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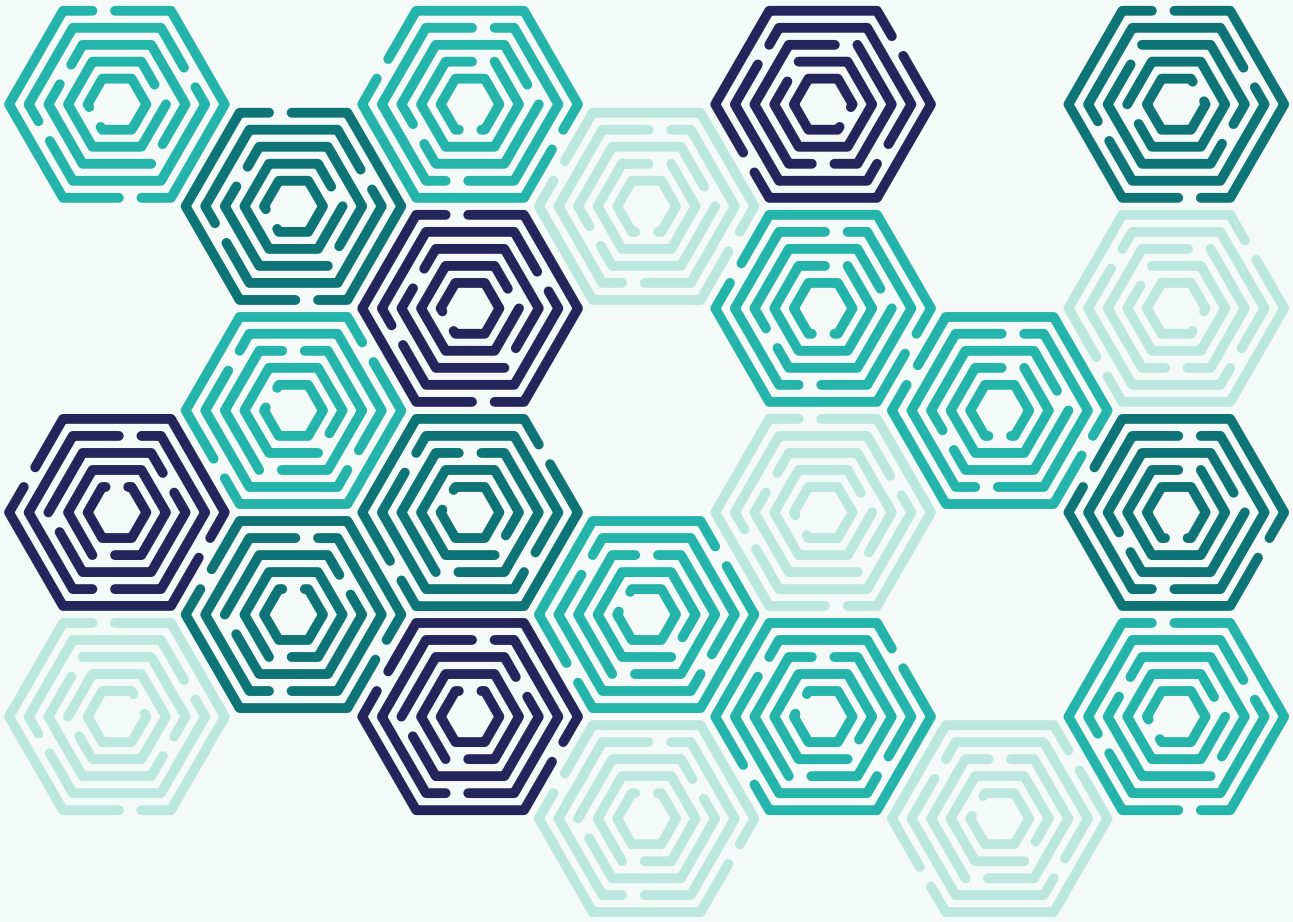


THE ENGINEERING AND TECHNOLOGY WORKFORCE

May 2025

engineeringuk.com

Engineering footprint

The engineering footprint is an agreed upon list of Standard Occupational Classification (SOC) and Standard Industry Classification (SIC) codes developed by EngineeringUK, the Engineering Council and Royal Academy of Engineering to ensure a universal and consistent definition of engineering and technology[1]. These definitions are used throughout this briefing when referring to those working in engineering and technology occupations, and those working in the engineering and technology industry. All diversity data focuses on those working in engineering and technology roles, using the SOC codes.

