



STEM: The Hidden Workforce

STEM Returners Survey
2020



STEM Returners was created as a pilot project for a small number of engineering companies in 2017 in response to a growing skills gap at the mid-career level and a lack of progress in diversity. We have now successfully returned over 150 engineers across the UK to their prior profession. We have worked with like-minded employers, small and large, to remove the barriers that returners face, tackle unconscious bias and challenge a broken recruitment system that undervalues experienced hires due to a career break. This report seeks to understand these barriers further by asking those attempting to return, and those who have successfully returned, about their experience of trying to re-enter a sector that desperately needs their skills and experience.



On diversity, whilst employers responded that they were taking positive action to attract more women to their workforce, it found that fewer than 1 in 10 engineering companies were taking any action to attract minority ethnic groups or LGBT diversity to their organisations.

The Royal Academy of Engineering estimates that engineering employers will need to recruit 182,000 engineers annually and suggests that the UK would need to double its recruitment of graduates and apprentices to meet the shortfall.



The IET's most recent Skills & Demand in Industry survey reported that, despite various early career initiatives and investment, the engineering skills gap continues to be a huge problem for engineering employers, with the expectation that it will worsen when the UK leaves the European Union.

61% of employers surveyed within the report said attracting the right skills was their biggest challenge in hitting their business objectives over the next 3 years



*IET Skills and Demand in industry Survey

*Diversity Programme Report - Royal Academy of Engineering



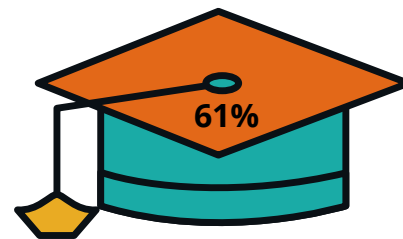
We believe another action must be to attract the thousands of experienced engineering returners that have left the industry. The report suggests that the scale of the demand, coupled with a current engineering workforce that is 92% male and 94% white, creates an imperative for action to increase diversity within engineering at all levels.

Further statistics provided within the report suggest that although women make up 51% of the working age population, they only account for 8% of professional engineers (and 46% of all STEM Returners). Despite 26% of UK domiciled engineering students coming from minority ethnic backgrounds, this translates to only 6% of engineers in the sector (and 34% of all STEM Returners).

The experience of our graduate returners is closely aligned to the research conducted by the Royal Academy of Engineering which found that unemployment is relatively high in engineering in comparison to all other graduates (despite the widely communicated need for more engineering graduates). The research also found that a higher proportion of unemployed engineering graduates are from a minority ethnic background and most are likely to be male. Of the graduate returners that we surveyed who had not managed to start their career, 64% were from minority ethnic backgrounds and 82% were male which corroborates the Academies research.

We have learned there is no such thing as a standard returner. People take career breaks for a variety of reasons including maternity or caring responsibilities, physical health, mental health, personal circumstances, redundancy, relocation and sometimes choice. We are also routinely working with a lost group of graduates who have chosen engineering as their vocation but despite gaining a degree, have not managed to join the industry. Talent is being wasted in part time roles outside of the industry despite the growing skills gap we all share.

We have also found that if a graduate is unsuccessful in securing a position the year of graduating, year on year, it becomes more difficult for them as their degree and experience becomes dated. In fact, 15% of all returners we surveyed were graduates who hadn't managed to start a career in engineering at all. Many citing they either didn't receive a response to applications, or that they found it personally difficult to perform in a "one size fits all" assessment centre process. As discussed later in the report, a disproportionate number of these graduates are from a minority ethnic background. The report will focus on the returner perspective and show an industry which is inaccessible to most returners. Analysing the response of over 350 returners, it will show that despite 81% of returners having either a Bachelors, Masters or Doctorate level degree, being very active (61% applying for more than 20 engineering roles) they have still been unsuccessful through standard recruitment channels. 63% of returners believe the biggest barrier is bias in the recruitment process and 85% of returners feel that they 'definitely have' or 'may have' been the victim of direct bias.



