</p> <p>Interventions/Activities): Resource development, careers sessions            Which non-traditional field:            Location (country): Bielefeld, Germany            Implementing organisation:</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
110	<p><b>Leadership Accord on Diversity, Equity and Inclusion</b>  <a href="https://electricityhr.ca/workplace-solutions/diversity-inclusion/leadership-accord-on-diversity-equity-and-inclusion/">https://electricityhr.ca/workplace-solutions/diversity-inclusion/leadership-accord-on-diversity-equity-and-inclusion/</a>            The Leadership Accord on Diversity, Equity and Inclusion is a signatory initiative for Canadian employers, educators, unions, associations and governments to commit to advancing, integrating and prioritising diversity, equity and inclusion in their workplaces.</p> <p>Interventions/Activities): A signatory process and an advocacy process            Which non-traditional field: Electricity            Location (country): Ottawa, Canada            Implementing organisation: Electricity Human Resources Canada's (EHRC)</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth:</p>



	PROGRAM	Career stage
111	<p><b>LeadHERtrucking</b>  <a href="https://www.womenintrucking.org/press-releases/women-in-trucking-association-launches-female-driver-mentoring-program">https://www.womenintrucking.org/press-releases/women-in-trucking-association-launches-female-driver-mentoring-program</a> ,  <a href="https://www.cynthiao.com/leadhertrucking">https://www.cynthiao.com/leadhertrucking</a></p> <p>A mentoring program for women in the trucking industry.</p> <p>Interventions/Activities): A 10-month mentoring program  Which non-traditional field: Trucking  Location (country): Plover, Wisconsin, US  Implementing organisation: The Women in Trucking (WIT) Association</p>	<p>Exploration:  Education &amp; Training:  Early Experiences:  Growth: ✓</p>
112	<p><b>Lean In Circles for Tradeswomen</b>  <a href="https://leanin.org/circles-for-union-tradeswomen">https://leanin.org/circles-for-union-tradeswomen</a></p> <p>An extension of the global advocacy group, Lean In, Lean In for tradeswomen is an online initiative for women to connect with one another and share their experiences and gain support for a community of other women in the industry. There is also support on how to navigate bias at work and how to advocate for yourself.</p> <p>Interventions/Activities): Networking  Which non-traditional field: Construction  Location (country): US &amp; Canada  Implementing organisation: LeanIn.Org, North America's Building Trades Unions (NABTU), AFL-CIO (The American Federation of Labor and Congress of Industrial Organizations), and Build Together</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth: ✓</p>
113	<p><b>Leeds Apprenticeship Project</b>  <a href="https://www.wisecampaign.org.uk/what-we-do/wise-projects/leeds-apprenticeship-project">https://www.wisecampaign.org.uk/what-we-do/wise-projects/leeds-apprenticeship-project</a></p> <p>WISE and Leeds City Council joined forces to run this project aimed at raising awareness of STEM careers and STEM Apprenticeships in particular, predominately among parents and carers. The objective of this is to show these careers as a viable option for young women.</p> <p>Interventions/Activities): School outreach sessions  Which non-traditional field: STEM  Location (country): Leeds, England  Implementing organisation: WISE</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
114	<p><b>Les Coulisses du Bâtiment</b>  <a href="http://www.coulisses.ffbatiment.fr">www.coulisses.ffbatiment.fr</a></p> <p>This program was launched in 2003 and has remained popular since. It consists of running open day events for member of the public to visit a large number of construction sites throughout France, over the course of two or three days. This includes guided tours for groups or whole classes of students. This serves to showcase the diversity in roles in the construction industry and debunk clichés. Promotional materials, such as guides on industry jobs and pathways to get there, and brochures on the industry, goodies are also distributed. This initiative has reached over 1 million people on approx.3,500 building sites.</p> <p>Interventions/Activities): Open days and tours on site, promotional/career guidance materials distributed  Which non-traditional field: Construction  Location (country): France  Implementing organisation: FFB - Fédération Française du Bâtiment</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>

	PROGRAM	Career stage
115	<p><b>London Olympic Park</b>  <a href="https://www.researchgate.net/publication/272826613_Wright_T_2014_The_Women_into_Construction_Project_an_assessment_of_a_model_for_increasing_women%27s_participation_in_construction_Centre_for_Research_in_Equality_and_Diversity_Queen_Mary_University_of_L">https://www.researchgate.net/publication/272826613_Wright_T_2014_The_Women_into_Construction_Project_an_assessment_of_a_model_for_increasing_women%27s_participation_in_construction_Centre_for_Research_in_Equality_and_Diversity_Queen_Mary_University_of_L</a>  The Olympic Delivery Authority overseeing this major project set gender employment targets in order to achieve diversity in the workforce. At this time, the Women into Construction project was established support the contractors in meeting these targets. The model was considered successful and WiC have continued. 222 women were gained employment on the Olympic Park during its implementation, of whom 34 % were from CALD backgrounds and 7% were women with disabilities.</p> <p>Interventions/Activities): Training program  Which non-traditional field: Construction  Location (country): UK  Implementing organisation: Olympic Delivery Authority</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences: ✓  Growth:</p>
116	<p><b>Māori and Pasifika Trades training - women in trades</b>  <a href="https://www.maoripasifikatrades.co.nz/women-in-trades/">https://www.maoripasifikatrades.co.nz/women-in-trades/</a>  Māori and Pasifika Trades Training Auckland is a group of training and industry organisations that working together to help Māori and Pasifika people become leaders in the trades. They offer training, mentoring and financial support, and connect participants with employers. They also offer additional support for women to encourage them to pursue a trade.</p> <p>Interventions/Activities): Training, mentoring, employment support  Which non-traditional field: Construction  Location (country): Auckland, New Zealand  Implementing organisation: Māori and Pasifika Trades Training Auckland</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences: ✓  Growth:</p>
117	<p><b>Māori and Pasifika women in trades</b>  <a href="https://women.govt.nz/sites/public_files/Maori%20and%20Pasifika%20women%20in%20trades.pdf">https://women.govt.nz/sites/public_files/Maori%20and%20Pasifika%20women%20in%20trades.pdf</a>  The Māori and Pasifika women in trades program collected stories from Māori and Pasifika women, to showcase their journeys and hopefully inspire others to pursue a trades career.</p> <p>Interventions/Activities): Awareness campaign/resource development  Which non-traditional field: Construction  Location (country): New Zealand  Implementing organisation: Ministry for Women</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
118	<p><b>Maryland: Build Up Program</b>  <a href="https://www.sha.maryland.gov/OEO/BUILDUP_Program_Overview.pdf">https://www.sha.maryland.gov/OEO/BUILDUP_Program_Overview.pdf</a>.  Highway construction program including training for women and minority groups</p> <p>Interventions/Activities): Training program  Which non-traditional field: Construction  Location (country): Maryland, US  Implementing organisation: Maryland Department of Transport &amp; State Highway Administration</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences: ✓  Growth:</p>

	PROGRAM	Career stage
119	<p><b>Mentoring a Girl in Construction, (MAGIC), Inc.</b>  <a href="https://mentoringagirlinconstruction.org">https://mentoringagirlinconstruction.org</a>  MAGIC is a one-week, day camp run with girls in high school to show them the career possibilities in the construction industry. MAGIC offers insight into the industry and allows girls to engage with it via hands-on training in basic construction skills.</p> <p>Interventions/Activities): Summer Camp  Which non-traditional field: Construction  Location (country): Georgia, US  Implementing organisation: Mentoring a Girl in Construction, (MAGIC), Inc.</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
120	<p><b>MentorSET</b>  <a href="https://www.wes.org.uk/content/mentorset-1">https://www.wes.org.uk/content/mentorset-1</a>  MentorSET is a mentoring program for women (and also men) in STEM run by WES. Mentors are from across the sector and mentorships last for up to 2 years. They also offer networking opportunities for mentors to connect with one another and participants the opportunity to connect with others who may share the same interests and goals. MentorSET outlines the benefits of this mentoring scheme as beneficial for career planning, the reduction in isolation in male-dominated industries, providing information about returning after a career break, networking, developing public speaking and leadership skills and for additional support (i.e., managing health problems or a disability alongside one's career).</p> <p>Interventions/Activities): Mentoring, networking, professional development session, support services  Which non-traditional field: STEM  Location (country): Stevenage, England  Implementing organisation: Women's Engineering Society (WES)</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth: ✓</p>
121	<p><b>Mentorship for Women in Architecture</b>  <a href="https://www.womeninarchitecture.net">https://www.womeninarchitecture.net</a>  This mentoring works to connect emerging female architects with those experienced in the industry to support their career development and retention in the industry.</p> <p>Interventions/Activities): Mentoring sessions  Which non-traditional field: Architecture  Location (country): New York, US  Implementing organisation: Mentorship for Women in Architecture</p>	<p>Exploration:  Education &amp; Training:  Early Experiences:  Growth: ✓</p>
122	<p><b>MESTA.net</b>  <a href="http://mesta.net">http://mesta.net</a>  Offers career counselling in addition to online information on possible careers in construction, real estate and design, training options in the sector.</p> <p>Interventions/Activities): Online resource development and career counselling sessions  Which non-traditional field: Construction  Location (country): Finland  Implementing organisation: the Confederation of Finnish Construction Industries (RT), the Finnish Construction Managers and Engineers (RKL) and the Finnish Association of Architects</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>

	PROGRAM	Career stage
123	<p><b>Mint: Pink</b>  <a href="https://www-mintpink-de.translate.google/? x tr sl=de&amp; x tr tl=en&amp; x tr hl=en-GB&amp; x tr pto=nui,sc">https://www-mintpink-de.translate.google/? x tr sl=de&amp; x tr tl=en&amp; x tr hl=en-GB&amp; x tr pto=nui,sc</a>  The Mint: Pink program gives participants insights into research in companies and universities and from success stories in MINT careers.</p> <p>Interventions/Activities): Workshops, excursions  Which non-traditional field: STEM  Location (country): Hamburg, Germany  Implementing organisation: The Hamburg Authority for Economy and Innovation (BWI), the Körber Foundation and the City of Norderstedt</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
124	<p><b>Miss STEM Europe</b>  <a href="https://www.swc.ac.uk/discover/news/awards/october-2017/miss-stem-europe-launched-to-champion-females-in-i">https://www.swc.ac.uk/discover/news/awards/october-2017/miss-stem-europe-launched-to-champion-females-in-i</a>  Miss STEM Europe is a new initiative which engages girls and young women to help shape future policies and programs which are aimed at encouraging women into STEM education and careers.</p> <p>Interventions/Activities): Careers sessions, stakeholder engagement  Which non-traditional field: STEM  Location (country): Cookstown, Northern Ireland  Implementing organisation: South West College</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
125	<p><b>Missouri Women in Trades</b>  <a href="http://www.missouriwomenintrades.org/">http://www.missouriwomenintrades.org/</a>  Trades training camps for girls, careers and networking sessions for women</p> <p>Interventions/Activities): Trades training camps for girls, careers and networking sessions for women  Which non-traditional field: Construction  Location (country): Missouri, US  Implementing organisation: Missouri Women in Trades</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth: ✓</p>
126	<p><b>Mobilité + BTP</b>  <a href="https://www.reforme.org/projects/btp-mobilite/">https://www.reforme.org/projects/btp-mobilite/</a>, <a href="https://www-ccca-btp-fr.translate.google/projet-btp-mobilite-la-dynamique-du-ccca-btp-en-faveur-de-la-mobilite-europeenne-renforcee? x tr sl=fr&amp; x tr tl=en&amp; x tr hl=en&amp; x tr pto=nui,sc">https://www-ccca-btp-fr.translate.google/projet-btp-mobilite-la-dynamique-du-ccca-btp-en-faveur-de-la-mobilite-europeenne-renforcee? x tr sl=fr&amp; x tr tl=en&amp; x tr hl=en&amp; x tr pto=nui,sc</a>  The BTP Mobilité + project includes two training periods of approx. two weeks each in different European country, over a course of two years. The program focuses on dual training in the construction sector and public works and fosters European mobility. Greater European mobility is seen to significantly increase employment prospects.</p> <p>Interventions/Activities): Training program  Which non-traditional field: Construction  Location (country): France  Implementing organisation: the Coordination Committee of Apprenticeship in the Construction Industry (CCCA-BTP, Comité de Concertation et de Coordination de l'Apprentissage du Bâtiment et des Travaux Publics)</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>

