Evolving Britain’s engineering industry to inspire the new modern workforce

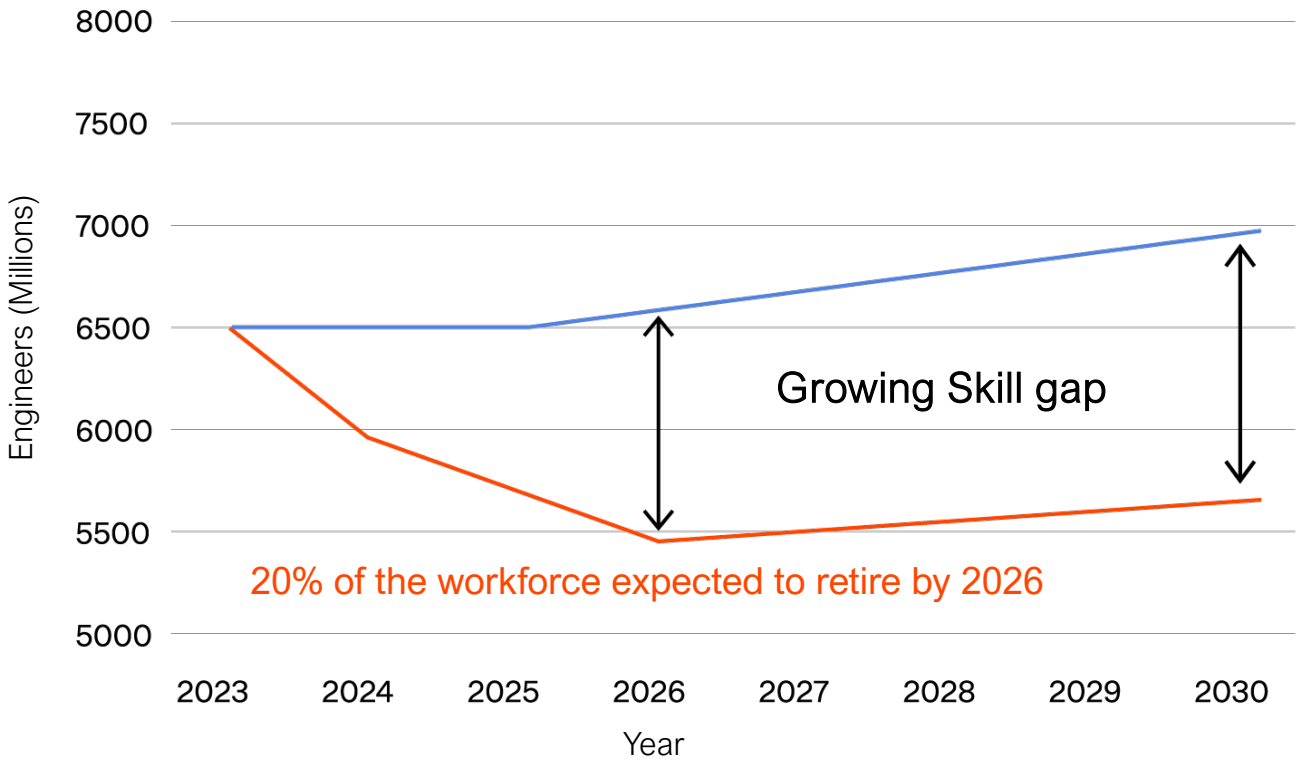


STONEHAVEN

Heading towards a skills crisis

01

The engineering sector is heading towards a 2030 skills crisis



Every year there is a deficit of 59,000 engineers to recruit, despite rising workforce demand.

Leading to a skills gap of 1 million engineers by 2030.