Analysis of the 2024 Labour Force Survey (LFS) data using this footprint shows there were approximately 6.4 million people working in engineering and technology occupations, which accounts for 19.3% of the UK workforce. This is marginally higher than 2023 at 6.3 million and 19.2% of the overall workforce. There are approximately 4.2 million working in core engineering occupations and a further 2.2 in related engineering occupations[2] (table 1).

Table 1: Number and percentage working in engineering and technology occupations in the UK

	Approximate number	% of the workforce
Core engineering and technology	4.2 million	12.5%
Related engineering and technology	2.2 million	6.8%
Total engineering and technology	6.4 million	19.3%

Source: EngineeringUK analysis of 2024 Labour Force Survey data

Over 1 in 10 of the employed UK workforce were working in an engineering and technology occupation **within** the engineering and technology industry (12.9%). A further 10.1% were working in the engineering and technology industry but *not* in an engineering or technology occupation (for example in HR or communications). A smaller proportion were working in engineering and technology, but within a different industry (6.4%). Overall, this means that engineering and technology accounts for 29.5% of UK employment (table 2).

Table 2: Percentage working in engineering and technology in the UK

Occupation and industry	% of overall workforce
Working in an engineering or tech role in the engineering and tech industry	12.9
Working in the engineering and tech industry but not in an engineering and tech role	10.1
Working in an engineering or tech role in a different sector	6.4
Neither working in an engineering or tech role nor in the industry	70.5

Source: EngineeringUK analysis of 2024 Labour Force Survey data

[1] Read the full report on how our engineering footprint was developed and adjusted to take into account the ONS' newly updated occupational coding system from SOC2010 to SOC2020 online at www.engineeringuk.com/footprint

[2] Definitions of core and related engineering and technology occupations can be found online at www.engineeringuk.com/footprint

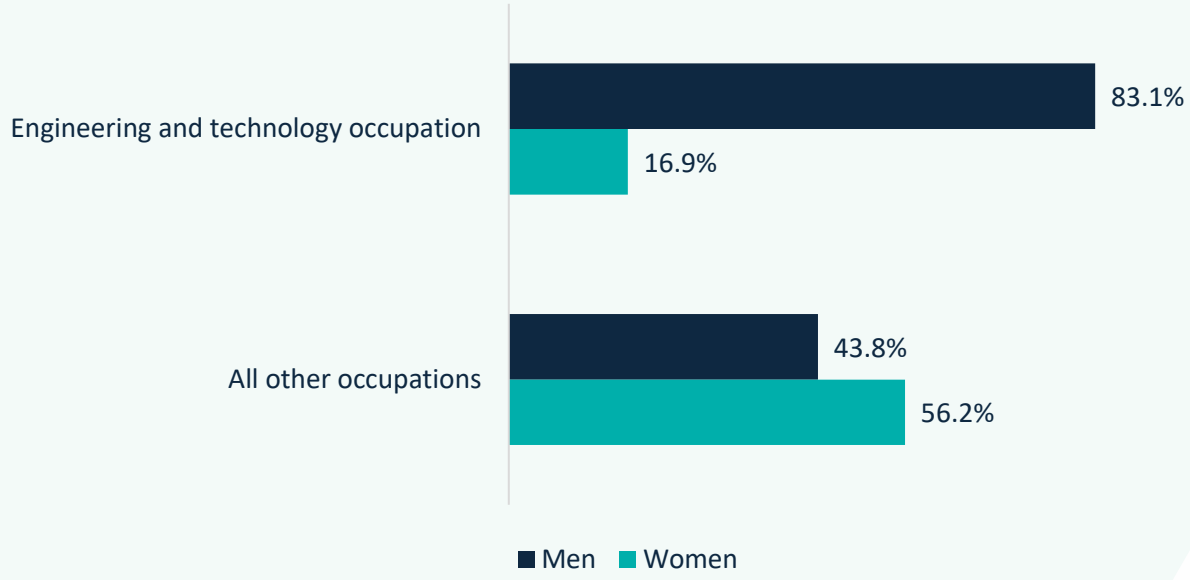
Gender

There has been a longer-term increase in the proportion of women in engineering and technology roles from around 10% since 2010[3], showing consistent but slow progress over this 15-year period.