	PROGRAM	Career stage
127	<p><b>MoMoWo Project</b>  <a href="http://www.momowo.eu/momowo-project/">http://www.momowo.eu/momowo-project/</a>            MoMoWo' key aim is to highlight the variety of contributions of women in design professions. By showcasing these, MoMoWo aims to promote cultural and professional equality and enable a gender balanced society. MoMoWo focuses on showcasing contemporary works by European women in the fields of architecture, civil engineering, interior design, landscape design, and urban planning.</p> <p>Interventions/Activities): Awareness campaign/resource development            Which non-traditional field: Architecture, civil engineering, interior design, landscape design, and urban planning            Location (country): Portugal &amp; Italy            Implementing organisation:</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
128	<p><b>Moving on Up</b>  <a href="https://www.women-into-construction.org/moving-on-up/">https://www.women-into-construction.org/moving-on-up/</a>            The MoU program works to support women in construction to advance in their careers. To do so, the program engaged women in low-paid roles to take part in group coaching and mentoring, one-on-one coaching, and technical training. The program also worked with the construction companies to retain and progress women and improve the gender diversity within their companies by engaging direct supervisors of the women and senior managers in the construction companies involved with the program, to educate these leaders and supervisors on the business case for gender diversity in the workplace, to give them practical tools to enable women's progression in their companies and to help them to end the gender pay gap in the industry.</p> <p>Interventions/Activities): Coaching, mentoring, training, pay gap workshops, manager &amp; supervisor coaching, review of actions            Which non-traditional field: Construction            Location (country): London, England            Implementing organisation: Women into Construction</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences: ✓            Growth:</p>
129	<p><b>National Association of Black Women in Construction Inc.</b>  <a href="https://nabwic.org">https://nabwic.org</a>            NABWIC has sought to address the unique challenges facing women of colour in the construction industry and runs educational programs, careers &amp; industry days and student internships.</p> <p>Interventions/Activities): Training program, careers sessions, industry days, internships            Which non-traditional field: Construction            Location (country): Miami, Florida, US            Implementing organisation: National Association of Black Women in Construction Inc.</p>	<p>Exploration: ✓            Education &amp; Training: ✓            Early Experiences:            Growth:</p>
130	<p><b>National Construction Incubator</b>  <a href="http://natci.org.za">http://natci.org.za</a>            NCI work to develop and mentor emerging construction companies in South Africa. To do so, they provide dedicated mentoring programs, training and development and outreach programs.</p> <p>Interventions/Activities): Mentoring sessions and training            Which non-traditional field: Construction            Location (country): South Africa            Implementing organisation: National Construction Incubator</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>

	PROGRAM	Career stage
131	<p><b>National Women's Law Centre</b>  <a href="https://nwlc.org/issue/non-traditional-jobs-for-women/">https://nwlc.org/issue/non-traditional-jobs-for-women/</a>            The National Women's Law Centre conduct campaigning for gender justice in the legal system, offer internships and develop resources</p> <p>Interventions/Activities): Advocacy campaigns, internships, resource development            Which non-traditional field: Law            Location (country): Washington, US            Implementing organisation: National Women's Law Centre</p>	<p>Exploration: ✓            Education &amp; Training: ✓            Early Experiences:            Growth:</p>
132	<p><b>NAWIC - NZ</b>  <a href="https://www.nawic.org.nz/connecting-in-construction">https://www.nawic.org.nz/connecting-in-construction</a>            The National Association of Women in Construction provides support for and advocate for women in the construction industry. They offer their members regular events, with focuses on both technical and professional development, as well as offering networking opportunities.</p> <p>Interventions/Activities): Industry events, professional development events, networking            Which non-traditional field: Construction            Location (country): NZ            Implementing organisation: NAWIC</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth: ✓</p>
133	<p><b>NAWIC - UK</b>  <a href="http://www.nawic.co.uk">www.nawic.co.uk</a>            The National Association of Women in Construction aims to support and celebrate women in the construction industry. They provide networking opportunities, site visits, industry events and workshops for personal development.</p> <p>Interventions/Activities): Networking, site visits, industry events, professional development workshops            Which non-traditional field: Construction            Location (country): UK            Implementing organisation: NAWIC</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth: ✓</p>
134	<p><b>NAWIC - US</b>  <a href="https://www.nawic.org/nawic/default.asp">https://www.nawic.org/nawic/default.asp</a>            The National Association of Women in Construction provide education, support and networking for women in the construction industry.</p> <p>Interventions/Activities): Educational events, resource development and networking            Which non-traditional field: Construction            Location (country): US            Implementing organisation: NAWIC</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth: ✓</p>
135	<p><b>New at Night</b>  <a href="https://www.new-nyc.org/programs">https://www.new-nyc.org/programs</a>            New at night is an evening version of Blue collar prep and runs for nine weeks.</p> <p>Interventions/Activities): Training program            Which non-traditional field: Construction            Location (country): New York, US            Implementing organisation: Nontraditional Employment for Women</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth:</p>

	PROGRAM	Career stage
136	<p><b>New Boots Network</b>  <a href="https://nb-map.ca/new-boots/women-in-trades/">https://nb-map.ca/new-boots/women-in-trades/</a>  New Boots begun in 2015 as a pilot research project, looking at the barriers women faced entering a non-traditional skilled workforce. Due to the success of the pilot, New Boots was developed into the provincial network it currently operates as. New Boots offers networking, mentoring and resources to promote and support women in non-traditional skilled trades areas.</p> <p>Interventions/Activities): Networking, mentoring, resource development  Which non-traditional field: Construction, maintenance, manufacturing, automotive, truck and transport and forestry.  Location (country): Canada  Implementing organisation: MAP Strategic Workforce Services</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth: ✓</p>
137	<p><b>Nordic Energy Equality Network (NEEN)</b>  <a href="https://neen.network">https://neen.network</a>  A network for promoting of gender diversity and the empowerment of women in sustainable energy.</p> <p>Interventions/Activities): Events/sessions for engagement and advocacy  Which non-traditional field: Renewable Energy  Location (country): Oslo, Norway  Implementing organisation: Nordic Energy Equality Network (NEEN)</p>	<p>Exploration:  Education &amp; Training:  Early Experiences:  Growth: ✓</p>
138	<p><b>Nuorilletoita</b>  <a href="http://www.nuorilletoita.fi">www.nuorilletoita.fi</a>  Nuorilletoita is a website where companies can submit pledges marking their commitment to undertaking certain youth-focused initiatives or changes. This includes initiatives such as a greater number of jobs or apprenticeships for young people. Young people can then contact these organisations regarding such opportunities.</p> <p>Interventions/Activities): Resource development (website), pledge/accreditation program  Which non-traditional field: Construction  Location (country): Finland  Implementing organisation: Confederation of Finnish Construction Industries RT</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences: ✓  Growth:</p>
139	<p><b>Ontario Building and Construction Tradeswomen (OBCT)</b>  <a href="https://www.obctradeswomen.com/about">https://www.obctradeswomen.com/about</a>  The Ontario Building and Construction Tradeswomen (OBCT) is a committee of tradeswomen which was formed to advocate for women and underrepresented gender identities working in the trades. They do so through the provision of resources, mentoring and workshops on presentation skills, confidence building and mental health first aid.</p> <p>Interventions/Activities): Resource development, mentoring and workshops  Which non-traditional field: Construction  Location (country): Ontario, Canada  Implementing organisation: Ontario Building and Construction Tradeswomen (OBCT)</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth: ✓</p>

	PROGRAM	Career stage
140	<p><b>Open Doors Construction</b>  <a href="https://opendoors.construction/">https://opendoors.construction/</a>  Open Doors gives a behind-the-scenes insight into careers in the construction industry. Running over the course of a week, the program offers site visits across the UK and live virtual experiences, like "meet the apprentice". It allows those interested in careers in the construction industry to gain first-hand insight.</p> <p>Interventions/Activities): Site visits and virtual events  Which non-traditional field: Construction  Location (country): UK  Implementing organisation: Open Doors</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
141	<p><b>Oregon: ODI/BOLI Initiative</b>  <a href="https://www.oregon.gov/ODOT/Business/OCR/SiteAssets/Pages/Workforce-Development/ODOT_BOLI_Highway_Construction_Workforce_Development_Program_2017.pdf">https://www.oregon.gov/ODOT/Business/OCR/SiteAssets/Pages/Workforce-Development/ODOT_BOLI_Highway_Construction_Workforce_Development_Program_2017.pdf</a>  This was a comprehensive program aimed at improving gender and racial/ethnic diversity in highway construction projects. One of the initiatives provided as a part of this program was focused on retaining current apprentices. This involved the provision of support, childcare and mentoring services. Other initiatives delivered included pre-apprenticeship programs and career outreach and educational activities.</p> <p>Interventions/Activities): Training, career outreach sessions, educational activities, mentoring, childcare services  Which non-traditional field: Construction  Location (country): Oregon, US  Implementing organisation: ODOT/BOLI</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences: ✓  Growth:</p>
142	<p><b>Partners Building Futures (PBF)</b>  <a href="https://www2.gnb.ca/content/dam/gnb/Departments/petlepft/PDF/Publications/PBF_FinalEvaluationReport.pdf">https://www2.gnb.ca/content/dam/gnb/Departments/petlepft/PDF/Publications/PBF_FinalEvaluationReport.pdf</a>  Engages women on social assistance and introduced them to non-traditional jobs. Pilot project was lauded as a success.</p> <p>Interventions/Activities): Apprenticeship training  Which non-traditional field: Non-traditional skilled trades  Location (country): New Brunswick, Canada  Implementing organisation: Skills/Compétences Canada New Brunswick</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>
143	<p><b>Pathways into Construction</b>  <a href="https://buildingpathways.org.uk/pathways-into-construction/">https://buildingpathways.org.uk/pathways-into-construction/</a>  Pathways into construction have been specifically designed to support underrepresented groups, such as veterans, women, CBE students, and long term unemployed through training.</p> <p>Interventions/Activities): Training program  Which non-traditional field: Construction  Location (country): London, UK  Implementing organisation: Building Pathways (delivery partners were Women into Construction &amp; DWP).</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>