SOURCES

The Impending skill shortage in Engineering (theengineeringtrust.org)

https://www.engineeringuk.com/media/318305/trends-in-the-engineering-workforce_engineeringuk_2022.pdf

Extent of engineering skills crisis revealed | theHRD (thehrdirector.com)

The UK's engineer shortage - what you need to know - Quantum (quantumsas.com)

Putting 5% of the UK's total GDP at risk, between now and 2030

HS2



Crossrail 2



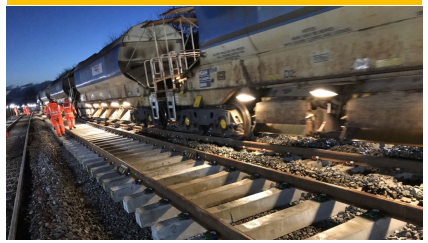
Houses of Parliament



Sizewell C



Network Rail Southern Renewals



London Data Freeport



Hinkley Point C



Sofia Offshore Windfarm



Thames Tideway Tunnel



New Hospital Programme



National projects that may not be completed if the skills gap is not closed

SOURCES
https://www.glenigan.com/construction-projects/)
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1171218/IPA-Annual-report-2022-2023.pdf
https://barbour-abi.com/top-100-construction-projects-uk/ (updated as of June 2023)

An urgent evolution of the engineering industry's positioning is required

02

Our approach

2023 RECRUITMENT RESEARCH

A study to unearth the hidden beliefs motivating job seekers across the UK, specifically focusing on what they are looking for from their future careers and prospective employers. Applying these learnings to the engineering industry in order to help firms develop more relevant and attractive employer brands.

RESEARCH METHODOLOGY

— Online survey c.15 minutes

— Attitudes to employment

— Impact to current and future job roles

— Fieldwork dates 6th-10th July 2023

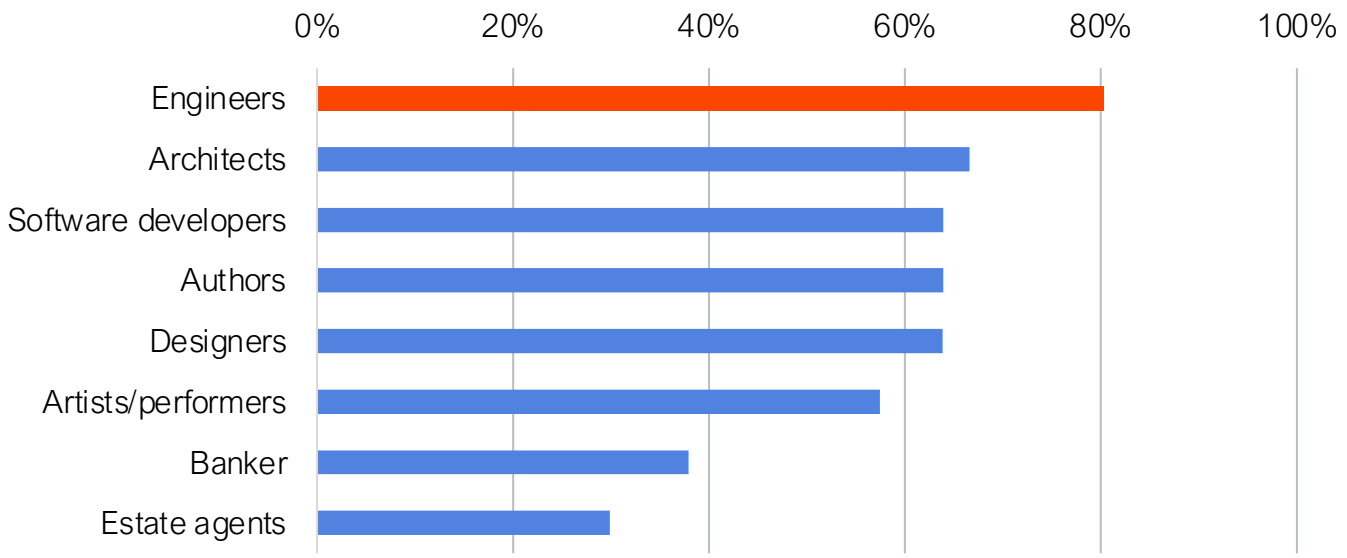
— Nationally representative sample: n= 2006

