



## Women in engineering 2020

# 'We need to show girls that engineering is exciting': how role models can light a spark

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**T**he number of women working in core Stem (science, technology, engineering and maths) jobs in the UK has, for the first time, topped 1 million, according to [Wise](#), an organisation that promotes gender balance in the sector. This means women now make up 24% of the Stem workforce.

As part of this increase, the number of women working in engineering has doubled to 50,000 over the past decade - 10% of the total. The question now is: how do we attract even more women into these roles?

The impact of engineering on our lives cannot be overestimated, says Elizabeth Donnelly, CEO of the Women's Engineering Society: "Even during lockdown, you just had to look around to see how much of our lives are touched by it. My car, made by mechanical and software engineers, my desk lamp, made by electrical engineers, and my computer, made by software engineers. Engineering is about problem-solving and using our mistakes to make improvements."

A [report](#) by Microsoft found that more than 50% of females aged 11-30 said they were interested in working in the Stem sector. But, as the saying goes, if you can't see it, you can't be it. The study of 11,500 girls and women across 12 countries discovered that girls were much more likely to consider a career in Stem if they had a visible role model.

Shamira Sanghrajka, co-founder of [1 million women in Stem \(1MWIS\)](#), a global network that aims to provide such role models, says: "We believe that providing role models every step of the way will encourage women to pursue engineering subjects in higher education, enter engineering and stay in the profession."

Sanghrajka says that targeting schools and universities, and providing mentors early in a woman's career should help dispel the "jobs for the boys" misconception. "We're hoping to play a small part in doing this by providing diverse role models of women in engineering and across Stem, who share their candid experiences," she says.

However, Dr Hayaatun Sillem, CEO of the Royal Academy of Engineering, points out that retaining talented women is still a major issue for many firms: "We know from our research that 57% of female engineers drop off the register of professional engineers before [the age of 45](#), compared with just 17% of male engineers."

Mimi-Isabella Nwosu, an assistant materials engineer at the construction company Sir Robert McAlpine and a Stem ambassador, says engineering needs to be more accessible to girls. "When I visit all-girls schools, I try and find out their interests then link it to an engineering job. For example, I spoke to a girl who said she loved horses so I told her about a product design engineer who works closely with horses, making bespoke carriages."

The industry needs to collaborate more with schools, colleges and universities, Nwosu says. "We all need allies to reach the equality, diversity and inclusion we seek in the industry, this is no different for women in engineering. We need to pull together to close gaps, retain and diversify talent."

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▲ Stem employers need to do more to attract BAME women. Photograph: monkeybusinessimages/Getty Images/iStockphoto

Mamta Singhal, a chartered design engineer who has worked for the likes of Mars Chocolate and Hasbro and is a council member of the Institution of Engineering and Technology, says that a degree in engineering gives students a huge range of transferable skills. “From computer skills, analytical skills and problem-solving ability to strategic thinking, to name but a few,” she says.

Singhal says that a job in engineering offers young women a gateway into an inspiring and varied career. “It covers everything from finding new ways of doing things and solving problems to addressing health issues, sustainability concerns and IT developments. You get to learn about the world by opening up products and find out what they can do - what could be more exciting?”

Sillem says that the pace of change is still disappointingly slow for BAME women in engineering, and that employers should be showcasing more diverse role-models. “However, the good news is that for women who do stay with it, engineering is a great career that consistently shows higher than average earnings and higher than average levels of job satisfaction,” she says. “In a 2017 survey of 7,000 UK engineers by the Royal Academy of Engineering, over 80% of women who responded said that they would recommend it as a great career to their friends and family.”

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