	PROGRAM	Career stage
144	<p><b>People Like Me/My Skills My Life</b>  <a href="https://www.wisecampaign.org.uk/how-to-get-involved/my-skills-my-life/">https://www.wisecampaign.org.uk/how-to-get-involved/my-skills-my-life/</a>            People like me was developed in 2015. Based on developmental psychology perspective on the educational choices of girls and young women, People Like Me is an outreach intervention run in schools with girls, with the aim of encouraging more women and girls to pursue careers in STEM. It is both a resource and program, hoping to draw girls' attention to STEM subjects in school and, following this, the range of career options they could have in these industries. While many other programs share this focus, People Like Me is unique in its joint focus on both schools and industry engagement. The program engages directly with STEM employers, to involve them in developing industry-specific resources and training materials.</p> <p>Interventions/Activities): Resource development, outreach events            Which non-traditional field: STEM            Location (country): Leeds, England            Implementing organisation: WISE</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
145	<p><b>Personal Safety Conversation Cards project</b>  <a href="https://ccsbestpractice.org.uk/entries/personal-safety-conversation-cards/">https://ccsbestpractice.org.uk/entries/personal-safety-conversation-cards/</a>            Construction contractor BAM have developed safety conversation starter cards in the wake of high profile gender-based violence cases in the UK. They have been used to help start conversations with the teams on personal safety, women's safety and diversity. This conversations initiative has made operatives and staff more aware and helped them to reflect on their behaviours, body language and actions, and become more aware of the challenges women face.</p> <p>Interventions/Activities): Resource development            Which non-traditional field: Construction            Location (country): Hertfordshire, England            Implementing organisation: BAM</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth:</p>
146	<p><b>PlanBEE</b>  <a href="https://www.gateshead.ac.uk/planbee/">https://www.gateshead.ac.uk/planbee/</a>            Plan Bee is a program to prepare people for a career in a range of technical and professional jobs in architecture, engineering, building services and construction/site management and offer an alternative route into these roles other than through university.</p> <p>Interventions/Activities): Training program            Which non-traditional field: Construction, architecture, engineering, building, site management            Location (country): UK            Implementing organisation: Gateshead College</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth:</p>

	PROGRAM	Career stage
147	<p><b>Polish Integrated Skill Strategy (Zintegrowana Strategia Umiejetnosci – ZSU)</b>  <a href="https://www.cedefop.europa.eu/en/news-and-press/news/poland-developing-integrated-skills-strategy">https://www.cedefop.europa.eu/en/news-and-press/news/poland-developing-integrated-skills-strategy</a>            Poland's Ministry of National Education developed a strategy, funded by the European Social Fund, focused on building, maintaining and using the country's human capital to increase employment and economic growth, especially in the construction sector. This includes trainings and skills building as key focuses in the pursuit of economic growth. They aim to increase opportunities and environments which allow for the development of the skills necessary for enhancing social capital, social inclusion, and economic growth, and ultimately enabling a higher quality of life.</p> <p>Interventions/Activities): Policy development, stakeholder engagement activities, career resource development, vocational counselling, training programs, and professional development.            Which non-traditional field: Construction and other industries            Location (country): Poland            Implementing organisation:</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences: ✓            Growth: ✓</p>
148	<p><b>Professional Women in Construction</b>  <a href="https://www.pwcusa.org/">https://www.pwcusa.org/</a>            PWC is a not-for-profit organisation that aims to support and connect women and advocate for diversity in the architecture, engineering, construction industries. To do so, they run regular networking events.</p> <p>Interventions/Activities): Networking            Which non-traditional field: Architecture, engineering, construction industries            Location (country): US            Implementing organisation: Professional Women in Construction</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>
149	<p><b>PROGRAMME D'ACCÈS À L'ÉGALITÉ DES FEMMES 2015-2024</b>  <a href="https://www.ccg.org/en/qualification-acces-industrie/femmes/PAEF">https://www.ccg.org/en/qualification-acces-industrie/femmes/PAEF</a>            PAEF (Equal Access Program for Women in the Construction Industry) was implemented by the Commission de la construction du Québec (Quebec Construction Commission), and includes a range of measures with the goal of increasing the number of women in the construction industry. The program has been endorsed by government departments, public agencies, VET centres, and the industry body for occupational health and safety (ASP Construction), committing to undertaking measures to increase the presence of women on construction sites. PEAFF's "first action plan" sought to reach 3% of women working on construction sites by 2018.</p> <p>Interventions/Activities): Stakeholder engagement and procurement activities            Which non-traditional field: Construction            Location (country): Quebec, Canada            Implementing organisation: Commission de la construction du Quebec (CCQ)</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth:</p>
150	<p><b>Progressive Employment Program</b>  <a href="https://www.constructionaccord.nz/good-practice/beacon-projects/city-rail-link-progressive-employment-programme/">https://www.constructionaccord.nz/good-practice/beacon-projects/city-rail-link-progressive-employment-programme/</a>            18-week program to engage "rangatahi" (young people) in the transport infrastructure sector, get on the job training and become work ready.</p> <p>Interventions/Activities): Training program            Which non-traditional field: Construction/Transport            Location (country): NZ            Implementing organisation: City Rail Link, Accord and Beacon</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth:</p>

	PROGRAM	Career stage
151	<p><b>Project: Accelerate!</b>  <a href="http://thebuildinitiative.org/programs/">http://thebuildinitiative.org/programs/</a>            Project Accelerate! is a part of the build initiative, which runs a series of programs to increase the number of women in construction, engineering, design and the trades. The PA program focuses on exposing women to careers in the construction industry. It is designed to reinforce knowledge for those in the industry and educate those new to the industry, as well as facilitate greater opportunities for women. The program takes place over seven weeks and is conducted annually in locations across Michigan. Participants attend the program for one day a week for eight hours a day. This includes between two and six modules a day, including lectures, labs and on-site experiences, and sessions with expert speakers.</p> <p>Interventions/Activities): Workshops, careers sessions            Which non-traditional field: Construction            Location (country): Michigan, US            Implementing organisation: The Buid Initiative</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
152	<p><b>Project: Ignite</b>  <a href="http://thebuildinitiative.org/programs/">http://thebuildinitiative.org/programs/</a>            Similarly, expanding the PA model, the Ignite program engages school-aged girls to expose them to careers in the construction industry.</p> <p>Interventions/Activities): Workshops, careers sessions            Which non-traditional field: Construction            Location (country): Michigan, US            Implementing organisation: The Buid Initiative</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
153	<p><b>Project: Spark</b>  <a href="http://thebuildinitiative.org/programs/">http://thebuildinitiative.org/programs/</a>            Expanding the PA model, the Spark program engages educators and counselors, to equip them with the skills to educate their students on opportunities in the construction industry.</p> <p>Interventions/Activities): Workshops, careers sessions            Which non-traditional field: Construction            Location (country): Michigan, US            Implementing organisation: The Buid Initiative</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
154	<p><b>RATP Women's Network</b>  <a href="https://cms.uitp.org/wp/wp-content/uploads/2020/08/WISE-II-Brochure-English.pdf">https://cms.uitp.org/wp/wp-content/uploads/2020/08/WISE-II-Brochure-English.pdf</a>            Networking for women in transport to support their career growth.</p> <p>Interventions/Activities): Networking            Which non-traditional field: Transport            Location (country): Paris, France            Implementing organisation: Régie autonome des transports Parisiens France</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>

	PROGRAM	Career stage
155	<p><b>Ready, Steady, Girls Construct! Employability programme</b>  <a href="http://www.scottishconstructionnow.com/24846/ready-steady-girls-construct/?utm_source=Scottish+Construction+Now&amp;utm_campaign=9af7d0ad0b-SCN_08_11_17&amp;utm_medium=email&amp;utm_term=0_da4310d8ed-9af7d0ad0b-66772561#">http://www.scottishconstructionnow.com/24846/ready-steady-girls-construct/?utm_source=Scottish+Construction+Now&amp;utm_campaign=9af7d0ad0b-SCN_08_11_17&amp;utm_medium=email&amp;utm_term=0_da4310d8ed-9af7d0ad0b-66772561#</a></p> <p>This program is focused on attracting female students to the construction industry by offering industry insight, training, work experience and employability skills. The program is run over the course of 10 weeks.</p> <p>Interventions/Activities): Careers sessions, training, work experience and employability sessions  Which non-traditional field: Construction  Location (country): Hertfordshire, England  Implementing organisation: BAM</p>	<p>Exploration: ✓  Education &amp; Training: ✓  Early Experiences:  Growth:</p>
156	<p><b>Reforme</b>  <a href="http://www.reforme.org/who-we-are/reforme/">http://www.reforme.org/who-we-are/reforme/</a></p> <p>Reforme is a network for vocational education and training in the construction sector in Europe. The purpose of this network is for partners to share strategies, learning methods and tools, and trainings programs ideas.</p> <p>Interventions/Activities): Networking  Which non-traditional field: Construction  Location (country): Europe  Implementing organisation: Reforme</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>
157	<p><b>Returns Programme</b>  <a href="https://www.balfourbeattycareers.com/returners-programme/">https://www.balfourbeattycareers.com/returners-programme/</a></p> <p>Returns programme to assist people who have had a career break.</p> <p>Interventions/Activities): Training and mentoring sessions  Which non-traditional field: Construction  Location (country): UK  Implementing organisation: Balfour Beatty</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences: ✓  Growth:</p>
158	<p><b>Rosie's Girls Afterschool</b>  <a href="https://www.vtworksforwomen.org/programs">https://www.vtworksforwomen.org/programs</a></p> <p>This after school program an adaptation of their highly successful summer camp curriculum, exposing middle school girls and gender non-conforming youth to trades and career exploration opportunities. They piloted this new program in the 2019/2020 school year with 6 schools.</p> <p>Interventions/Activities): Afterschool trades program  Which non-traditional field: Construction  Location (country): Vermont, US  Implementing organisation: Vermont Works For Women</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
159	<p><b>Rosie's Girls Camp</b>  <a href="https://www.vtworksforwomen.org/programs">https://www.vtworksforwomen.org/programs</a></p> <p>Rosie's Girls Camp focuses on trades and career exploration for girls and gender non-conforming youth beginning grades 6-8.</p> <p>Interventions/Activities): Summer Camp  Which non-traditional field: Construction  Location (country): Vermont, US  Implementing organisation: Vermont Works For Women</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>

	PROGRAM	Career stage
160	<p><b>Salon Services</b>  <a href="https://ccsbestpractice.org.uk/entries/promoting-women-in-construction-3/">https://ccsbestpractice.org.uk/entries/promoting-women-in-construction-3/</a>  Contractors McCarthy &amp; Stone organised an initiative to promote more career opportunities within the construction industry to women, which involved a series of presentations on construction careers within 'Salon Services' in near to where the site is situated.</p> <p>Through partnering with the salon, they were given access to a female-dominated environment, which allowed them to explain the careers women can have in the construction industry, which they may not have previously considered a possibility.</p> <p>Interventions/Activities): Outreach events  Which non-traditional field: Construction  Location (country): UK  Implementing organisation: McCarthy &amp; Stone</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
161	<p><b>She's an Engineer</b>  <a href="https://www.wes.org.uk/content/shes-engineer-1">https://www.wes.org.uk/content/shes-engineer-1</a>  She's an Engineer showcases the lives and stories of women engineers. The program involved the production of content to highlight to girls and women that career in engineering is a possibility for them. It illustrates the career choices available and encourages them via a network of role models. This content seeks to encourage young girls deciding their career pathways and women who are looking for a career change.</p> <p>Interventions/Activities): Resource development  Which non-traditional field: Engineering  Location (country): Stevenage, England  Implementing organisation: Women's Engineering Society (WES)</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
162	<p><b>Sir Robert McAlpine Women's Network</b>  <a href="https://ccsbestpractice.org.uk/entries/gender-equality-workshop/">https://ccsbestpractice.org.uk/entries/gender-equality-workshop/</a>  The women's network aims to promote sustainable employment, by enabling women to discuss key issues such as health and gender equality. This supports women so they don't feel alone in male-dominated industries.</p> <p>Interventions/Activities): Networking  Which non-traditional field: Construction  Location (country): Hertfordshire, England  Implementing organisation: Sir Robert McAlpine</p>	<p>Exploration:  Education &amp; Training:  Early Experiences:  Growth: ✓</p>
163	<p><b>Sisters in the Building Trades</b>  <a href="https://www.sistersinthebuildingtrades.rocks">https://www.sistersinthebuildingtrades.rocks</a>  Sisters in the building trades offer mentoring, networking and support to disadvantaged women to facilitate their careers in the construction industry. They also aim to increase awareness about career options via speaking events, careers fairs, outreach activities, and by supporting efforts to recruit women into apprenticeship programs. As part of their outreach activities, they encourage people to "buy a sister a tool", which works to support women in developing countries.</p> <p>Interventions/Activities): Careers events, outreach activities, mentoring, networking and employment support  Which non-traditional field: Construction  Location (country): US, the Phillipines and Papua New Guinea  Implementing organisation: Sisters in the Building Trades</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences: ✓  Growth: ✓</p>

