



WOMEN IN ENGINEERING

Empowering Women in Engineering:
When It Does Not Exist, Design it.

MAT FOUNDRY
GROUP LTD



“Strive for perfection in everything you do. Take the best that exists and make it better. When it does not exist, design it.”

Sir Henry Royce may well have been referencing automobiles or aeroplanes in his renowned quote, but the sentiment is far from restricted to the making of machines.

In spaces where we have an influence, it's vital to make a positive impact; and if the best doesn't seem good enough, we should make it our business to improve.

For those working in engineering – a notoriously innovative field – it has become clear that inclusivity is one area where the profession has fallen onto the back foot.

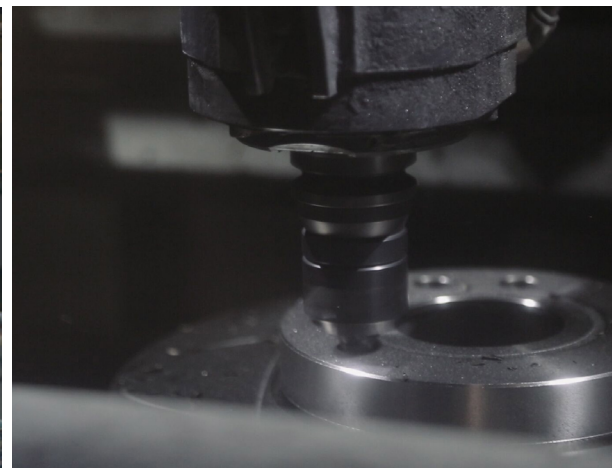
Despite the progress made in recent years to make the engineering sector more diverse, women continue to face challenges on many fronts. First and foremost, women are severely under-represented in engineering roles.

According to a study in 2022 by EngineeringUK, women make up just 16.5% of all engineers.

It isn't all bad news - this is a 6% increase on the 10.5% reported in 2010.

Furthermore, the number of women in engineering roles continued to rise even when the total number of people working in engineering fell during the Covid-19 pandemic.

However, it's clear that - despite the growing interest from women to pursue careers in engineering - there is much work left to be done.



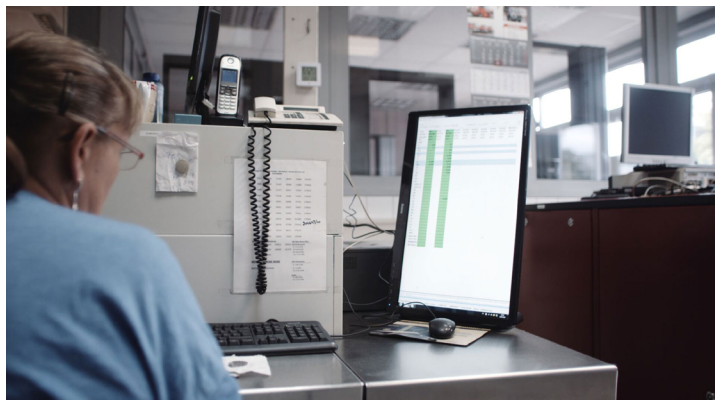
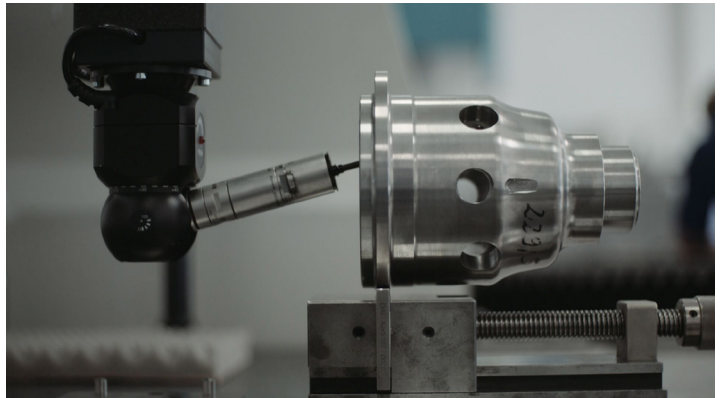
What are the challenges for women in the engineering sector?

On an immediate basis, many women have difficulty finding support networks and allies in engineering spaces - intensifying feelings of isolation and disparity. This dissatisfaction can smoulder in workplaces where women are also not visible in senior roles, leading to a vicious cycle of gender stereotypes.

When it comes to the career advancement of women, this lack of adequate representation at higher levels remains a major obstacle. It often leads to experiences of bias and unequal opportunity, impeding chances for promotion or salary raises.

This isn't where the pressures stop. According to a study in 2022 by The Centre for Progressive Policy, nearly half of working-age women are providing an average of 45 hours of unpaid care every week (compared to 25% of men providing 17 hours).

This suggests that women are more likely to struggle to thrive in engineering workplaces that don't offer an adequate flexible working policy to support caring responsibilities.



What can be done to address challenges for women in engineering?

