

how women

can lead the way



in engineering.

# skills shortage

## and the solution.

The UK has a proud engineering history but for that to continue the sector must improve its diversity and inclusion.

Two years ago the Royal Academy of Engineering estimated 92% of engineers were men and while steps are being made to improve gender representation it will be some time before we reach equality.

The issue is even more acute in senior positions, which is why in 2018, Randstad surveyed more than 500 engineering professionals to find out the barriers, limitations and challenges women face on the path to leadership roles.

To close the skills gap in engineering, industry leaders need to find 186,000\* skilled workers every year until 2024. But in a sector where only 8% of workers are female, how realistic is this target?

An increase in the number of female engineers could be one of the solutions to a skills gap that has so far been difficult to plug. Many companies have started to adopt initiatives to increase the number of women in their workforce, and ensure equality of pay. The industry has realised that if it wants to thrive it must support those who have for too long gone unsupported and today new and diverse leadership and management capabilities are more necessary than ever.

47%

of respondents have never had a female manager.

A lack of female role models in leadership positions across the engineering sector may be a big contributor when it comes to the lack of diversity in the industry. Our study found that women leaving the industry can be influenced by a lack of inspirational figures, with 13% of respondents pointing towards having too few female role models. This makes it more difficult for women to aspire to senior positions because they don't have clear pathways.





## Diversity and discrimination.

 Half of the female respondents said they had experienced gender discrimination in their employment.

One factor that employers need to consider in the recruitment and selection process is unconscious bias. Often without realising, managers are quick to hire in their own image, and tend to be drawn to people that are similar to them. Organisations need to promote ways to ensure a more diverse and inclusive workforce; paving the way for the future.

31% were offered a less important role or were passed over for promotions or big projects.

31%

Other forms of discrimination reported in the survey included comments or inappropriate behaviour from a male colleague (29%), being excluded from male conversations or social events (17%) and even being made redundant (7%).

A junior female engineer is paid on average £4,000 less than her male counterpart and the disparity soars to £20,000 at director level.\*

The pay gap widens in senior positions and failing to promote engineers due to gender only makes matters worse. By ensuring that everyone has a fair chance at progression and development within the sector, we might eventually have enough engineers to adequately fill vacancies.

# exiting

## the engineering industry.

One in five said a 'male dominated culture' was a reason women might leave the sector.



This suggests a desire to move away from the hyper-masculinity that is often found in traditionally male dominated workplaces.

What might persuade women to either join or remain in the industry?

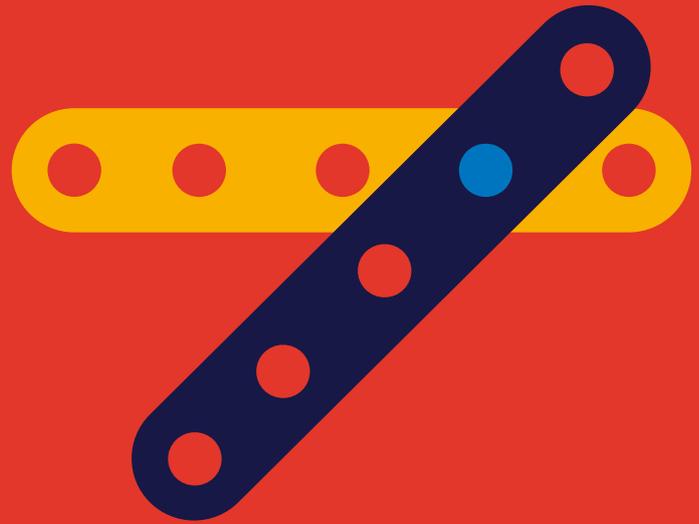
-  20% - equal pay
-  17% - culture change
-  13% - better mentoring

Staying in the sector.

When asked what might persuade women to either join or remain in the industry, one in five said equal pay and 17% said a culture change. A third of respondents said their employers do not support women in progressing to senior positions.

It is clear that pay equality and work culture are necessary components for making women feel appreciated and accepted in their working environments.