	PROGRAM	Career stage
164	<p><b>Sisters in the Brotherhood</b>  <a href="https://www.carpenters.org/sib-join-us/">https://www.carpenters.org/sib-join-us/</a>            The UBC Sisters in the Brotherhood's goal is to develop a stronger union, create a network of women in the industry, help to break down the barriers they face and promote diversity. They provide networking, workshops, and events both locally and online, as well as resources for women.</p> <p>Interventions/Activities): Networking, workshops, events, resource development            Which non-traditional field: Construction            Location (country): US            Implementing organisation: The United Brotherhood of Carpenters</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>
165	<p><b>Skilled Trades Employment Program (STEP)</b>  <a href="https://www.stepbc.ca/about/">https://www.stepbc.ca/about/</a>            STEP focuses on connecting jobseekers with employers in the trades.</p> <p>Interventions/Activities): Employment connections sessions, career mentoring and follow-up support sessions            Which non-traditional field: Construction            Location (country): British Columbia, Canada            Implementing organisation: STEP is managed by the British Columbia Construction Association</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth:</p>
166	<p><b>Social Transformation and Empowerment Programme (STEP)</b>  <a href="https://www.nhbrc.org.za/nhbrc-partners-with-nci-to-advance-women-empowerment-agenda/">https://www.nhbrc.org.za/nhbrc-partners-with-nci-to-advance-women-empowerment-agenda/</a>            A number of training workshops run as part of the broader STEP program targeting underrepresented groups. The workshop series focuses on skills training for women with an interest in the construction industry and aims to encourage the advancement of equal opportunities in the industry. In the 2019-2020 financial year, the NHBRC provided training to a total of 9,023 individuals, which included women, young people and people with disabilities, among other marginalised groups.</p> <p>Interventions/Activities): Workshops covering the following areas:" Introduction to Construction sector            Understanding of a business plan; House development value chain; Innovative Building Technologies; Occupational Health &amp; Safety; Home Building Technical Skills            Which non-traditional field: Construction            Location (country): South Africa            Implementing organisation: The National Home Builders Registration Council (NHBRC)</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth:</p>
167	<p><b>South African Women in Construction</b>  <a href="http://www.sawicnational.co.za/About%20us.html">http://www.sawicnational.co.za/About%20us.html</a>            The SAWIC initiative was founded in order to engage women in business opportunities, training, finance and networking within the construction industry. SAWIC works closely with government and other entities to support and empower women.</p> <p>Interventions/Activities): Networking and training programs            Which non-traditional field: Construction            Location (country): South Africa            Implementing organisation: South African Women in Construction</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>

	PROGRAM	Career stage
168	<p><b>Speak Out</b>  <a href="https://boltonline.org/speak-outs/">https://boltonline.org/speak-outs/</a>            BOLT's Speak Out program is designed to engage young people and highlight the career options in the construction industry. To do so, they run careers sessions and panels at schools to inspire young people and give them insight into the industry.</p> <p>Interventions/Activities): Careers sessions, panel            Which non-traditional field: Construction            Location (country): Canada            Implementing organisation: BOLT</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
169	<p><b>Stadtverkehr Lübeck</b>  <a href="https://cms.uitp.org/wp/wp-content/uploads/2020/08/WISE-II-Brochure-English.pdf">https://cms.uitp.org/wp/wp-content/uploads/2020/08/WISE-II-Brochure-English.pdf</a>            Stadtverkehr Lübeck run networking and mentoring for women, coupled with initiatives to change the organisational culture.</p> <p>Interventions/Activities): Networking, mentoring, events, cultural change sessions, cultural change training, recruitment practices, resource development            Which non-traditional field: Transport            Location (country): Lübeck, Germany            Implementing organisation: Stadtverkehr Lübeck</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth: ✓</p>
170	<p><b>STEM Returners</b>  <a href="https://www.stemreturners.com/the-programme/">https://www.stemreturners.com/the-programme/</a>            The STEM Returners works to recruit, develop and retain women in STEM. The program offers paid short-term employment placements for those returning after a career break. Alongside this experience, the STEM Returners project will also provide support for participants including advice, career coaching, networking opportunities and mentoring. All of the participants will also have the opportunity to gain a permanent position at the end of the program.</p> <p>Interventions/Activities): Work placement, career guidance, networking, mentoring            Which non-traditional field: STEM            Location (country): Stevenage, England            Implementing organisation: Women's Engineering Society (WES)</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences: ✓            Growth:</p>
171	<p><b>Súťažná prehliadka stavebných remesiel</b>  <a href="https://www.sosos--trnava-sk.translate.goog/galerie/odborne-sutaze/sutazna-prehliadka-stavebnych-remesiel-suso-2019-381sk.html? x tr sl=sk&amp; x tr tl=en&amp; x tr hl=en&amp; x tr pto=nui,sc">https://www.sosos--trnava-sk.translate.goog/galerie/odborne-sutaze/sutazna-prehliadka-stavebnych-remesiel-suso-2019-381sk.html? x tr sl=sk&amp; x tr tl=en&amp; x tr hl=en&amp; x tr pto=nui,sc</a>            In this skills workshop and competition initiative students can get hands-on experience multiple trades such as masonry, joinery, carpentry, bricklaying and floor fitting. The competition takes place yearly.</p> <p>Interventions/Activities): Skills workshops and competition            Which non-traditional field: Construction            Location (country): Slovakia            Implementing organisation: SOŠ Trnava</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>

	PROGRAM	Career stage
172	<p><b>Technical Opportunities Program</b>  <a href="https://cwit.org/trade-programs/technical-opportunities-program">https://cwit.org/trade-programs/technical-opportunities-program</a>            Pre-apprenticeship program</p> <p>Interventions/Activities): Training program            Which non-traditional field: Construction            Location (country): Chicago, US            Implementing organisation: Chicago Women in Trades</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth:</p>
173	<p><b>The Best Young Builder Competition</b>  <a href="http://www.construction-for-youth.eu/en/initiatives/bg---the-best-young-builder-competition.aspx">http://www.construction-for-youth.eu/en/initiatives/bg---the-best-young-builder-competition.aspx</a>            This program involves a competition for students from VET schools to demonstrate theoretical knowledge and practical skills in construction. They're also able to demonstrate their soft skills. This allows students an opportunity to apply their knowledge and develop their creativity.</p> <p>Interventions/Activities): Competition event            Which non-traditional field: Construction            Location (country): Bulgaria            Implementing organisation: The Ministry of Education and Science (MES).</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth:</p>
174	<p><b>The Building Routes Into Degrees with Greater Equality (BRIDGE) project</b>  <a href="https://www.bridgeresearch.net">https://www.bridgeresearch.net</a>, <a href="https://www.officeforstudents.org.uk/advice-and-guidance/promoting-equal-opportunities/addressing-barriers-to-student-success-programme/abss-project-gateshead-college/">https://www.officeforstudents.org.uk/advice-and-guidance/promoting-equal-opportunities/addressing-barriers-to-student-success-programme/abss-project-gateshead-college/</a>            BRIDGE focused was focused on remedying the low numbers of women, people from disadvantaged backgrounds, ethnic minority groups, people with disabilities, mature age and part-time students enrolling on construction degrees and related courses.</p> <p>Interventions/Activities): Workshops, school assemblies and pop up shops            Which non-traditional field: Construction            Location (country): Gateshead, England, Newcastle, England &amp; Derby, England            Implementing organisation: Gateshead College, Northumbria University and Derby College</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
175	<p><b>The CAWIC LEVEL BEST Women's Advancement Project</b>  <a href="https://cawic.ca/about/level-best/">https://cawic.ca/about/level-best/</a>            The CAWIC LEVEL BEST project, which ran from January 2014 to December 2016 and was a federal government funded research and action plan aimed at construction industry employers, unions, alternative unions and open shop contractors across Canada, with the goal of improving women's advancement into leadership roles in the industry.</p> <p>Interventions/Activities): Research activities, resource development            Which non-traditional field: Construction            Location (country): Canada            Implementing organisation: Canadian Association of Women in Construction (CAWIC)</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>



	PROGRAM	Career stage
176	<p><b>The Century Freeway Project in Los Angeles (USA)</b>  <a href="https://link.springer.com/content/pdf/10.1057/978-1-137-50136-3.pdf">https://link.springer.com/content/pdf/10.1057/978-1-137-50136-3.pdf</a>            During the construction of the Los Angeles Century Freeway, the implementation of their Women's Employment Program (WEP) worked to significantly increase the number of women working on the project (Price, 2004; Wright, 2016).</p> <p>Interventions/Activities): Training program            Which non-traditional field: Construction            Location (country): US            Implementing organisation: The Los Angeles Century Freeway</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences: ✓            Growth:</p>
177	<p><b>The Construction Blueprint project</b>  <a href="https://constructionblueprint.eu/context/">https://constructionblueprint.eu/context/</a>            The Construction Blueprint project is a pilot project being implemented by Spanish FLC for 4 years, from January 2019-December 2022. The project seeks to identify the skills needs of construction companies with regard to energy efficiency, circular economy and digitalisation. This will then inform construction VET training courses, in order to meet these skills demands.            The French and Belgian partners will co-pilot the 4th phase of the project, which sets out to design a "European Observatory of Construction Companies' Skills Needs" and launch the first edition of the skills identification survey.</p> <p>Interventions/Activities): Stakeholder workshops to collect good practices and promote initiatives addressing skill gaps via an Interactive Map; Curriculum development and piloting; Resource development (observatory tool, profiles and website).            Which non-traditional field: Construction            Location (country): Spain, Germany, France, Italy, Portugal, Belgium, Ireland, Greece, Poland, Finland, Slovenia and Lithuania            Implementing organisation: Fundación Laboral de la Construcción (Spain)</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth:</p>
178	<p><b>The European Alliance for Apprenticeships (EAfA)</b>  <a href="https://ec.europa.eu/growth/sectors/construction/apprenticeships_en">https://ec.europa.eu/growth/sectors/construction/apprenticeships_en</a>            The European Alliance for Apprenticeships (EAfA) was launched in July 2013 and is a multi-stakeholder initiative aimed at boosting the quality, supply and image of apprenticeships in Europe. This involves a pledge process from construction sector stakeholders in the area of apprenticeships in VET with a focus on young people and SMEs.</p> <p>Interventions/Activities): An accreditation/"pledge" program            Which non-traditional field: Construction            Location (country): Europe            Implementing organisation: European Commission</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth:</p>
179	<p><b>The Fostering Women to STEM MOOCs (FOSTWOM) project</b>  <a href="https://fostwom.eu/?page_id=233">https://fostwom.eu/?page_id=233</a>            The Fostering Women to STEM MOOCs (FOSTWOM) project is a three-year initiative, which aims to use Massive Open Online Courses (MOOCs) to promote STEM subjects to young women.</p> <p>Interventions/Activities): Online education sessions            Which non-traditional field: STEM            Location (country): Spain, Italy, Sweden, Portugal            Implementing organisation: UNIVERSITAT POLITÈCNICA DE VALÈNCIA</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>