The proportion of women in engineering and technology occupations remains worrying low at only 16.9%. We are encouraged to see this increase from the decline to 15.7% we reported last year. However, it is important to treat year-on-year changes with some caution and to note the challenges faced in data collection for the LFS in recent years[4]. For more information please see the methodology on page 5 and the more detailed paper we wrote on the impacts of the changes[5].

We can also see a stark contrast compared to all other occupations, with over half of their workforce being women (56.2%) (figure 1).

Figure 1: Women in engineering and technology occupations, compared to men and all other occupations combined



Source: EngineeringUK analysis of 2024 Labour Force Survey data

[3] https://ukdataservice.ac.uk/app/uploads/horton2023-02-02.pdf
[4] https://osr.statisticsauthority.gov.uk/publication/statistics-from-the-labour-force-survey/pages/1/
[5] For more on these issues and changes, please see www.engineeringuk.com/footprinttechnical

Ethnicity

Due to the sample sizes in the LFS, we are able to look at ethnicity using the 5-category variable as the highest level of detail. We found a smaller percentage of UK minority ethnic groups were working in engineering and technology occupations (13.7%) compared to all other occupations combined (17.5%) (table 3).

Table 3: Ethnicity of those working in engineering and technology occupations, as percentage compared to all other occupations

Ethnicity	Engineering and technology occupations	All other occupations combined
Asian (Indian, Pakistani, Bangladeshi, Chinese and any other Asian background)	8.1%	8.7%
Black/African/Caribbean/Black British	2.7%	5.3%
Mixed/Multiple ethnic groups	1.3%	1.7%
Other ethnic groups	1.5%	1.9%
White	86.3%	82.5%

Source: EngineeringUK analysis of 2024 Labour Force Survey data

Ethnicity and gender

Looking at women in the workforce, there were more women from UK minority ethnic groups working in engineering and technology occupations at 20.7%, compared to all other occupations combined (16.7%).

There was a higher percentage of Asian women working as engineers (13.1%) compared to all other occupations combined (7.8%). We saw the opposite effect, however, for Black/African/Caribbean and Black British women, who were underrepresented in engineering and technology occupations (3.8%) compared to all other occupations combined (5.4%). There were only small or no differences for Mixed/Multiple ethnic groups and other ethnic groups (table 4).

Table 4: Women in engineering and technology occupations, by ethnicity compared to all other occupations combined

Ethnicity	Engineering and technology occupations	All other occupations combined
Asian (Indian, Pakistani, Bangladeshi, Chinese and any other Asian background)	13.1%	7.8%
Black/African/Caribbean/Black British	3.8%	5.4%
Mixed/Multiple ethnic groups	2.0%	1.7%
Other ethnic groups	1.8%	1.8%
White	79.3%	83.3%