An industry with high admiration, but low consideration

03

Engineering is the most admired profession in the UK

Positivity towards professions

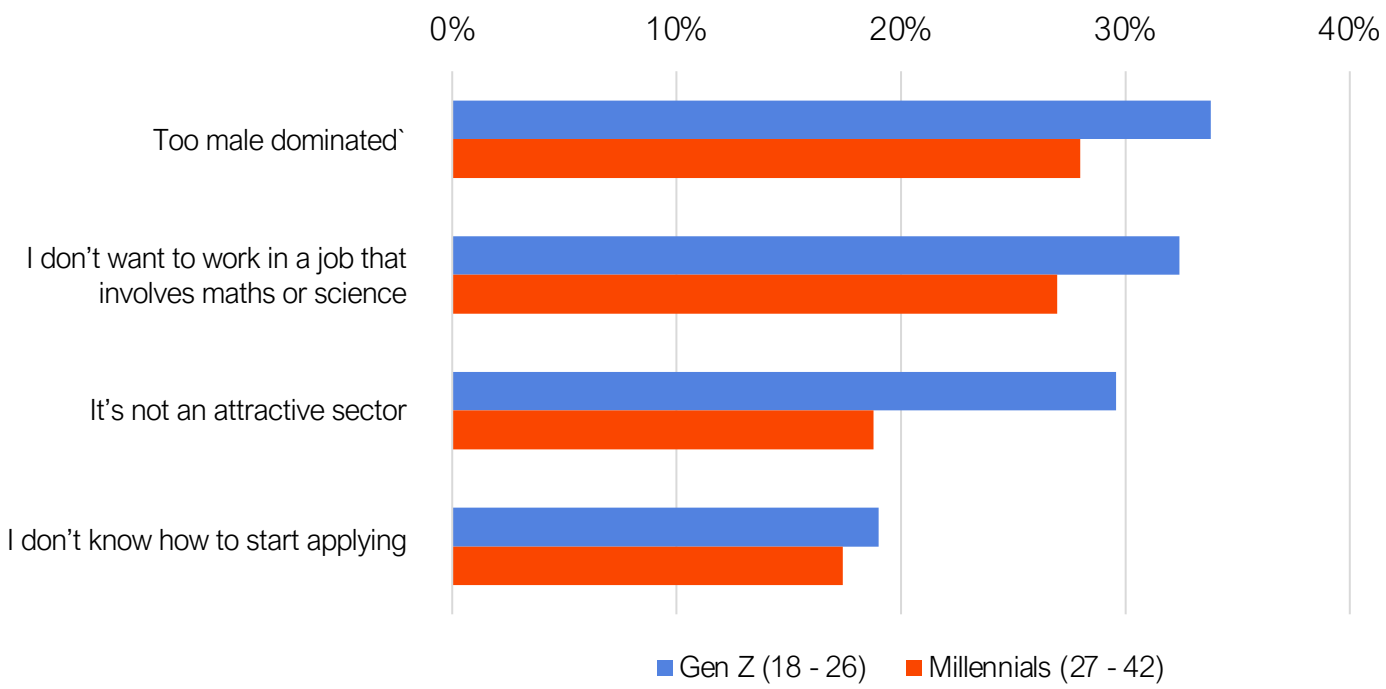


80%

Feel nothing but positivity towards engineering as a profession

But negative industry perceptions are getting in the way of turning admiration into consideration for engineering as a career

Below are some reasons people have decided not to work in engineering. Which of the following applies to you?

