Listening to Minorities in Engineering

DETI
DIGITAL ENGINEERING
TECHNOLOGY & INNOVATION

DETI's Innovate Programme has undertaken a detailed Digital Engineering skills analysis, with the aim to breach the skills gap in the current and future workforce, particularly when it comes to supporting under-represented groups.

Representation in the STEM UK workforce remains woefully low, with little or no change in the last 10 years: Women make up 12% of Engineers and 26% of the STEM workforce (51% of the population), people from BAME backgrounds account for just 7% of Engineers (13% of the population). In order to support under-represented groups, we need to understand the lived experience of people working in, or interested in working in, digital engineering in 2021.
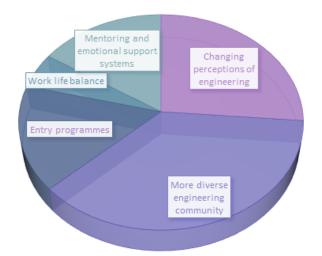
Listening Workshops

A series of workshops explored the lived experience of Digital Engineering from the perspective of Women, those with Neurodiversity, and people from Black, Asian, Brown and dual-heritage backgrounds, in the West of England. There were over 40 participants (each with a connection to Digital Engineering) in the online interactive workshops.
Participants were asked to identify the hopes and challenges of underrepresented people in digital engineering, as well as identifying ways they can be supported and encouraged.

Hopes for the Future

Hopes expressed by participants resonated around five key themes shown in the pie chart.

Pie chart themes: Mentoring and emotional support systems; Changing perceptions of engineering; Work life balance; Entry programmes; More diverse engineering community

"To me, it's having somebody that you know, it's having that care and that empathy. And I think regardless of whether you're male or female, it doesn't matter."

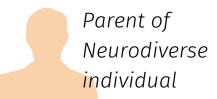Female Participant

Identified Barriers

Three core areas of challenge were highlighted:

- External Perspectives/Stereotypes of the industry - male dominated
- Access to internal support for progression - mentoring & work experience
- Personal factors intrinsic for career progression - confidence, lack of voice etc

"As the father of a child with [neurodiversity], my hope is that the schooling system can be more interest-led and guided rather than prescriptive and thus leading to a more fulfilled work-life rather than a forced one"

Parent of Neurodiverse individual

Solutions

Four core areas were identified to support and encourage entry and progression of underrepresented groups of people in Digital Engineering:

- Career-based support - mentoring
- Physical & Mental Health support
- Educational support - upskill/reskill programmes
- Social system support - policy changes to workforce culture

Future work

- Inclusion programme opportunities for skill development and job opportunities for people currently in the industry
- Designing new CPD digital engineering courses – DETI is delivering short courses to help upskilling for new technologies
- Sector-wide recruitment shift – for instance, partnering with neurodiversity recruitment agencies and bridging the gap to industries with similar skills such as the Creative Industries