In order for engineering to become a more inclusive and prosperous environment for women, we need to look further than individual workplaces.

This is, in many respects, a societal responsibility. We must ensure that we advocate for women and girls – in schools, colleges, workplaces and at home.

1. Support from the Start

... And we mean right from the very start!

Even from birth, girls can be encouraged to explore their potential, away from gender stereotypes. From being given toys that promote spatial awareness, to parenting language which assists a problem-solving mindset, there are many ways that girls can be introduced to engineering concepts from a young age – in the same way that boys often already are.

For girls who express an interest in STEM at school, this is the ideal time to support the pursuit of engineering through apprenticeships and higher education – however, according to EngineeringUK, only 8% of people who start engineering apprenticeships in England are girls.

In the same study, just 25% of girls aged 16 to 19 said that they would ever consider a career in engineering - and 28% of girls aged 11 to 19 agreed that they knew what to do next to become an engineer, compared with 46% of boys.

Key influencers – parents and teachers in particular – play an important role in both engaging and informing young people in STEM, as well as shaping their expectations and self-belief.

For engineering professionals, community mentoring is a great way to get involved in this effort. By visiting schools and colleges – as a part of careers fairs, for example – employers can purposefully engage with girls, particularly through the experiences of existing employees who are women.

2. Elevate Female Voices in the Engineering Workforce

Early promotions in a career are most critical to success, and yet - for the past eight years - McKinsey research has consistently shown that women lose ground in the step up to manager.

According to data from their Women in the Workplace 2021 report, women hold only 34% of entry-level engineering and product roles and just 26% of first-level manager positions, compared with 48% of entry-level roles and 41% of first-level manager positions in the pipeline overall.

To inspire women to take a seat at the boardroom, they need to see more women in leadership roles.



Engineering businesses can purposefully increase the visibility of women in the workforce by:

- Recommending women for senior roles. This includes women in junior positions who have shown potential, so they can develop their experience and skills over time.
- Give women credit for their work. By publicly recognising their individual accomplishments, we can ensure that the contributions of women are celebrated – rather than relying on them to self-promote.
- Encourage and facilitate the participation of women at industry events and conferences. This isn't just important for visibility, but for professional development, too.

3. Support Women to Stay in the Engineering Profession

According to research by the Royal Academy of Engineering, 57% of female engineers drop off the register of professional engineers before the age of 45, compared with just 17% of male engineers.

It's clear that women are not only severely under-represented in engineering, but those who do come into the profession are not likely to stay.

It's a vicious cycle: If girls interested in STEM aren't advocated for, they're unlikely to pursue engineering as a career... but those already in the career are leaving because they aren't advocated for.

Women need to be encouraged to stay in their engineering careers... but how?

- Positively challenge women beyond their existing skill levels. Purposefully give them a chance to develop by supporting them through more advanced tasks. Through success, women will gain more confidence in their abilities – putting them on a path to elevated career trajectories.
- Offer peer support. Women should be championed at work – and the experiences of other, accomplished women can provide valuable role models. By introducing relatable and inspirational female mentors, women have a greater platform to discuss and find solutions for their challenges - which may have otherwise turned them away from the profession.
- Help women to expand their networks. By enabling connections with influential people across your company and industry, women can deepen their roots in the profession, organically creating more avenues for long-term opportunity.
- Promote flexible working. Whether this is hybrid working between the home and office, or flexible hours that enable more convenient shift times, flexibility can help everyone in your business to balance their work and home life – which could otherwise present insolvable challenges, particularly for women who take on the majority of parenting responsibility.

MAT Foundry are supporting women to realise their potential in the engineering industry.

Through apprenticeships, advocacy, visibility and more, we're providing a platform for women to succeed in their engineering careers.

Here's what just some of the women at MAT Foundry had to say about their work for our Group, and their advice for aspiring female engineers...

"Show confidence in what you do, even if you feel that you don't, confidence can go a long way in demonstrating you know what you are doing. Ignore the fact that it will be a male dominated environment, don't be scared to stand up for what you believe, don't be belittled or intimidated"

– Stephanie, Raw Materials Buyer

"MAT Foundry is a large group with several foundries, producing many different products for a large number of clients. This diversity makes it demanding, but it also allows you to continuously improve, and to exchange information and learn with the other members of the group"

– Cristina, Foundry Engineer & Metallurgical Manager

"If I'm honest I didn't initially set out for a career in engineering. When I started in Human Resources (many years ago) it was within a manufacturing business and I enjoyed seeing a production facility and contributing towards its development and growth through people skills, development, and recruitment. As the years have gone by and I have changed jobs I have maintained that interest in manufacturing and industry and feel it offers more than HR in the retail or service sector"

– Claire, Facility HR Manager

"My aim is to develop the processes within the organisation, pushing it towards becoming a self-learning "organism" - and enjoy every step of the road"

– Agnieszka, Machine Plant Manag

DISCOVER MORE ABOUT HOW WE
CHAMPION WOMEN IN
ENGINEERING AT MAT FOUNDRY