**of returners apply for 20+
engineering roles through
standard recruitment**



STEM Returners, in partnership with Women's Engineering society, partners with employers to attract highly skilled returners back after a career break and enables highly qualified and experienced candidates to restart their career in a supported way. Women's Engineering Society (WES) has been working to inspire women and increase diversity in engineering for over 100 years.



STEM Returners, WES and our partner employers share a common objective of increasing the representation of underrepresented groups in STEM and ensuring that those who have left STEM are able to return to a flexible, supported, and inclusive environment. We also support degree qualified engineers who are struggling to start their career and face the same barriers as our career break returners.

The STEM Returners programme seeks to achieve the following:

- Increase the number of mid- senior career engineers
- Increase the number of female engineers and engineers from minority ethnic backgrounds
- Attract and re-train engineers from other industries
- Engage the majority in understanding the benefits of diversity and inclusion
- Raise awareness of the impact of unconscious bias and how to mitigate its effects
- Promote good practice in inclusive recruitment

The key barrier to returning to engineering after a career break is the perception of recruiters and hiring managers, that a CV gap automatically equates to a deterioration of skills. Simply put, these CV's will seldom find their way through companies' standard recruitment channels. Based on our research we have found that career gaps, explained or otherwise, feed into unconscious bias at the shortlist stage. Hiring pressures mean that CV's are reviewed quickly, and assumptions and decisions are made on limited information. It is not hard to see why when compared to non-career break CV's those looking to return generally fall through the gaps of the hiring process.

Recruitment agencies are paid to find the 'best' candidate for the job in the least amount of submissions possible (thus giving some time back to the hiring manager), this focus of creating a shortlist of their 'top 3' candidates creates an unequal opportunity to returners. The way job specifications are written, the inclusion of long lists of essential criteria, usually requesting recent or current experience also means that many employers are not attracting returners in the first place.

This is a waste of talent; it leads to returning engineers working either below their capability (or in an entirely different profession) and has long term implications on the engineering talent pipeline.

As demonstrated by the survey results within this report, the secondary benefits of hosting returners are the attraction of a pool of available candidates which can't be sourced via standard recruitment methods, the attraction of engineers with experience from different sectors, and the provision of a mechanism to attract, recruit and re-train mid-career transferees.



Although returners acquire multiple skills on career breaks (such as organisation and project management), they often find it difficult to articulate their value to employers within a work environment. Most have tried very hard to return, applying for multiple vacancies, and being routinely rejected until it impacts their confidence or desire to rejoin and they stop trying. A returners programme helps returners transition effectively back to the workplace by providing a route back in, support and mentoring to increase confidence, and an opportunity to update their skills and knowledge. The returnees also have the opportunity of securing a contract or permanent position at the end of the programme, as well as significantly increasing their professional networks.



I left a career in the semiconductor industry 20 years ago and wanted to get back in touch with technology. The STEM Returners programme is very well run and dedicated to finding opportunities for people with different backgrounds.

Ann Stanhope, STEM Returner
Dstl



We received over 350 responses to our Returner survey from returners who were either currently looking to return or had recently been successful in rejoining the industry.

So, what does the Returner engineering talent pool look like?

Gender:



Within engineering, the image of a returner being a returning mum is only a small part of the story. Returners have multiple reasons for taking career breaks and the majority are not gendered. The introduction of shared parental leave means that parenting and caring responsibilities are starting to be shared. However, from a diversity perspective, it is interesting to note that 46% of engineering returners are female, which in comparison to an engineering female workforce of 8% shows the scale of opportunity missed by not attracting returners, particularly as most will have taken a career break at a senior or management level where the percentage of females falls again.