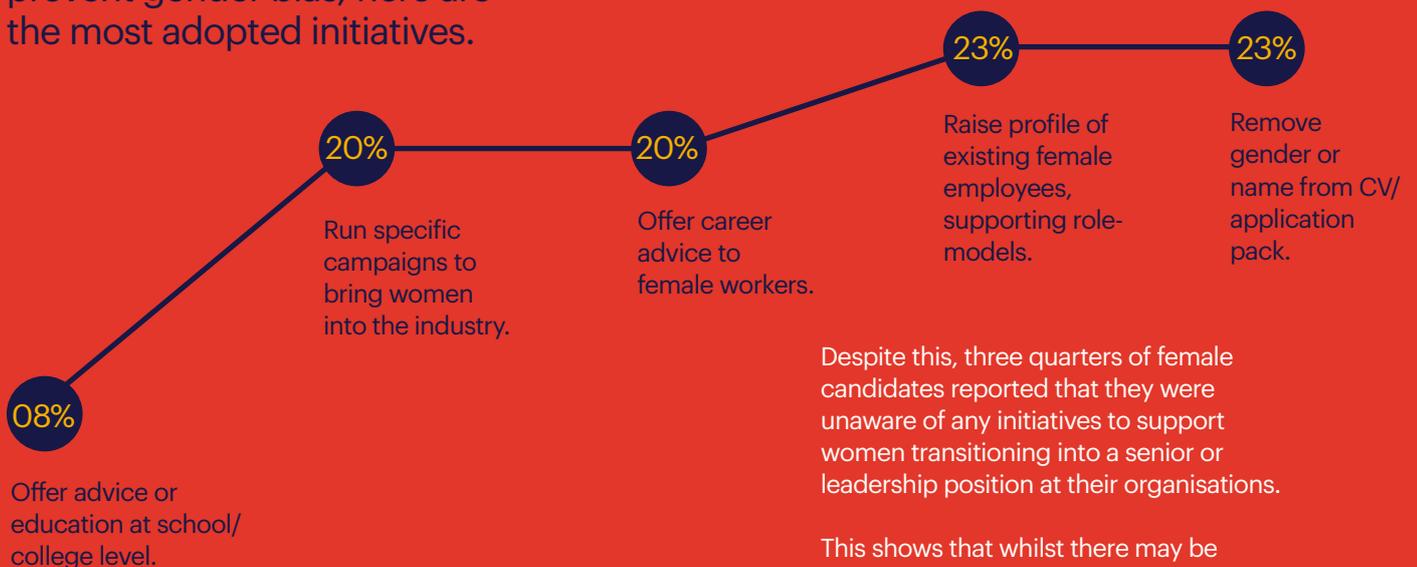
This is something that can start with increased visibility of incentives and mentoring programmes to aid progression and help normalise ideas around women in these roles.



## Time for change.

Solving a skills shortage and narrowing the pay gap is no small feat, but it is possible. There are various steps that organisations can take to eliminate bias and change the culture of the industry. Simple measures such as careers advice, supporting the existing female employees to become role-models for new starters and running targeted campaigns.

In our survey, we asked what organisations within the engineering sector do to prevent gender bias; here are the most adopted initiatives.



Despite this, three quarters of female candidates reported that they were unaware of any initiatives to support women transitioning into a senior or leadership position at their organisations.

This shows that whilst there may be initiatives available, they may not be fully advertised and communicated to women in the industry. Employers need to make sure they offer the right support and development opportunities to encourage female involvement in the sector.

# solving the problem:

# starting early.

According to research by 'Girls in STEM', the UK needs 10,000 graduates in Science, Technology, Engineering and Mathematics every year simply to maintain the current workforce.\*

The proportion of young women studying engineering and physics has remained virtually static since 2012 and only around 20% of A-Level physics students are girls.

This figure has not changed in almost 30 years.\* Despite this, there is now very little gender difference in the take up of, and achievement in core STEM GCSE subjects.

**10,000 STEM  
graduates**  
needed per year to  
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By encouraging girls to consider STEM subjects as they are choosing their courses and career paths could go a long way in terms of bridging the skills gap the sector is facing. Employers could work closely with local schools and communities to promote the career opportunities that working in the engineering sector can bring.



## Advice from the top.

“Construction has always had a ‘macho’, male dominated connotation. In over 10 years of construction recruitment I have seen more and more women entering the industry and have seen women promoted into senior positions, which is refreshing as it shows the industry is beginning to remove barriers. Businesses need to analyse why women would leave the industry. Most importantly, we all need to make sure that construction is a career path that both women and men enjoy being a part of.”

[Sarah Sidey, head of strategic accounts, Randstad CPE.](#)

“There are enough events and initiatives going on in the industry, in many different sectors so the door is definitely open for women. In the six years of working with construction firms, I have seen an improvement around women in the industry. The key is in building rapport and trusting relationships.”

[Pam Sherwood, health and safety manager.](#)

“At a time when equality and diversity is making leaps forward, construction is playing catch up. Companies need to band together to build an environment that nurtures and rewards successful, hard-working women to move up the career ladder. Though the number of women entering construction is slowly rising, retention is a key area that needs development. Organisations that cannot retain, develop and enhance their female workforce will be missing out on key skills, new ideas and ways of working to help keep the industry driving forward.”

[Owen Goodhead, managing Director, Randstad CPE.](#)



# get in touch.

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## Links to stats within this report.

\*1 <https://www.yearofengineering.gov.uk/>

\*2 <https://s3-eu-central-1.amazonaws.com/centaur-wp/theengineer/prod/content/uploads/2017/06/14164613/Salary-Survey-Web2.pdf>

\*3 <http://www.girlsintostem.co.uk/girlsintostem-1/>

\*4 <http://www.wes.org.uk/sites/default/files/Women%20in%20Engineering%20Statistics%20March2016.pdf>

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