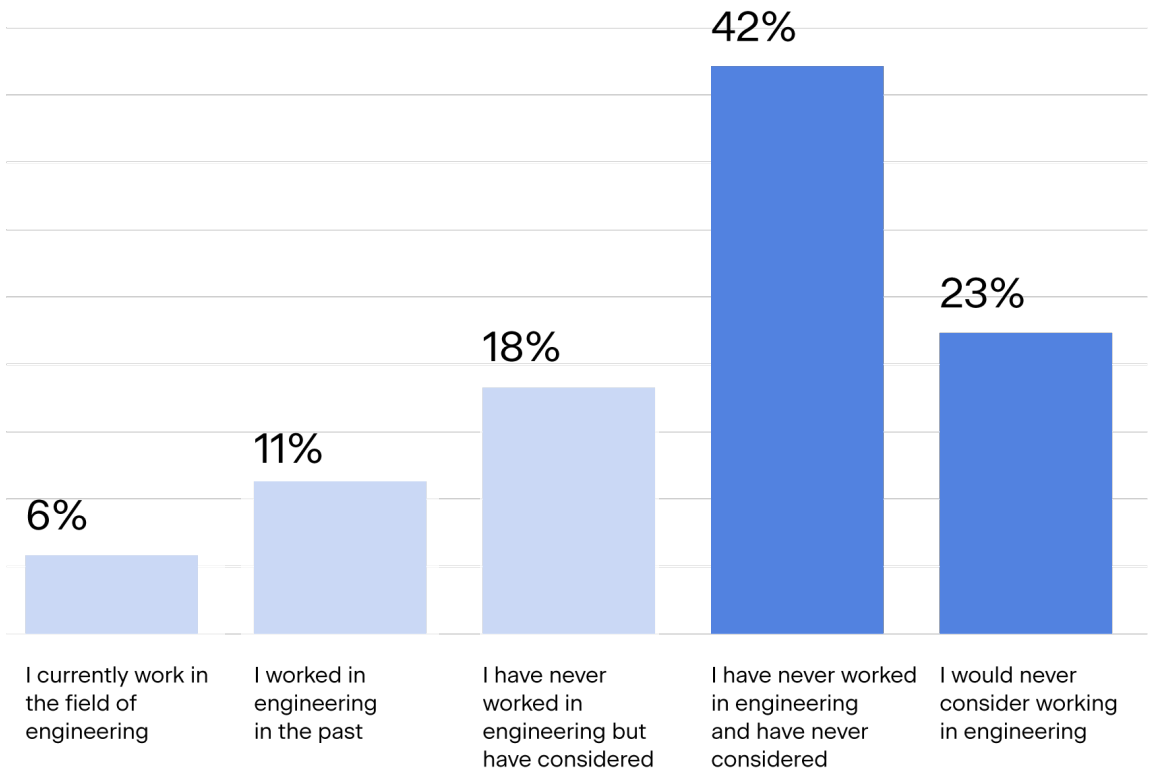


1 in 4

Think the engineering sector has a brand image problem

Meaning 2 out of 3 people have never considered engineering as a career

What is your experience with engineering?