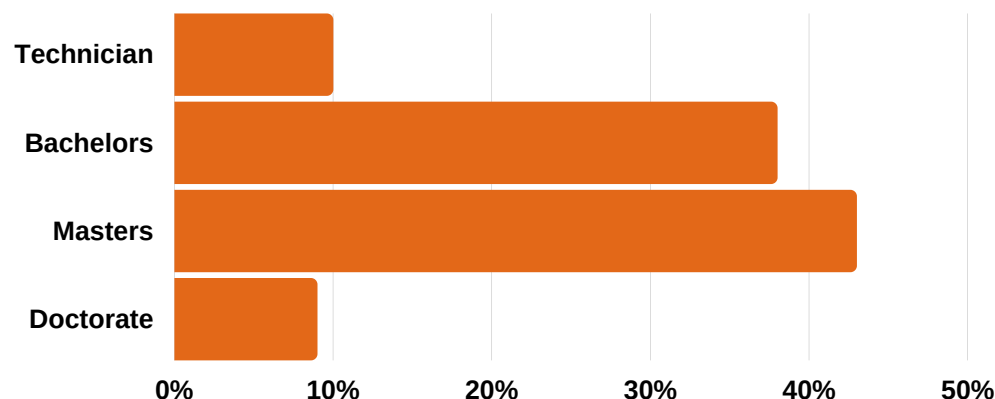
Race/ Ethnicity:

34% of returners are from ethnic minority backgrounds. Again, the percentage seems disproportionate when compared to the 6% of minority ethnic engineers who are working in industry. At graduate level, the number disproportionately increases again.

64% of all graduates who have applied for recent STEM Returner direct entry graduate campaigns are from ethnic minority backgrounds, suggesting that those graduates face additional barriers at entry level.

In addition, candidates with international experience or education, particularly refugees, find it very difficult to transfer their skills and experience to UK engineering.

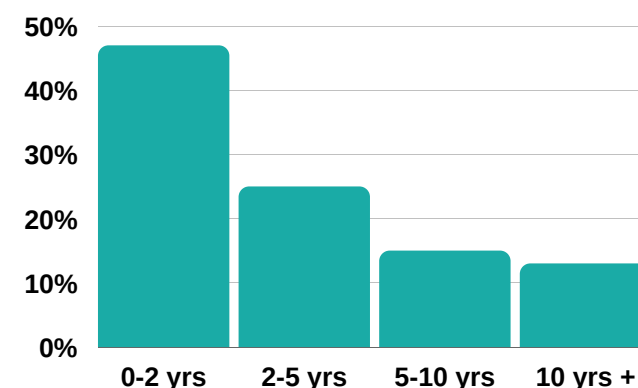
Education:



90% of all STEM Returners are educated to a Bachelors, Masters or PhD level. We have found that mature students find it very difficult to re-enter engineering in a different discipline, particularly those who have completed an apprenticeship and have a technician background prior to obtaining a degree, or those who have transferred from the military and obtained a degree to retrain. Candidates with a PhD also find it difficult to start their career, rejections received by PhD returners includes being over-qualified for graduate roles, experience viewed as too research based or a lack of hands-on engineering experience. Of all the PhD students we have worked with, all expected their PhD to significantly increase their opportunities of gaining a position but in these cases, it seemed to have the opposite effect.

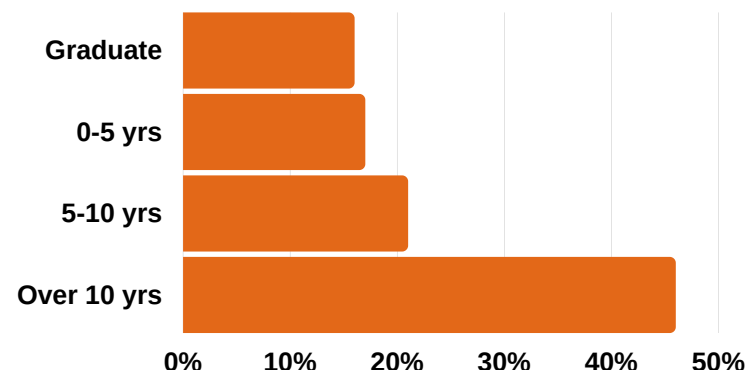
Career break length:

One of the biggest barriers to returners is the perception by employers that a career break relates to a deterioration of skills, in every case, we have found this not to be true.