	PROGRAM	Career stage
180	<p><b>The GEEIS Standard</b>  <a href="https://cms.uitp.org/wp/wp-content/uploads/2020/08/WISE-II-Brochure-English.pdf">https://cms.uitp.org/wp/wp-content/uploads/2020/08/WISE-II-Brochure-English.pdf</a>  GEEIS is an accreditation initiative for gender equality at the European and international level. Their goal is to create a standardised process across Europe, in order to create a common culture of gender equality in the workplace.</p> <p>Interventions/Activities): Accreditation program  Which non-traditional field: Transport  Location (country): Paris, France  Implementing organisation: Keolis</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth:</p>
181	<p><b>The Hammer Heads Program</b>  <a href="https://boltonline.org/trades/">https://boltonline.org/trades/</a>  The Hammer Heads Program is a boot camp-style intensive pre-apprenticeship for disadvantaged young people aged between 18-26. They are introduced to a variety of different trades and also gain employability skills during the program.</p> <p>Interventions/Activities): Qualification training, employability training  Which non-traditional field: Construction  Location (country): Canada  Implementing organisation: BOLT</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>
182	<p><b>The Momentum Programme</b>  <a href="https://www.voced.edu.au/content/ngv%3A70006">https://www.voced.edu.au/content/ngv%3A70006</a>  Momentum provided free education and training to roughly 13,000 people who were long-term unemployed in areas with vacancies and particularly in the construction industry.</p> <p>Interventions/Activities): Education and training program  Which non-traditional field: Construction and other industries  Location (country): Ireland  Implementing organisation: the Department of Social Protection</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>
183	<p><b>The Northeast Center for Tradeswomen's Equity (NCTE)</b>  <a href="https://buildalifema.org/about-the-program/">https://buildalifema.org/about-the-program/</a>  NCTE is focused on helping women find careers in construction. In particular, they place added focus on assisting women of colour to gain employment in the industry and develop within the industry.</p> <p>Interventions/Activities): Employment support sessions  Which non-traditional field: Construction  Location (country): Massachusetts, US  Implementing organisation: The Northeast Center for Tradeswomen's Equity (NCTE)</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth:</p>

	PROGRAM	Career stage
184	<p><b>The Outbox programme</b>  <a href="https://stemettes.org/outbox/">https://stemettes.org/outbox/</a>  The Stemettes social enterprise encourages girls aged 5–22 to pursue careers in STEM. In 2013, they launched the Outbox programme. This program is an intensive residential course for girls under the age of 22, which is delivered over 6 weeks during the summer holidays. It includes sessions with Industry professionals on business development, fundraising, marketing and design. During the program, participants take part in coming up with start-up ideas and plans for these, with assistance from a mentor.</p> <p>Interventions/Activities): Industry events, workshops, mentoring  Which non-traditional field: STEM  Location (country): London, England  Implementing organisation: Stemettes</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
185	<p><b>The Pilot Project of on-the-job education in construction companies</b>  <a href="https://www.confederationconstruction.brussels">https://www.confederationconstruction.brussels</a>  This pilot program provided on-the-job training in construction companies via a traineeship program for high school students. It aims to attract young people to the construction industry showing them the day-to-day reality of the roles. Underscoring this is also a an encouragement for students to pursue "dual vocational training", which is common in Germany and Switzerland. Overall, the program lasts for between 1 to 6 weeks.</p> <p>Interventions/Activities): Training program  Which non-traditional field: Construction  Location (country): Belgium  Implementing organisation: The Confederation Construction Brussels-Capital and the FVB-FFC Constructiv</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>
186	<p><b>the Serious Games project (Jeux sérieux)</b>  <a href="http://www.construction-for-youth.eu/en/initiatives/fr---serious-games.aspx">http://www.construction-for-youth.eu/en/initiatives/fr---serious-games.aspx</a>  This initiative offers participants interactive challenges surrounding the construction of a high-speed rail line. In doing so, it aims to engage addresses young people and VET teachers.</p> <p>Interventions/Activities): Online resource development  Which non-traditional field: Construction  Location (country): France  Implementing organisation: FNTP - Fédération Nationale des Travaux Publics</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
187	<p><b>The Shift for Men/Be More Than A Bystander</b>  <a href="https://bccwitt.ca/whatwedo/bystander/">https://bccwitt.ca/whatwedo/bystander/</a>  BCCWITT works with male allies in the industry and community to facilitate cultural change in the industry. This program consists of a three-day "train-the-trainer program" to enable men to become male leaders in the industry. It also offers a two hour bystander training workshop.</p> <p>Interventions/Activities): Bystander training and workshops  Which non-traditional field: Construction  Location (country): British Colombia, Canada  Implementing organisation: BC Centre for Women in the Trades (BCCWITT)</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth:</p>

	PROGRAM	Career stage
188	<p><b>The Shift for Organisations</b>  <a href="https://bccwitt.ca/whatwedo/shift-orgs/">https://bccwitt.ca/whatwedo/shift-orgs/</a>            BCCWITT works with male allies in the industry and community enable cultural change. This involves engaging employers, contractors, unions and training providers.</p> <p>Interventions/Activities): Workplace training            Which non-traditional field: Construction            Location (country): British Colombia, Canada            Implementing organisation: BC Centre for Women in the Trades (BCCWITT)</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth:</p>
189	<p><b>The Women and Construction project</b>  <a href="https://ec.europa.eu/regional_policy/en/projects/France/building-a-future-for-women-on-construction-sites-in-france">https://ec.europa.eu/regional_policy/en/projects/France/building-a-future-for-women-on-construction-sites-in-france</a>            The Women and Construction project is a long-running, women-only training course to give them the skills they need to success in the industry. The project aims to the face and culture of the construction industry. In the training, participants are able to learn skills in rendering, painting, floor laying, tiling – in a safe environment. After five months on the site completing training, the women then spend one month completing a work placement in a company, which sometimes leads to employment. Women with a good educational background are also encouraged to use these skills to establishing their own construction businesses.</p> <p>Interventions/Activities): Training, work placement, employment support            Which non-traditional field: Construction            Location (country): Saint-Ouen, France            Implementing organisation: Habitat au Quotidien</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences: ✓            Growth:</p>
190	<p><b>The Women’s Legal Mentorship Program (WLMP)</b>  <a href="https://wlmp-pmfd.ca">https://wlmp-pmfd.ca</a>            A first of its kind, national peer mentoring program for law students. In has also developed to include mentoring to assist them through their careers. This includes the WLMP Mentoring Community and the WLMP National Student Program as well as a University Chapter Program. The National Student Program and University Chapter Program combine peer mentorship, lawyer-student mentorship and leadership and professional development opportunities.</p> <p>Interventions/Activities): Mentoring sessions            Which non-traditional field: Law            Location (country): Canada            Implementing organisation: The Women’s Legal Mentorship Program (WLMP)</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth:</p>
191	<p><b>Tideway - Women in Construction</b>  <a href="https://womenreturners.com/employer-interview/thames-tideway-tunnel-returnship-success-2/">https://womenreturners.com/employer-interview/thames-tideway-tunnel-returnship-success-2/</a>            Returners programme - helping women who have had a career break return to work. Thames Tideway Tunnel and Women Returners partnered to offer a sector returnship program. All 7 participants were then offered positions afterwards.</p> <p>Interventions/Activities): Training            Which non-traditional field: Construction            Location (country): UK            Implementing organisation: Thames Tideaway Tunnel &amp; Women Returners</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth:</p>

	PROGRAM	Career stage
192	<p><b>Time to Build</b>  <a href="https://timetobuild.fr">https://timetobuild.fr</a>  Time to Build was launched in March 2020. It seeks to inform young people about career opportunities in the construction industry. This involves an awareness campaign, consisting of information on construction jobs displayed on social media, short videos featuring construction professionals explaining their career paths, and the use of local ambassadors and influencers to promote the campaign on social media.</p> <p>Interventions/Activities): Awareness campaign  Which non-traditional field: Construction  Location (country): France  Implementing organisation: Haute-Garonne’s Federation of Building and Public Works</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
193	<p><b>Tools &amp; Tiaras</b>  <a href="https://www.toolsandtiaras.org/programs">https://www.toolsandtiaras.org/programs</a>  Monthly workshops for women and girls. Summer programs for girls.</p> <p>Interventions/Activities): Workshops and summer camps  Which non-traditional field: Construction  Location (country): New York, US  Implementing organisation: Tools and Tiaras</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
194	<p><b>TradesCareers</b>  <a href="https://tradecareers.co/about/">https://tradecareers.co/about/</a>  TradesCareers has been established by the Women in Trades Collective (WITC). Their focus is on drastically increasing the number of women, particularly those whose employment has been impacted by COVID-19 and especially Māori and Pasifika women. The program has developed toolkits of resources to support both women and employers. They have also produced videos such as, “Trade Careers: Let's give it a red hot go”, to support this process and engage women in the industry.</p> <p>Interventions/Activities): Research activities, resource development, advocacy materials  Which non-traditional field: Construction  Location (country): New Zealand  Implementing organisation: Women in Trades Collective (WITC)</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences: ✓  Growth:</p>
195	<p><b>Tradeswomen Inc.</b>  <a href="https://tradeswomen.org/programs/">https://tradeswomen.org/programs/</a>  Tradeswomen Inc. work with women and girls to help expose them to and engage them in non-traditional careers. Their programs include training in a range of trades, apprenticeship intro workshop, careers fair.</p> <p>Interventions/Activities): Trades training, apprenticeship intro workshop, careers fair.  Which non-traditional field: Construction  Location (country): California, US  Implementing organisation: Tradeswomen Inc.</p>	<p>Exploration: ✓  Education &amp; Training: ✓  Early Experiences:  Growth:</p>

	PROGRAM	Career stage
196	<p><b>Tradeswomen Network</b>  <a href="https://bccwitt.ca/whatwedo/network/">https://bccwitt.ca/whatwedo/network/</a>            BCCWITT believe that creating a network of other supportive women is vital to the retention and development of women in trades.</p> <p>Interventions/Activities): Networking sessions            Which non-traditional field: Construction            Location (country): British Colombia, Canada            Implementing organisation: BC Centre for Women in the Trades (BCCWITT)</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>
197	<p><b>Trailblazers: Trades Training Program</b>  <a href="https://www.vtworksforwomen.org/programs">https://www.vtworksforwomen.org/programs</a>            The trailblazers program involves a combination of hands-on skills training in in-demand trades, a soft skills component and employment support services to develop the skills and confidence women need to begin careers in the trades.</p> <p>Interventions/Activities): Hard skills training, soft skills training and employment support sessions            Which non-traditional field: Construction            Location (country): Vermont, US            Implementing organisation: Vermont Works For Women</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences: ✓            Growth:</p>
198	<p><b>Transferable Skills Mentoring Programme</b>  <a href="https://www.wisecampaign.org.uk/what-we-do/wise-projects/wise-network-rail-transferable-skills-mentoring-programme-2021/">https://www.wisecampaign.org.uk/what-we-do/wise-projects/wise-network-rail-transferable-skills-mentoring-programme-2021/</a>            This program works to show participants how their transferable skills could be used within the rail industry. The program includes six months of mentoring sessions, insight from those in the rail industry and take part in networking opportunities.</p> <p>Interventions/Activities): Mentoring, networking            Which non-traditional field: STEM            Location (country): Leeds, England            Implementing organisation: WISE &amp; Network Rail</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>
199	<p><b>Trimble Women's Network</b>  <a href="https://www.trimble.com/Corporate/RCC/Communities.aspx">https://www.trimble.com/Corporate/RCC/Communities.aspx</a>            The Trimble Women's Network is a company-wide networking program aimed at connecting, supporting, and mentoring women in the workplace to increase their career growth.</p> <p>Interventions/Activities): Networking            Which non-traditional field: Software &amp; Technology            Location (country): US, New Zealand, Brazil &amp; India            Implementing organisation: Trimble</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>
200	<p><b>UNITE Women into Welding</b>  <a href="https://www.unitetheunion.org/news-events/news/2019/march/encouraging-women-to-try-welding/#">https://www.unitetheunion.org/news-events/news/2019/march/encouraging-women-to-try-welding/#</a>            This initiative gave female participants the opportunity to try MIG (metal inert gas) welding. The program was aimed to encouraging women to try welding and enable them to consider a career in the industry.</p> <p>Interventions/Activities): Workshop            Which non-traditional field: Construction            Location (country): Clydebank, Scotland            Implementing organisation: WCS Clydebank &amp; Unite Scotland</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>