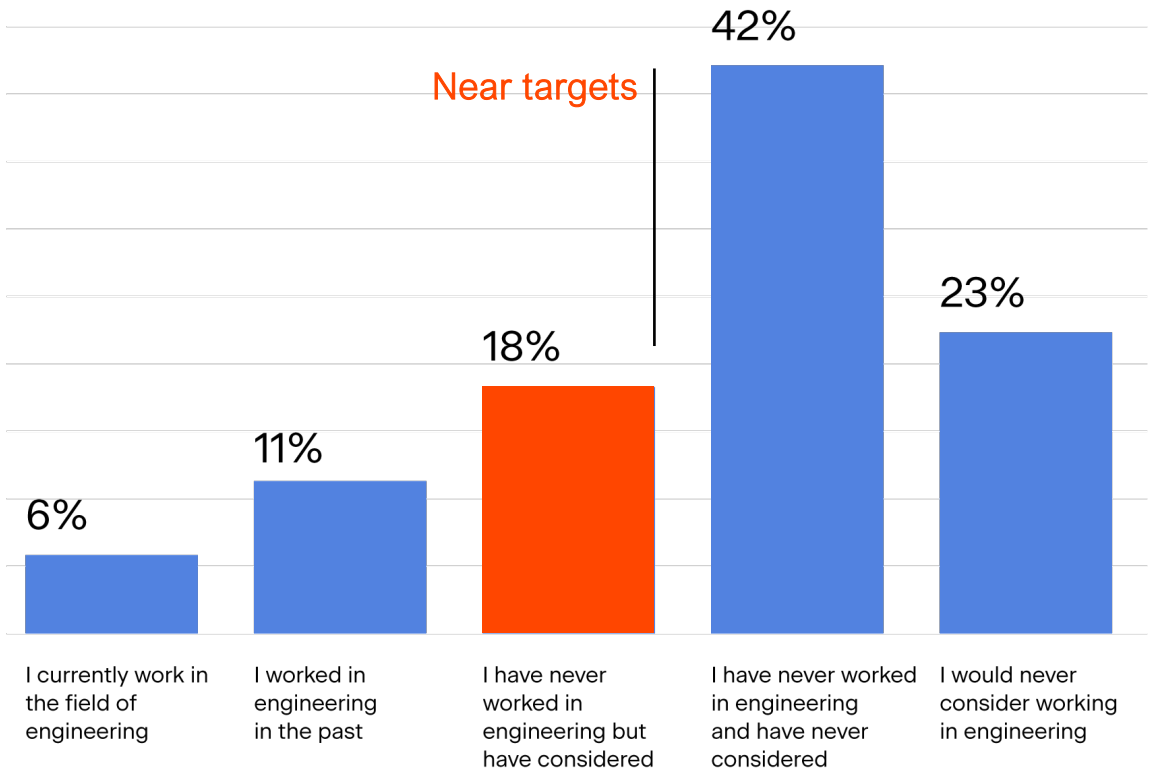


66%

Have never considered a career in engineering

A glimmer of hope exists in converting consideration into action for 1 in 5

What is your experience with engineering?

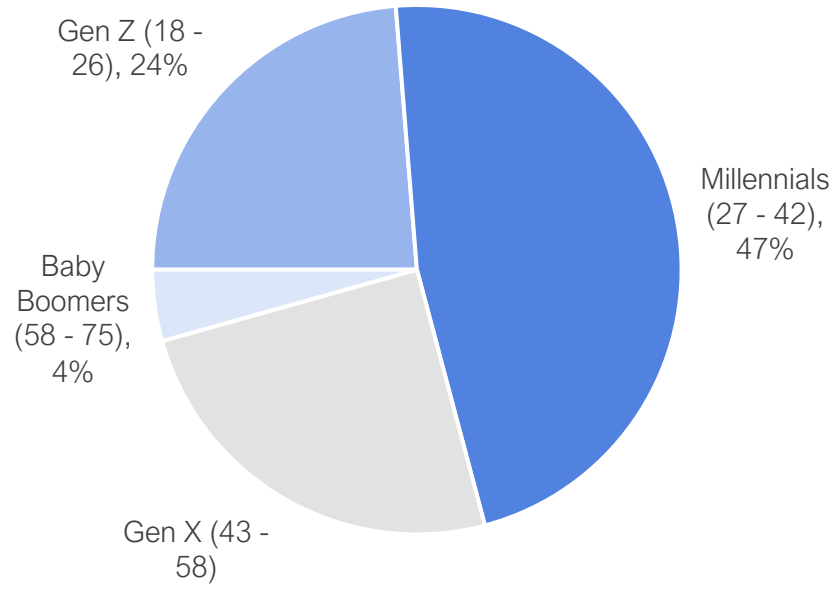


18%

Have never worked in engineering, but have considered it as a job

This 18% equates to 8 million new recruits, most of whom are Gen Z and Millennials

Near targets:
8.25m potential recruits broken down by age.



If we can convince

1 in 8

to pursue a career in engineering, we will overcome the 1 million 2030 skills gap