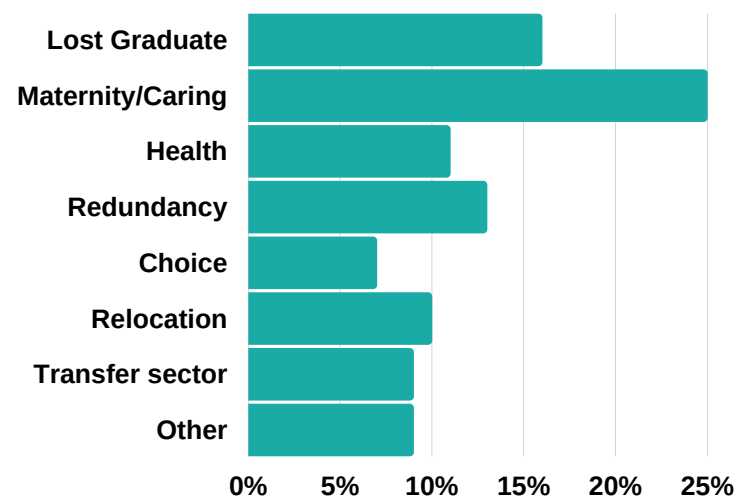
Returners have amassed many skills whilst on their career break which are valuable to their new employer, have generally kept themselves up to date with the industry throughout their break, and quickly refresh their skills when back in a work environment. It is also interesting to note that almost half of returners have had a career break of only 0-2 years yet are still struggling to return. The second biggest percentage of returners have had only a break of up to 5 years. The difficulty a returner has experienced in returning is closely correlated to their length of break. 15% of our placed returners had a career break of over 5 years and 13% of returners had a career break of over 10. All have successfully managed to use the 12 week period to refresh their skills, increase their confidence to demonstrate their competence to be offered a permanent position.

Years of experience:



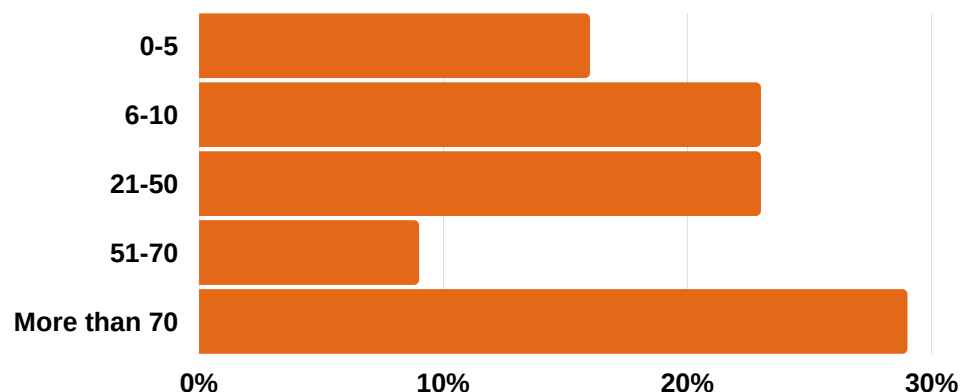
67% of Returners amassed either 5-10 years' or over 10 years' experience before they took their career break. These returners fall into the mid-career bracket of senior and principal engineers and middle managers, where the skills gap within STEM is even higher. Successfully returning candidates at a mid-career level also has a positive effect on leadership diversity and the gender pay gap. 17% of returners had up to 5 years' experience before their break and re-entered at a lower level. 16% of all placed returners were graduates who had graduated within the last 5 years but never managed to start their career.