	PROGRAM	Career stage
201	<p><b>Unlock employee potential through inclusion in times of change</b>  <a href="https://www.cbi.org.uk/our-campaigns/unlock-employee-potential-through-inclusion-in-times-of-change/">https://www.cbi.org.uk/our-campaigns/unlock-employee-potential-through-inclusion-in-times-of-change/</a>  A CBI campaign promoting diversity and inclusion in the workplace.</p> <p>Interventions/Activities): Consultation sessions, engagement and resource development  Which non-traditional field: Business  Location (country): UK  Implementing organisation: The Confederation of British Industry (CBI)</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth:</p>
202	<p><b>Unstoppable. Women in Construction</b>  <a href="https://construyoigualdad.fundacionlaboral.org">https://construyoigualdad.fundacionlaboral.org</a>  FLC in Spain have developed a campaign titled “Unstoppable. Women in Construction”. This campaign is a part of measures included in the Equality Plan of Fundación Laboral. These measures aim to eliminate discrimination on gender and promote equal opportunities for men and women.</p> <p>Interventions/Activities): Advocacy campaign  Which non-traditional field: Construction  Location (country): Madrid, Spain  Implementing organisation: Fundación Laboral de la Construcción (Spain)</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
203	<p><b>Vancouver Island Highway Project in Canada</b>  <a href="https://link.springer.com/content/pdf/10.1057/978-1-137-50136-3.pdf">https://link.springer.com/content/pdf/10.1057/978-1-137-50136-3.pdf</a>  The Vancouver Island Highway Project’s equity program has been lauded as “unique and stunningly successful” (Griffin Cohen &amp; Baird, 2000, p.70). This included equity hires for women, First Nations people and people with disabilities, which resulted in these groups constituting more than twenty per cent of the workforce (Griffin Cohen &amp; Baird, 2000). As the second priority area of this project, it also included a training site where these groups built a highway section as part of the training (Griffin Cohen &amp; Baird, 2000).</p> <p>Interventions/Activities): Training program  Which non-traditional field: Construction  Location (country): Canada  Implementing organisation: The Vancouver Island Highway Project</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences: ✓  Growth:</p>
204	<p><b>Warchée</b>  <a href="https://www.warchee.org/projects">https://www.warchee.org/projects</a>  Warchée began with the aim of increasing the number of women in the construction industry. Noting the rapid urbanisation in the Middle East and women's exclusion from many male dominated professions, like construction, Warchée sought to change this. They support women to pursue careers in the industry, teach them skills and help develop their confidence. They also partner with construction companies to help them recruit women.</p> <p>Interventions/Activities): Training, employment support  Which non-traditional field: Construction, architecture, urban planning  Location (country): Beirut, Lebanon  Implementing organisation: Warchée</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences: ✓  Growth:</p>

	PROGRAM	Career stage
205	<p><b>We Are Trades</b>  <a href="https://www.ccwestt.org/equity-and-the-trades/about/">https://www.ccwestt.org/equity-and-the-trades/about/</a>            We Are Trades is a pledge program for employers. It provides them with tangible steps on how to develop a safe and inclusive workplace. To do so, it guides them through the stages of "commit, create, sustain". They seek to work towards a shared vision in the industry where every person is respected and valued in the workplace.</p> <p>Interventions/Activities): Resource development, pledge process            Which non-traditional field: Construction            Location (country): Renfrew, Ontario, Canada            Implementing organisation: The Canadian Coalition for Women in Engineering, Science, Trades and Technology (CCWESTT)</p>	<p>Exploration:            Education &amp; Training:            Early Experiences: ✓            Growth:</p>
206	<p><b>WEMADEIT</b>  <a href="https://www.wemadeit.ca/about/">https://www.wemadeit.ca/about/</a>            WEMADEIT is a Canadian initiative to engage girls and young women in engineering. It is implemented between a partnership of 5 university engineering faculties. Together, these five partners have developed coordinated strategies to improve enrolment and career opportunities for women and young girls in engineering in order to achieve impact in three areas: outreach, support, networks. Expand current outreach activities undertaken at all participating consortium universities. Increase women's engagement with engineering as an area of study at the post-secondary level and demonstrate the potential career paths with an engineering degree. Enhance the success of women engineering students through better support within the university, including networking events and mentoring. Support women engineering graduates as they transition into the engineering profession workforce through industrial networks and mentorship.</p> <p>Interventions/Activities): Outreach events, summer camps, mentoring, networking            Which non-traditional field: Engineering            Location (country): Ontario, Canada            Implementing organisation: Ryerson University, Ontario Tech University, University of Waterloo, and Western University</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences: ✓            Growth:</p>
207	<p><b>WiC Employment Programme - Cambridgeshire</b>  <a href="https://www.women-into-construction.org/programmes/">https://www.women-into-construction.org/programmes/</a>            Women into Construction has partnered with Hill Group UK to implement this program. It offers women career guidance, qualification training, in-person and remote work experience placements, remote mentoring, employment training/support (CV writing, application and interview tips, and employment negotiations).</p> <p>Interventions/Activities): Career guidance, qualification training, work experience placements, mentoring, employment training/support.            Which non-traditional field: Construction            Location (country): Cambridgeshire, England            Implementing organisation: Women into Construction</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences: ✓            Growth:</p>



	PROGRAM	Career stage
208	<p><b>WiC Employment Programme – West Midlands</b>  <a href="https://www.women-into-construction.org/programmes/">https://www.women-into-construction.org/programmes/</a>            Women into Construction are offering an employment program to assist women that are looking to pursue careers in the construction industry. The program includes qualification training, mentoring, virtual work placements and employment support.</p> <p>Interventions/Activities): Qualification training, mentoring, work placements and employment support.            Which non-traditional field: Construction            Location (country): West Midlands, England            Implementing organisation: Women into Construction</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences: ✓            Growth:</p>
209	<p><b>Wiener Stadtwerke</b>  <a href="https://cms.uitp.org/wp/wp-content/uploads/2020/08/WISE-II-Brochure-English.pdf">https://cms.uitp.org/wp/wp-content/uploads/2020/08/WISE-II-Brochure-English.pdf</a>            WSTW run a Daughter's Day event every year, and partly fund doctorate college at the Technical University of Vienna (TU Vienna), focused on researching transportation, energy and similar areas. Nearly half of these students they fund are women. They also run company-wide networking for women, hold an event once a year to raise awareness about gender in the company among the executive level to ensure women aren't over looked, they have actively sought to recruit more women through changes in the recruitment activities and they offer professional development training for both women and men, as well as specific training for women as well.</p> <p>Interventions/Activities): Exposure events, educational support/outreach activities, networking, cultural change/unconscious bias sessions, recruitment practices, professional development            Which non-traditional field: Transport            Location (country): Vienna, Austria            Implementing organisation: Wiener Stadtwerke</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences: ✓            Growth: ✓</p>
210	<p><b>WING</b>  <a href="http://www.german-asa.com/projects/wing/">http://www.german-asa.com/projects/wing/</a>            WING was a pilot project established in 2011 to assist women to re-enter careers in engineering after career breaks. The program offers women training courses, such as in project management and they receive a certificate certifying them as say, poject managers, upon completion. They also have the opportunity to network.</p> <p>Interventions/Activities): Training, networking            Which non-traditional field: Engineering            Location (country): Germany            Implementing organisation: German Aerospace Academy</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth:</p>

	PROGRAM	Career stage
211	<p><b>WIR – Women in Rail project</b>  <a href="https://cms.uitp.org/wp/wp-content/uploads/2020/08/WISE-II-Brochure-English.pdf">https://cms.uitp.org/wp/wp-content/uploads/2020/08/WISE-II-Brochure-English.pdf</a></p> <p>The project developed a “Good Practices and Implementation Guide” which gives a comprehensive overview gender-based measures and strategies to be implemented to target barriers to women in transport. The purpose of this resource is to serve as guide for urban public transport companies. The resources focuses on changes companies can make in recruitment and retention.</p> <p>Interventions/Activities): Resource development  Which non-traditional field: Transport  Location (country): Europe  Implementing organisation: European Transport Workers’ Federation and Community of European Railway and Infrastructure Companies</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth: ✓</p>
212	<p><b>WISE (Women entrepreneurs in STEM) project</b>  <a href="https://stementrepreneurs.eu">https://stementrepreneurs.eu</a></p> <p>The WISE (Women entrepreneurs in STEM) project has aimed to increase the number of female entrepreneurs in STEM by improving their access to and the quality of the training they receive from entrepreneurship Vocational Education and Training (VET) institutions. The project works to address the lack of knowledge, and need for action plans and toolkits to support an increase in the number of women STEM entrepreneurs via VET education partnerships. Within the WISE project a group of female participants will take part in an apprenticeship style learning placement framework, who will experience work in a high growth STEM enterprise as a work placement.</p> <p>Interventions/Activities): Research activities, resource development, work placement  Which non-traditional field: STEM  Location (country): Norway, United Kindom, Ireland and Germany  Implementing organisation: Omagh Enterprise Company and Canice Consulting Limited from the UK, FH Münster University of Applied Sciences from Germany, European Centre for Women and Technology (ECWT) from Norway, Momentum Marketing services and Leitrim County Council from Ireland</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>
213	<p><b>WISE (Women in Solar Energy)</b>  <a href="https://www.solwomen.org">https://www.solwomen.org</a></p> <p>A not-for-profit running initiatives to advocate for women in solar energy. They offer educational sessions, capacity building activities, advocacy, networking and events.</p> <p>Interventions/Activities): Educational sessions, capacity building activities, advocacy, networking and events  Which non-traditional field: Renewable Energy  Location (country): US  Implementing organisation: WISE (Women in Solar Energy)</p>	<p>Exploration:  Education &amp; Training:  Early Experiences:  Growth: ✓</p>