New workforce, new rules

04

This younger talent pool is more diverse and bigger than you think

Roles associated with engineering related sectors

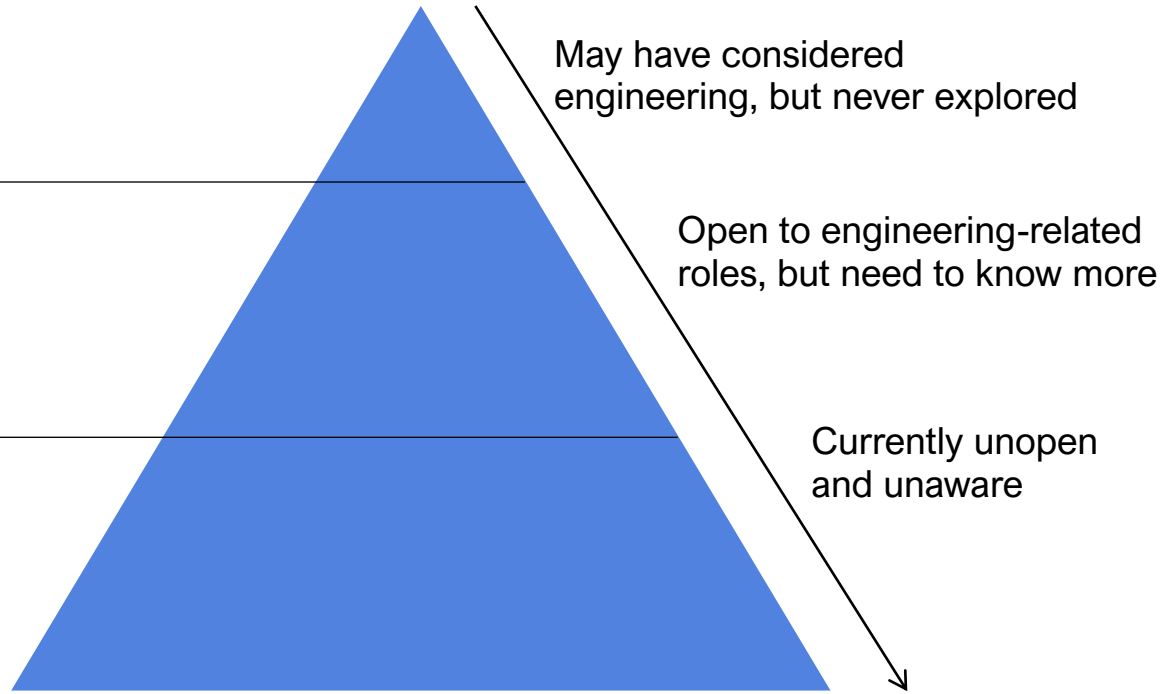
e.g. CAD technicians, software developers, data/financial/business analysts, product managers, machine learning specialists, surveyors

Roles with parallel skills more open to switching

e.g. IT technicians, computer programmers, mathematicians and statisticians, scientists, architects, urban planners, patent attorney

Roles not typically associated with engineering, but with transferrable skills

e.g. Business and management consultants, QA&C specialists, web developers, organisational change consultants, technical writers



United by their shared desire for ‘agency’ in their careers

What would motivate you to switch careers?

1 in 2

want the ability to **think for themselves** and manage their own time to generate the best results.

1 in 2

want the ability to **grow their careers at their own pace,** and in the direction they choose.

1 in 3

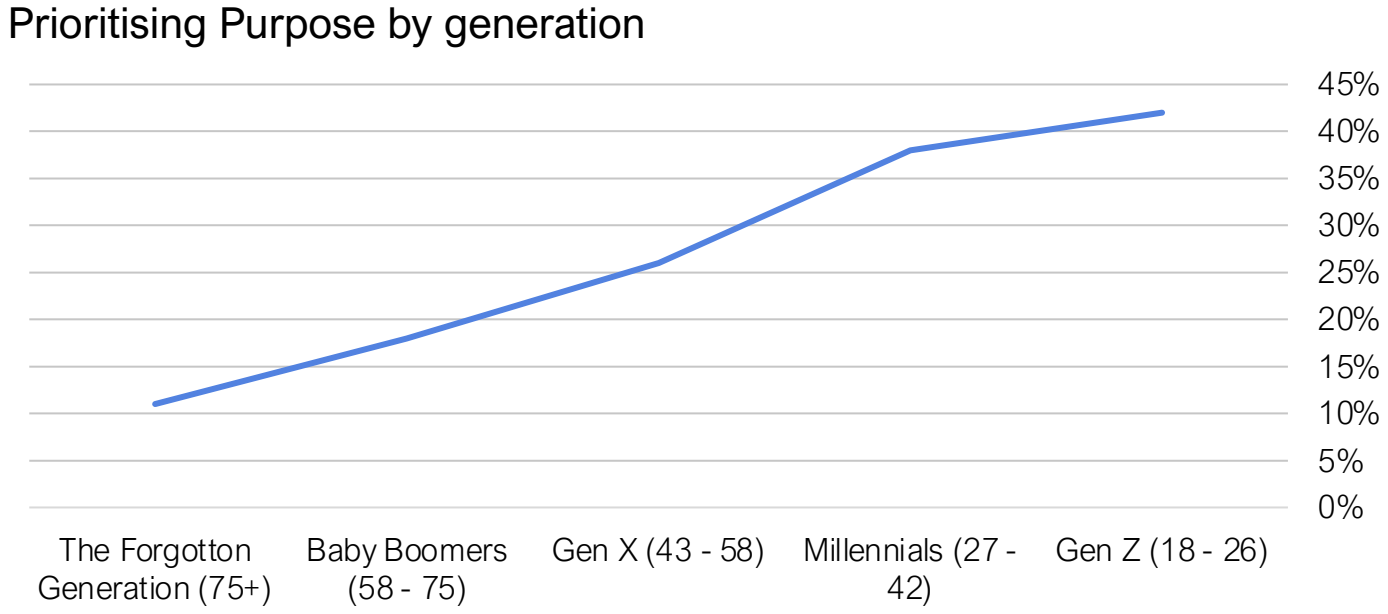
want to have the **space to create new solutions** and develop new ways of doing things.