Reasons for a career break:



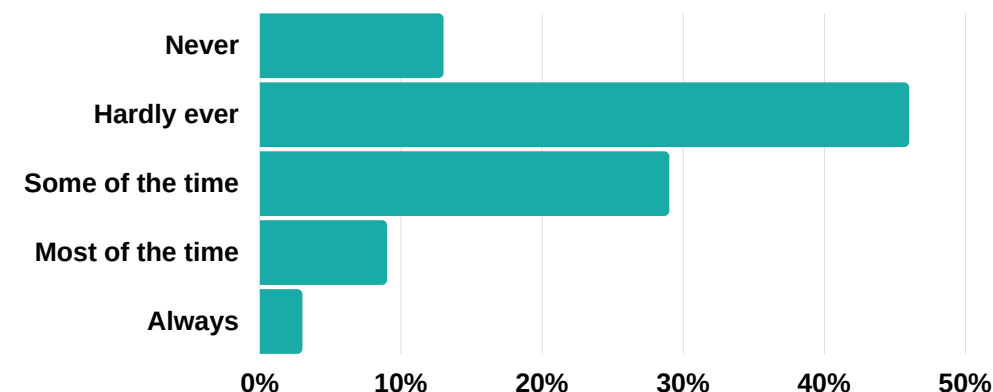
People take career breaks for a huge variety of reasons, some through choice and some through circumstance. Of our returner community, 16% of our returners haven't managed to start their chosen career- they are the lost graduates who are qualified but have fallen foul of the recruitment system and are working part time in retail, hospitality or other sectors. The highest group of returners (25%) are looking to return from maternity or caring, those mums, dads and carers who either decided to take extended maternity leave or to care for a family member and were only expecting to pause their career for a short time. 11% of our placed returners took a career break for health reasons and 13% are looking to return after redundancy. 10% of returners are trying to return after a relocation, either domestically or internationally, and this would also include refugee returners who are highly skilled and looking to restart their career in the UK. 9% of returners are actively trying to transfer industry. This means that they have moved into a different industry and are looking to return to their core vocation. Other reasons included leaving employment to take up further education and family bereavement.

Q How many jobs have you applied for through standard recruitment channels?



Returners fall foul of a broken recruitment system. The bias built into the system means that candidates with a career break are routinely filtered out of the process at application stage when compared to other applicants without a career break. When reviewing applications through standard recruitment channels, they simply seldom make the shortlist and the length of the break appears to increase the likelihood of rejection at application stage. Returners initially try hard to return, they engage with industry, make connections, and apply for various positions. The more applications they make with either a negative, or worse, no response, means that they become disengaged and stop applying to an industry that they perceive does not value their skills. 61% of all returners have applied for more than 20 STEM vacancies and 29% had applied for more than 70.

Q Of these applications, how often did you receive feedback?

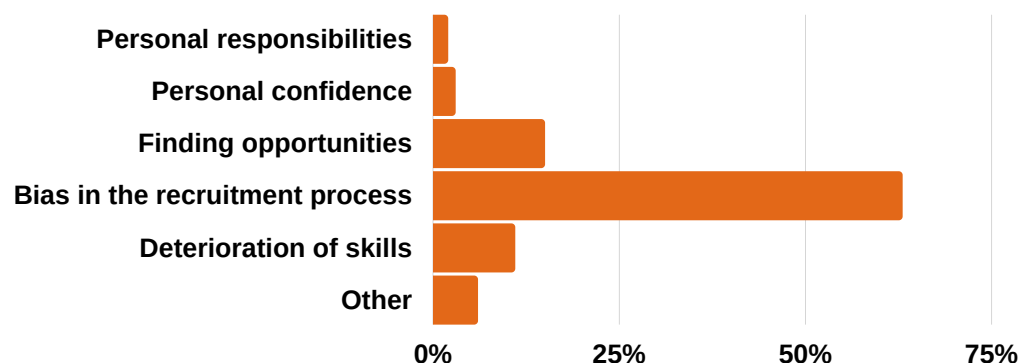


It is not hard to see why returners quickly become disengaged and lose confidence in their return when faced with the statistics of how often they receive a response. We know that 61% of returners apply for more than 20 different jobs, and of these 59% either 'never' or 'hardly ever' received a response. 29% reported that they sometimes received a response and only 3% of returners said that they always received a response.