	PROGRAM	Career stage
214	<p><b>WISE Engineering and You</b>  <a href="https://www.wisecampaign.org.uk/what-we-do/wise-projects/engineering-and-you/">https://www.wisecampaign.org.uk/what-we-do/wise-projects/engineering-and-you/</a>            This project aims to encourage women of all ages back into the STEM pipeline. Women at all levels of skills and backgrounds are able to take part the 3-day workshops, which help them to identify their skills and potential, gain an insight into engineering careers, develop their practical skills, and gain confidence. This helps participants learn how these skills can be applied in industry roles supports them to identify career progression and training opportunities.</p> <p>Interventions/Activities): Careers sessions, professional development workshops            Which non-traditional field: Engineering            Location (country): Leeds, England            Implementing organisation: WISE</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>
215	<p><b>Women and Manual Trades (WaMT)</b>  <a href="https://wamt.procure-plus.com">https://wamt.procure-plus.com</a>            WaMT provide support for women who are interested in a career change into the construction industry, women who are interested in training, and women who are looking to move and are after information about local employers. They provide or fund training, offer help to prepare for job interviews, toolkits, on-the-job support, networking opportunities and guidance on career development.</p> <p>Interventions/Activities): Training, employment support, resource development, on-the-job support, networking, guidance            Which non-traditional field: Construction            Location (country): Manchester, UK            Implementing organisation: Women and Manual Trades (WaMT)</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences: ✓            Growth:</p>
216	<p><b>Women at Wates Network</b>  <a href="https://www.wates.co.uk/sustainability/diversity-and-inclusion/">https://www.wates.co.uk/sustainability/diversity-and-inclusion/</a>            Wates provides networking opportunities for female staff to support them to remain in the industry.</p> <p>Interventions/Activities): Networking sessions            Which non-traditional field: Construction            Location (country): UK            Implementing organisation: Wates</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>
217	<p><b>Women Behind the Wheel</b>  <a href="https://cms.uitp.org/wp/wp-content/uploads/2020/08/WISE-II-Brochure-English.pdf">https://cms.uitp.org/wp/wp-content/uploads/2020/08/WISE-II-Brochure-English.pdf</a>            The program engages women who are looking for work and offers them training and licencing to become a bus driver.</p> <p>Interventions/Activities): Training            Which non-traditional field: Transport            Location (country): Berlin, Germany            Implementing organisation: Berliner Verkehrsbetriebe (BVG)</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences:            Growth:</p>

	PROGRAM	Career stage
218	<p><b>Women Build Nevada</b>  <a href="https://www.buildingtradejobs.org/women-build-nevada">https://www.buildingtradejobs.org/women-build-nevada</a>            The program conducts outreach, events, school tours, community partnerships, leadership training, mentoring and networking to increase the number of women in the construction industry. Women Build Nevada is part of the Northern Nevada Apprenticeship Coordinators' initiative to increase awareness of opportunities in the industry and encourage women's involvement.</p> <p>Interventions/Activities): Outreach events, school sessions, leadership training, mentoring, networking            Which non-traditional field: Construction            Location (country): Nevada, US            Implementing organisation: The Northern Nevada Apprenticeship Coordinators' Association</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth: ✓</p>
219	<p><b>Women Building Futures</b>  <a href="https://womenbuildingfutures.com/about/who-we-are">https://womenbuildingfutures.com/about/who-we-are</a>            Their mission is to enable women's economic prosperity by removing the barriers they face and providing training in construction trades, maintenance, transportation industries etc. The program primarily cater to women who are unemployed or underemployed and they focus on removing barrier such as access to affordable housing and affordable childcare. Their programs focus on awareness &amp; engagement, skills training, coaching and career support.</p> <p>Interventions/Activities): Awareness &amp; engagement, skills training, coaching and career support            Which non-traditional field: Construction, maintenance &amp; transportation            Location (country): Alberta, Canada            Implementing organisation: Women Building Futures</p>	<p>Exploration:            Education &amp; Training: ✓            Early Experiences: ✓            Growth:</p>
220	<p><b>Women Can Build</b>  <a href="https://www.womencanbuild.eu/en/the_project/">https://www.womencanbuild.eu/en/the_project/</a>            Women Can Build is a multi-country program to increase women in the construction sector. To do so, it focuses on transforming Vocational Education Training. The program has four key components, including training programs for women and for VET trainers, as well as resources developed for both the VET industry and construction companies regarding gender.</p> <p>Interventions/Activities): A training program for VET trainers, a training program for women to introduce them to construction, resource development (the development of an education roadmap for the VET industry in gender sensitivity training), resource development (an action plan for construction companies on gender competencies).            Which non-traditional field: Construction            Location (country): Spain, Italy, Portugal, Belgium, Germany &amp; France            Implementing organisation: Fundación Laboral de la Construcción (Spain) and EU</p>	<p>Exploration: ✓            Education &amp; Training: ✓            Early Experiences: ✓            Growth:</p>
221	<p><b>Women Can Do</b>  <a href="https://www.vtworksforwomen.org/programs">https://www.vtworksforwomen.org/programs</a>            Women Can Do is a week of career exploration activities and events for high school aged girls and gender non-conforming youth</p> <p>Interventions/Activities): Career exploration sessions            Which non-traditional field: STEM and non-traditional occupations            Location (country): Vermont, US            Implementing organisation: Vermont Works For Women</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>

	PROGRAM	Career stage
222	<p><b>Women Empowerment Programme</b>  <a href="https://www.campaign.nhbrc.org.za/women-in-business/">https://www.campaign.nhbrc.org.za/women-in-business/</a> ,  <a href="http://www.crown.co.za/reader/housinginsa/2014/November/files/assets/comm on/downloads/page0033.pdf">http://www.crown.co.za/reader/housinginsa/2014/November/files/assets/comm on/downloads/page0033.pdf</a></p> <p>The Women Empowerment Programme, created in partnership between NHBRC and the Gordon Institute of Business Science's Enterprise Academy seeks to empower women to further grow their enterprises. In WEP, participants attend a four-month academic program that includes training from leading academics and industry experts, which is then followed by a mentorship program. By the end of the 4 months, participants are expected to have developed a detailed business plan and these are assessed for revenue growth. Lauded as a success within the Women Empowerment Programme receiving an award for "the Most Innovative Training Programme" at the Women in Construction Awards. Over 300 women have gone through the program.</p> <p>Interventions/Activities): 4 month academic training, 5-6 months of mentoring &amp; support sessions  Which non-traditional field: Construction  Location (country): Johannesburg, South Africa  Implementing organisation: National Home Builders Registration Council (NHBRC) &amp; The Gordon Institute of Business Science (GIBS) Enterprise Development Academy (EDA)</p>	<p>Exploration:  Education &amp; Training:  Early Experiences:  Growth: ✓</p>
223	<p><b>Women Go Tech</b>  <a href="https://womengotech.com/about-the-program/">https://womengotech.com/about-the-program/</a></p> <p>Women Go Tech a first of its kind mentoring program in Lithuania. It aimed at encouraging women to discover and develop careers in tech-related jobs. The program was launched in 2016.</p> <p>Interventions/Activities): Mentoring, networking, workshops, events  Which non-traditional field: Technology  Location (country): Vilnius, Lithuania  Implementing organisation: INFOBALT association and Global Shapers Vilnius</p>	<p>Exploration:  Education &amp; Training:  Early Experiences:  Growth: ✓</p>
224	<p><b>Women in Cleantech &amp; Sustainability (WICS)</b>  <a href="https://www.womenincleantechsustainability.org">https://www.womenincleantechsustainability.org</a></p> <p>WICS work to develop network of professional women to increase the number of women in the green economy.</p> <p>Interventions/Activities): Networking, mentoring  Which non-traditional field: Renewable Energy  Location (country): US  Implementing organisation: Women in Cleantech &amp; Sustainability (WICS)</p>	<p>Exploration:  Education &amp; Training:  Early Experiences:  Growth: ✓</p>

	PROGRAM	Career stage
225	<p><b>Women in Construction</b>  <a href="https://www.leicester.gov.uk/your-council/our-jobs-and-careers/women-in-construction/">https://www.leicester.gov.uk/your-council/our-jobs-and-careers/women-in-construction/</a>  The city council actively encourages women into housing craft trades, where they are under-represented. For the past 25 years, the council has run a free Women In Construction taster course, open to any woman over 16, where they can come and have a go at trades such as plumbing, painting and decorating or plastering. This has been a successful way to encourage women to think about an apprenticeship. The council currently has 51 women employed in craft trades, with another 15 undertaking apprenticeships. The program has been praised by British politician as "best practice".</p> <p>Interventions/Activities): Workshops, Careers sessions  Which non-traditional field: Construction  Location (country): Leicester, England  Implementing organisation: Leicester City Council</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
226	<p><b>Women in Construction Arts and Technology Ltd</b>  <a href="http://www.wicat.org.uk">http://www.wicat.org.uk</a>  Offers programs in non-traditional trades</p> <p>Interventions/Activities): Training program  Which non-traditional field: Construction  Location (country): Sheffield, UK  Implementing organisation:</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>
227	<p><b>Women in Construction Operations</b>  <a href="https://wiops.org/about-us/">https://wiops.org/about-us/</a>  Women in Construction Operations seeks to empower and advance women in construction via mentoring, education and networking.</p> <p>Interventions/Activities): Networking, professional development events, mentoring  Which non-traditional field: Construction  Location (country): US  Implementing organisation: Women in Construction Operations</p>	<p>Exploration:  Education &amp; Training:  Early Experiences:  Growth: ✓</p>
228	<p><b>Women in Construction Site World Series Online Festival</b>  <a href="https://www.womeninconstructionsummit.com/">https://www.womeninconstructionsummit.com/</a>  A series of virtual events for professional development and networking, focusing on the intersection of the construction and technology industries.</p> <p>Interventions/Activities): Networking, professional development events  Which non-traditional field: Construction  Location (country): Online  Implementing organisation: Women in Construction</p>	<p>Exploration:  Education &amp; Training:  Early Experiences:  Growth: ✓</p>

	PROGRAM	Career stage
229	<p><b>Women in Constructionarium</b>  <a href="https://equatescotland.org.uk/attracting-women-construction/">https://equatescotland.org.uk/attracting-women-construction/</a>            Women in Constructionarium was established in 2019 and has now been run for the 2nd year in a row, with Equate Scotland, Constructionarium Scotland, CiTB, Sibbald and AECOM collaborating to provide a practical onsite learning experience for women students. Women students attended from 11 different universities and colleges studying a range of built environment subjects. In teams, they each built a working wind turbine in 3 days women who are professionals in the industry.</p> <p>Interventions/Activities): Workshops            Which non-traditional field: Construction            Location (country): Glasgow, Scotland            Implementing organisation: Equate Scotland, Constructionarium Scotland, CiTB, Sibbald and AECOM</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
230	<p><b>Women in Energy</b>  <a href="https://getintoenergy.com/wp-content/uploads/2021/01/CEWD-Women-Handout.pdf">https://getintoenergy.com/wp-content/uploads/2021/01/CEWD-Women-Handout.pdf</a>            Building awareness about careers in the energy sector.</p> <p>Interventions/Activities): Resource development            Which non-traditional field: Energy            Location (country): Washington, US            Implementing organisation: Center for Energy and Workforce Development (CEWD)</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences:            Growth:</p>
231	<p><b>Women in Rail</b>  <a href="https://cms.uitp.org/wp/wp-content/uploads/2020/08/WISE-II-Brochure-English.pdf">https://cms.uitp.org/wp/wp-content/uploads/2020/08/WISE-II-Brochure-English.pdf</a>            Women in Rail is a charitable organisation founded in 2012 with the aim of creating greater gender balance and helping to bridge the skills gap in the UK railway sector. They do this by supporting women in the industry, promoting jobs in rail as career options to girls and working to encourage stakeholders to adopt diversity initiatives.</p> <p>Interventions/Activities): Networking, workshops to address barriers to women, mentoring, and outreach events at schools, colleges and universities, stakeholder engagement            Which non-traditional field: Transport            Location (country): London, England            Implementing organisation: Women in Rail</p>	<p>Exploration: ✓            Education &amp; Training:            Early Experiences: ✓            Growth:</p>
232	<p><b>Women in Renewable Energy (WiRE)</b>  <a href="https://www.womeninrenewableenergy.ca">https://www.womeninrenewableenergy.ca</a>            WiRE support women in renewable energy through capacity building, networking and mentoring activities.</p> <p>Interventions/Activities): Capacity building, networking mentoring            Which non-traditional field: Renewable Energy            Location (country): Worldwide            Implementing organisation: Women in Renewable Energy (WiRE)</p>	<p>Exploration:            Education &amp; Training:            Early Experiences:            Growth: ✓</p>