Source: EngineeringUK analysis of 2024 Labour Force Survey data

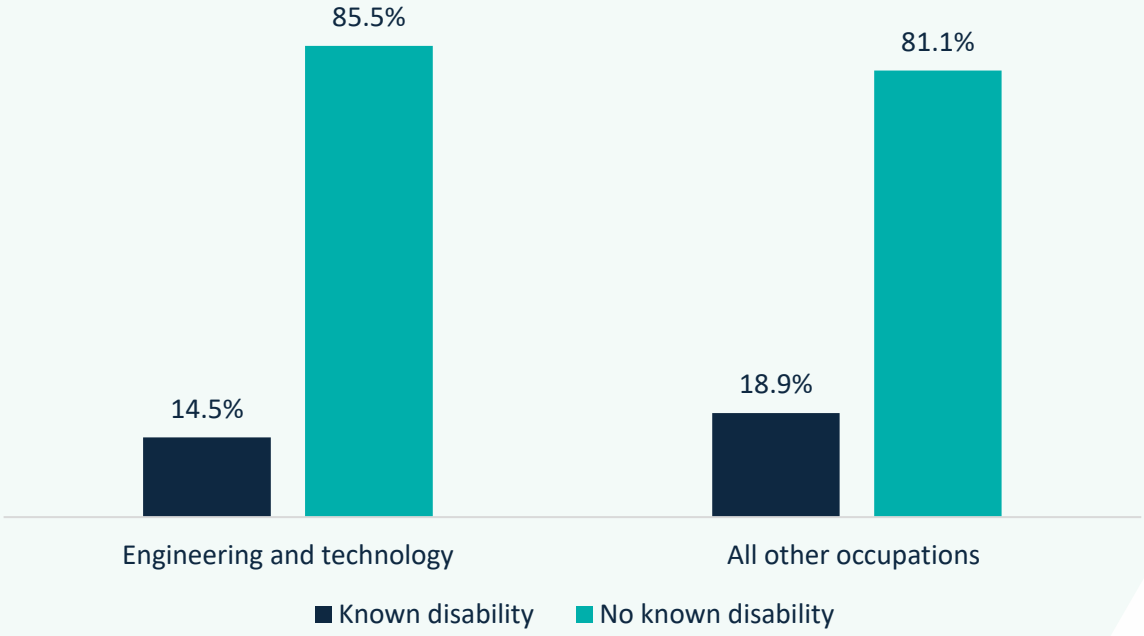
Disability

A smaller proportion of engineers reported a disability (14.5%) compared to all other occupations combined (18.9%) (figure 2).

Of those with disabilities, the most common disabilities included:

- other health problems or disability (15.2%, compared to 17.9% for all other occupations combined)
- depression, bad nerves or anxiety (14.2%, compared to 16.1%)
- back or neck problems (12.4%, compared to 10.6%)
- legs or feet problems (11.3%, compared to 10.5%)
- heart, blood pressure or blood circulation problems (7.3%, compared to 5.8%)

Figure 2: Percentage of engineers who reported a disability consistent with the Equality Act (2010), as a percentage compared to all other occupations combined



Source: EngineeringUK analysis of 2024 Labour Force Survey data

Methodology

In 2024, due to reduced response rates to the ONS' LFS we adjusted the way in which we measure the size and composition of engineering and technology by using an average from each LFS quarter. For comparison purposes we also re-ran the previous year's data using the new methodology.

As part of our ongoing aim to produce the most detailed and accurate picture of engineering and technology within the UK, this change is explained in more detail in our accompanying methodology report, which can be accessed at www.engineeringuk.com/footprinttechnical. This methodology has been used again for 2025.

Throughout this report, engineering and technology occupations were defined using our engineering footprint, an agreed upon list developed by ourselves, the Royal Academy of Engineering and the Engineering Council. In March 2024, we published a report prompted by the ONS revising its standard occupation classification (SOC) codes, which provided up-to-date figures for the percentage of people working in engineering occupations and be accessed at www.engineeringuk.com/footprint.

Who are we

Established in 2001, EngineeringUK is a not-for profit organisation, funded predominantly via the professional registration fees of individual engineers, as well as the support of a range of businesses, trusts and foundations, and a corporate membership scheme. Our ambition is to enable more young people from all backgrounds to be informed, inspired and progress into engineering and technology.

Working in partnership to inspire more young people from a greater range of backgrounds to pursue the exciting career opportunities in modern engineering and technology is at the heart of EngineeringUK's purpose. Collaboration is essential to reach our long-term vision: for the UK to have the diverse workforce needed for engineering and technology to thrive and to drive economic prosperity, improve sustainability and achieve net zero.

Driven by data

Our work is rooted in our understanding of the current and future needs of the engineering and technology workforce. We complement that understanding by establishing which activities help increase the number and diversity of young people choosing engineering, technology and technician careers, especially those in sustainability and net zero.

We base everything we do on evidence and we share our analysis and insight widely. We publish comprehensive data on all aspects of engineering and technology in the UK – providing a detailed examination of the economic contribution, the workforce composition, as well as the extent to which workforce supply through education and training is likely to meet future demand for engineering and technology skills.

We evaluate all our activity to help ensure our engagements with young people are as effective as possible. It is through evaluation that we can identify the extent to which our programmes are winning the hearts and minds of young people, increasing their understanding of engineering and technology, and changing their perceptions of a career in it as something they'd consider for themselves, regardless of background and gender.