Q What do you think has been your biggest barrier to returning?

Based on their personal experience of attempting to return, 63% of returners believe that their biggest barrier is bias in the recruitment process.

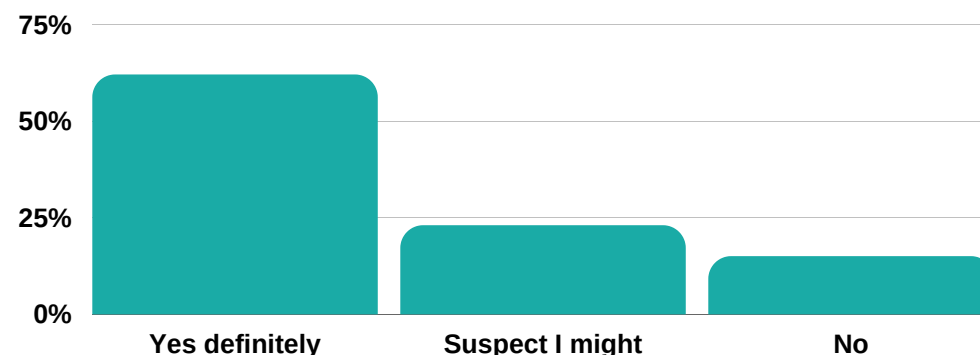
This is a really concerning statistic based on the returners personal experience of attempting to return to industry. On further questioning the returners perceptions had been based on never receiving feedback, not being called forward for interview or being directly told that their career break made them ineligible to apply due to a lack of 'recent applicable experience' or that they lack 'UK experience'.



Q Do you feel that you have personally experience bias?

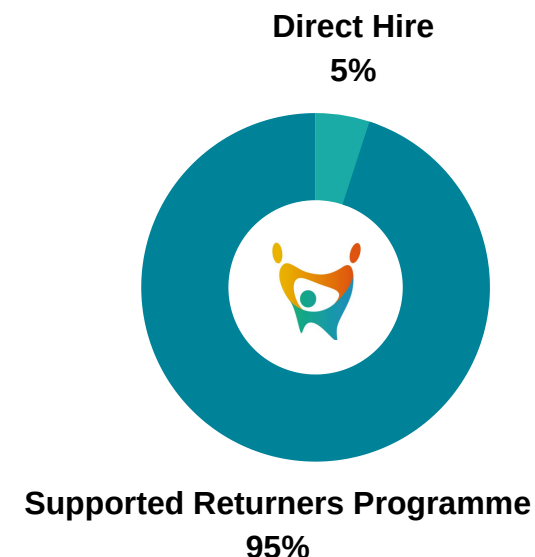
85% of all returners felt that they had either 'definitely' or 'possibly' been a victim of direct bias in their return journey.

Bearing in mind the huge number of reasons that people take career breaks, the reasons behind these perceived biases will be vast and attributed to various protected characteristics. A startling statistic for an industry that is attempting to make strides in diversity and inclusion. We had a high number of returners note that they felt their age was negatively impacting on their ability to return, particularly those looking to return from redundancy.



Q Would you rather return via a returners programme or a direct hire route?

95% of returners felt that they would rather return via a returners programme. They felt that entering via this route leveled their experience and gave them a greater opportunity to be successful. Providing a softer and supported return also allowed them to increase their confidence and refresh their skills for a period, without feeling overwhelmed by the pressure of attempting to hit the ground running. It also allowed returners to manage home responsibilities and childcare whilst transitioning to being back in a work environment. The most important variable of a returners programme is removing the barriers of application, the key issue is returners being filtered out at application stage when compared to other applicants without a career break.



Q Have you applied for or seen any other returner opportunities in STEM?