	PROGRAM	Career stage
233	<p><b>Women in Science and Engineering (WISE)</b>  <a href="https://www.wisecampaign.org.uk/what-we-do/">https://www.wisecampaign.org.uk/what-we-do/</a>  The WISE campaign runs a range of programs to improve the gender balance in STEM. These include the 'ten steps' on diversity and inclusion, unconscious bias training, mentoring, leadership development and have developed a resource to attract young girls to consider careers in STEM.</p> <p>Interventions/Activities): ten steps programme' for diversity and inclusion, unconscious bias training, mentoring programmes, leadership development, resource development  Which non-traditional field: STEM  Location (country): Leeds, UK  Implementing organisation: WISE</p>	<p>Exploration: ✓  Education &amp; Training: ✓  Early Experiences: ✓  Growth: ✓</p>
234	<p><b>Women in Trades</b>  <a href="https://www.women-into-construction.org/programmes/">https://www.women-into-construction.org/programmes/</a>  Women into Construction have partnered with Ixion and Places for People to run this 7-week “Women in Trades” program. The program includes: initial remote training, followed by 70hr work placements, qualifications in construction and in foundational skills (english and maths), the opportunity to continue onto an apprenticeship, industry expert sessions and a toolkit resource.</p> <p>Interventions/Activities): Training, work placements, construction and educational qualifications, industry expert sessions and resource development (toolkit).  Which non-traditional field: Construction  Location (country): UK  Implementing organisation: Women into Construction</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>
235	<p><b>Women in Trades</b>  <a href="https://ako.ac.nz/assets/Knowledge-centre/What-are-the-characteristics-of-an-effective-learning-journey-for-women-entering-trades/Part-1-Research-Programme-Overview.pdf">https://ako.ac.nz/assets/Knowledge-centre/What-are-the-characteristics-of-an-effective-learning-journey-for-women-entering-trades/Part-1-Research-Programme-Overview.pdf</a>  Women in Trades is a three-year research project focused on increasing the involvement and success of women in construction and engineering related trades. It aims to gain an understanding of the barriers to women entering these industries and this will inform pilot projects that they run to address this.</p> <p>Interventions/Activities): Research activities  Which non-traditional field: Construction and engineering  Location (country): New Zealand  Implementing organisation: The Ministry for Women and Ako Aotearoa</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences: ✓  Growth:</p>
236	<p><b>Women in Trades</b>  <a href="https://www.womenintradesnz.com/about-us">https://www.womenintradesnz.com/about-us</a>  NFP that promotes trades and associated training as viable career options for women. They provide networking and resources.</p> <p>Interventions/Activities): Resource development, advocacy, networking  Which non-traditional field: Construction  Location (country): New Zealand  Implementing organisation: Women in Trades</p>	<p>Exploration: ✓  Education &amp; Training: ✓  Early Experiences: ✓  Growth:</p>



	PROGRAM	Career stage
237	<p><b>Women in Welding Program</b>  <a href="https://cwit.org/trade-programs/women-welding-program">https://cwit.org/trade-programs/women-welding-program</a>  A training program to build skills in manufacturing, welding and metalworking construction trades.</p> <p>Interventions/Activities): Training program  Which non-traditional field: Construction  Location (country): Chicago, US  Implementing organisation: Chicago Women in Trades</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>
238	<p><b>Women into Construction with West London College</b>  <a href="https://www.women-into-construction.org/programmes/">https://www.women-into-construction.org/programmes/</a>  This program seeks to engage unemployed women into the construction industry. It includes 2-week work placements, employability training (CV writing &amp; interview tips), qualification training, and job application support. The program also includes childcare.</p> <p>Interventions/Activities): Work placements, employability training, qualification training, and employment support.  Which non-traditional field: Construction  Location (country): West London, England  Implementing organisation: Women into Construction</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences: ✓  Growth:</p>
239	<p><b>Women into Construction with Willmott Dixon</b>  <a href="https://www.women-into-construction.org/programmes/">https://www.women-into-construction.org/programmes/</a>  This program is sponsored by Willmott Dixon. It is a 6-week program which seeks to engage unemployed women wanting to work in trade and site-based positions. The program includes work placements, employability training (CV writing &amp; interview tips), qualification training, career guidance and job application support.</p> <p>Interventions/Activities): Work placements, employability training, qualification training, career guidance and employment support.  Which non-traditional field: Construction  Location (country): England  Implementing organisation: Women into Construction</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences: ✓  Growth:</p>
240	<p><b>Women into Transport and Engineering – London</b>  <a href="https://www.women-into-construction.org/programmes/">https://www.women-into-construction.org/programmes/</a>  This program aims to engage unemployed women who are looking to begin a career in transport and engineering. It involves employability training, such as CV writing and interview skills, work experience, information on career pathways and follow-up support with job applications.</p> <p>Interventions/Activities): Employability training, work experience, career guidance and employment support.  Which non-traditional field: Construction  Location (country): England  Implementing organisation: Women into Construction</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences: ✓  Growth:</p>
241	<p><b>Women of the Future Ambassadors Program</b>  <a href="https://ambassadors.womenofthefuture.co.uk/programme-activity/">https://ambassadors.womenofthefuture.co.uk/programme-activity/</a>  Women of the Future Ambassadors program provides school visits, networking and events for career advice and inspiration.</p> <p>Interventions/Activities): School visits, networking, career advice sessions  Which non-traditional field: multiple industries  Location (country): UK  Implementing organisation: WOF</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>

	PROGRAM	Career stage
242	<p><b>Women with Drive</b>  <a href="https://cms.uitp.org/wp/wp-content/uploads/2020/08/WISE-II-Brochure-English.pdf">https://cms.uitp.org/wp/wp-content/uploads/2020/08/WISE-II-Brochure-English.pdf</a>  This program offers training to women with experience in bus driving but who are looking for work and allows them to upskill.</p> <p>Interventions/Activities): Training  Which non-traditional field: Transport  Location (country): Berlin, Germany  Implementing organisation: Berliner Verkehrsbetriebe (BVG)</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences:  Growth:</p>
243	<p><b>WOMEN-CORE Project</b>  <a href="https://cordis.europa.eu/project/id/17568">https://cordis.europa.eu/project/id/17568</a>  The EU-funded project 'Women in construction scientific research' (Women-Core) was a research program that took place between 2006-2008. It was aimed at developing women in construction research. It also analysed policies focused on to attracting, retaining and promoting women in research, including quotas for gender equality. WOMEN-CORE a lack of workplace flexibility, lower seniority and a lack of role models affects women career growth, which leads them more to academic environments instead. They also found that emerging, multidisciplinary fields, i.e. with environmental and socially sensitive issues, can be ideal for women in this area.</p> <p>Interventions/Activities): Research activities  Which non-traditional field: Construction  Location (country): Spain, Germany, Denmark, UK, &amp; Czech Republic  Implementing organisation: Fundación Labien (Spain)</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth: ✓</p>
244	<p><b>Women's TEC</b>  <a href="http://www.clanmil.org/employability">http://www.clanmil.org/employability</a>  This program has aimed to give people , mainly women, who having difficulty finding employment the opportunity to develop skills through accredited training, which will aid their ability to secure work. The program includes series of taster sessions to teach tenants of Clanmil DIY skills, which allow them to fix things around the home. From this taster, participants can progress into accredited training and employment. The program was able to get subsequent funding and was able to reach 500 tenants.</p> <p>Interventions/Activities): Workshops, training  Which non-traditional field: Construction  Location (country): Belfast, Ireland  Implementing organisation: Clanmil Housing Association</p>	<p>Exploration: ✓  Education &amp; Training: ✓  Early Experiences:  Growth:</p>
245	<p><b>Work It Out Programme</b>  <a href="https://www.wates.co.uk/articles/news/young-womens-trust/">https://www.wates.co.uk/articles/news/young-womens-trust/</a>  A partnership between Young Women's Trust and Wates to encourage more pursue careers in the industry. This involves receiving advice, CV feedback, interview tips, as well as a work experience programme through Wates.</p> <p>Interventions/Activities): Employment support sessions and work experience  Which non-traditional field: Construction  Location (country): UK  Implementing organisation: Wates &amp; Young Women's Trust</p>	<p>Exploration:  Education &amp; Training: ✓  Early Experiences: ✓  Growth:</p>

	PROGRAM	Career stage
246	<p><b>Workplace Respect Handbook</b>  <a href="https://www.coaa.ab.ca/COAA-Library/WFD-WRS-PRC-01-2011-v1%20Workplace%20Respect%20Handbook.pdf">https://www.coaa.ab.ca/COAA-Library/WFD-WRS-PRC-01-2011-v1%20Workplace%20Respect%20Handbook.pdf</a>  Resource to aid retention and maintain a respectful workplace.</p> <p>Interventions/Activities): Resource development  Which non-traditional field: Construction  Location (country): Alberta, Canada  Implementing organisation: Construction Owners Association of Alberta</p>	<p>Exploration:  Education &amp; Training:  Early Experiences: ✓  Growth:</p>
247	<p><b>Young Builder's Network</b>  <a href="http://www.construction-for-youth.eu/en/initiatives/lv--young-builders-network.aspx">http://www.construction-for-youth.eu/en/initiatives/lv--young-builders-network.aspx</a>  This program involved creating a non-formal youth group, called "Pilons". The group then visited a number of different professional schools in different regions to develop students' communication and creativity. These groups were then tasked with brainstorming ways to improve the image of the construction industry. A few of the students then went on to attend a regional camp where they designed educational material for other students and which was presented to the Ministry of Education and industry stakeholders.</p> <p>Interventions/Activities): Youth group sessions, school visits, program design workshop, camp , resource development  Which non-traditional field: Construction  Location (country): Latvia  Implementing organisation: LCA - Latvian Builders Trade Union</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
248	<p><b>Youth in Construction</b>  <a href="http://www.youthinconstruction.co.za/index.php?ct=about">http://www.youthinconstruction.co.za/index.php?ct=about</a>  Gauteng YIC started in 2008 as a pilot project. The program focuses on the development of skills required for the Government's planned infrastructure investments. YIC's objective is to expose participants to construction careers and offer them advice on the steps to take to get there.</p> <p>Interventions/Activities): Exposure workshops and career guidance sessions  Which non-traditional field: Construction  Location (country): South Africa  Implementing organisation: The Construction Industry Development Board (CIDB), the South African Federation of Civil Engineering Contractors (SAFCEC), The South African Institute of Civil Engineers (SAICE), the Gauteng Master Builders Association (GMBA), the Gauteng Marketing Forum and the Sci-Bono Discovery Centre.</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>
249	<p><b>Z Wie Zimmerer (Z Like Carpenter)</b>  <a href="http://www.holzbau-online.de">www.holzbau-online.de</a>  This is a campaign targeting students in their last year of school to inform them about carpentry apprenticeships. The campaign's main feature is a website that explains work practices during and after apprenticeships. The website provides opportunities, including apprenticeships, internships and full-time work. After the website's launch, a trade-fair stand was also developed.</p> <p>Interventions/Activities): Awareness campaign, resource development (website), trade fair stand  Which non-traditional field: Construction  Location (country): Germany  Implementing organisation: Holzbau Baden-Württemberg</p>	<p>Exploration: ✓  Education &amp; Training:  Early Experiences:  Growth:</p>