For 92% of returners the STEM Returners programme was the first opportunity that they had seen to return to STEM through a returners route. Although returners programmes are well established in some sectors, they are very new within STEM. Although more companies are starting to run programmes, there are still far more returners looking to return than opportunities to do so. All the current Returners programmes that STEM Returners are running are hugely over-subscribed, even within niche and skills short disciplines such as Electrical and Software Engineering.



Q Do you feel that a returners programme gave you the opportunity to permanently return?



100%

We passionately believe that we should be giving all returners a permanent opportunity to return. Whilst work experience is valuable, a returner programme without an ongoing position puts the returner back in the same position at the end, albeit with some recent work experience. It also feeds into bias when employers question why returners were not offered a permanent role, even if one was never available.

Of all of our placed returners, 96% have gone into permanent positions with their host employer.

Whilst companies are not obligated, and it is based on the performance of the returner, aiming to bring returners in permanently to fill needed skills short roles also responds to a business need as well as a diversity and inclusion initiative.

Q Are you glad you made the decision to return?



100%

The experience of all our returners who have been placed permanently has been a positive one and we are thankful to the dedication, commitment, and support of our partner organisations. Thanks to them, 156 returners are now returned to an industry that desperately needed their skills. Many have been promoted in to senior and management roles and some have already become clients, running their own returners programmes and providing the opportunity to return that they valued.

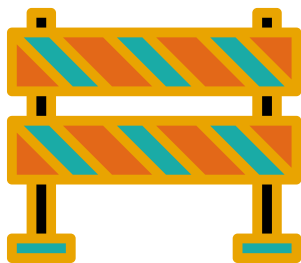
Nearly two thirds (63%) of returners feel their key barrier to return is bias in the recruitment process and 8 out of 10 (85%) fear that they have or may have been the victim of direct bias.

When faced with the statistics in this report it is hard to deny the industry has a problem. The barriers faced by returners disproportionately affect female engineers who are still responsible for the majority of childcare and caring responsibilities. It shows a disproportionate impact on engineers from ethnic minorities, particularly refugees, and suggests there are additional barriers at entry level to graduates from ethnic minority backgrounds.

We also know that 11% of returners have taken a career break due to health or a disability. Anecdotally, many returners, particularly those returning from redundancy, perceived that they were overlooked due to age. These are startling statistics and pose the question of what industry is going to do to tackle this perceived bias. Changing this reality is vital not only as an attraction tool but also as a retention one.

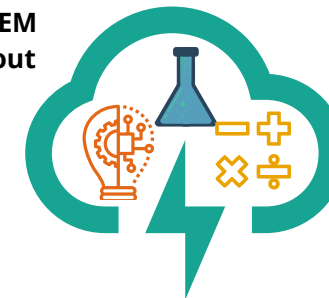
Recent WES research found that; 70% of women in STEM are anxious about taking a career break, 60% reported barriers in returning to work after a career break, 20% said employers are not supportive of working mothers and 18% said colleagues aren't supportive either. Combined, this is a huge risk to an engineering workforce which is already suffering from advanced skills gaps, particularly at the mid-career level, where employees tend to take career breaks, and where returners fail to re-enter.

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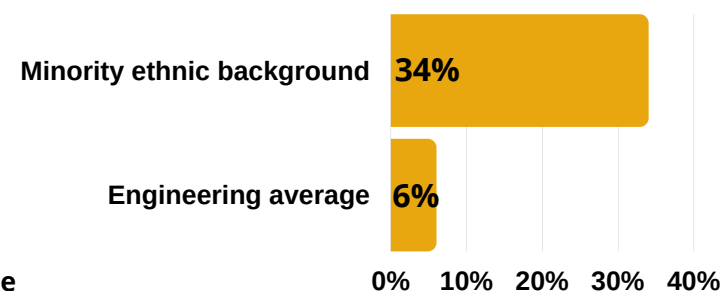
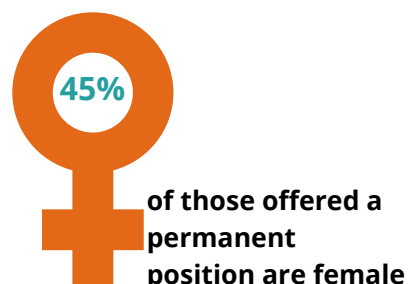
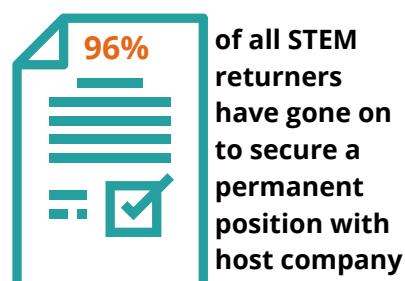
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Tapping into the returner talent pool is a direct opportunity to attract diverse and experienced hires for hard to fill vacancies, and our experience tells us it is an overwhelmingly successful strategy.

Of the 156 returners placed on a programme, 150 (96%) have gone on to secure a permanent position with the host company. Of those, 45% are female, in comparison to an engineering average of 8% and 34% of those are from minority ethnic backgrounds, compared to an engineering average of 6%.

Hiring returners has also improved age diversity, attracting mid-career individuals with high levels of maturity and experience, in turn improving cognitive diversity. The report also highlighted the capability of the returner pool which is currently being overlooked by industry. 90% of returners are educated to a bachelors, masters, or PhD level and 46% have over 10 years' experience.

Tapping into returners opens a mid-career recruitment strategy to feed in directly where the biggest skills gaps within industry occur and where diversity is at its lowest.



Industry is currently failing the returner community. 61% of returners have applied for more than 20 STEM positions with only 3% routinely receiving a (negative) response. We simply must level the opportunities, address unconscious bias in the recruitment process and remove the barriers for returners to re-enter an industry that desperately needs their skills.

As an industry we must create and actively encourage opportunities for returners to level applications, build in support mechanisms to increase confidence and refresh skills, challenge unconscious bias in the CV screening process and remove barriers to entry from graduate to senior level recruitment. There is a reason that attracting and recruiting returners as a separate strategy alongside standard recruitment works. Conflicting priorities, line managers and employers searching for 'their' perception of the best candidate creates an unequal opportunity for returners to be considered. Actively attracting returners as part of an overall diversity and inclusion strategy allows unconscious bias to be addressed, gives returners an equal opportunity and starts to positively change a culture that still views career breaks negatively instead of a completely normal part of many peoples working life.



Natalie Desty is the Founder and Director of STEM Returners, an organisation that creates back to work opportunities for highly qualified, passionate and committed STEM professionals who are finding it difficult to return after a career break of any length.

After building a progressive career in recruitment, where she was Director of Maritime at a large recruitment company, Natalie was struck by the apparent lack of progress in diversity and inclusion within STEM, and particularly concerned by the insurmountable barriers that returners faced when looking to restart their career after a break. Natalie created a small pilot returners programme for a group of employers and has now built this into an organisation that supports hundreds of returners in restarting their careers. She works with all candidates who are lost to standard recruitment channels from graduate to director level to ensure that the sector can utilise and retain the skills that it has available.



The returners programme has been highly successful within STEM and 96% of all returners who have joined the programme have gone in to permanent work with the host employer, of these 45% have been female (in comparison to the engineering average of 8%) and 34% from ethnic minority backgrounds (in comparison to the engineering average of 6%).

Natalie is committed to partnering with as many STEM employers as possible to help to create the diverse, agile and innovative STEM workforce that the UK needs for today and the future, and to ensure that no more valuable STEM skills are lost to an industry that desperately needs them. Natalie has a BA Honours degree in International Relations and Politics and has been working within the engineering sector for her whole career, particularly focused on improving the sectors diversity and inclusion.

This year, Natalie has been awarded the Royal Institution of Naval Architecture's Eily Keily Award and an honorary Engineering Doctorate from Southampton Solent University for her role in increasing diversity and inclusion within STEM.