1 in 5

want to feel a **sense of independence** as they create a career path unique to their skills and passions.

Making career choices driven by their values, and inspired by purpose

How much do you consider the purpose of the company when looking for a new job?

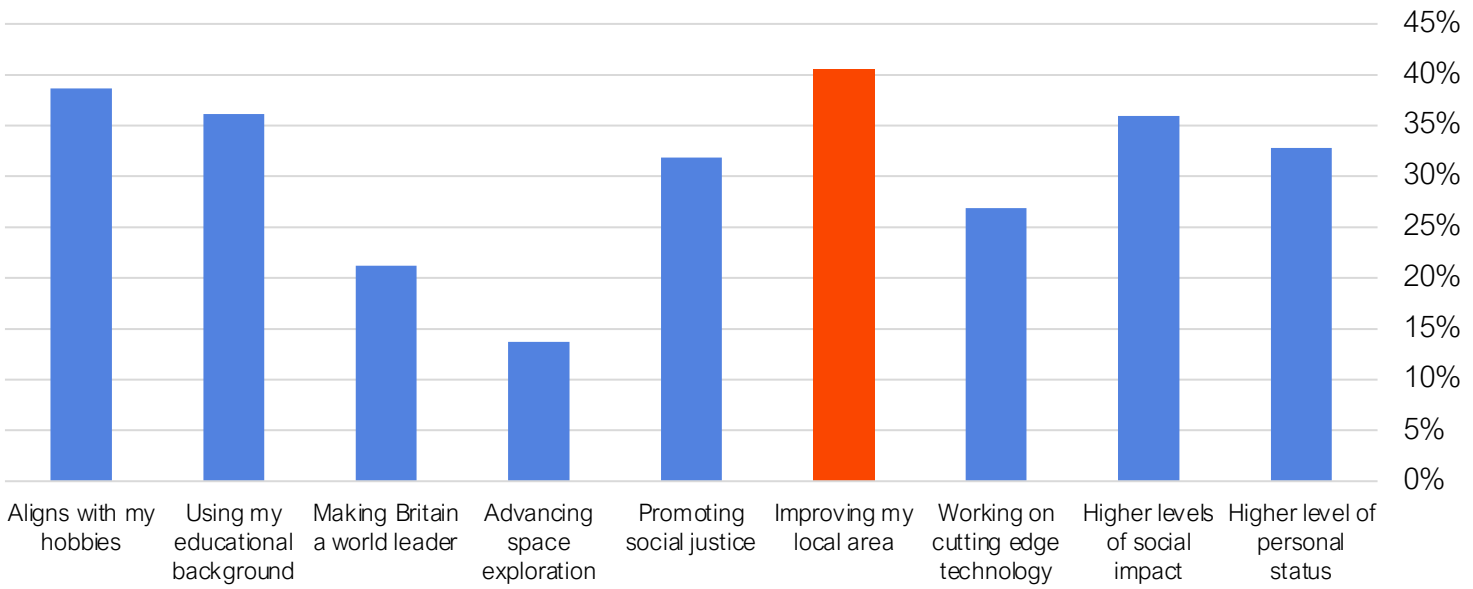


2 in 5

Gen Z and Millennials seek purpose driven work

More motivated by the idea of "shaping their towns", than saving the world

Which of the following would be most motivating for you to select one job over another?



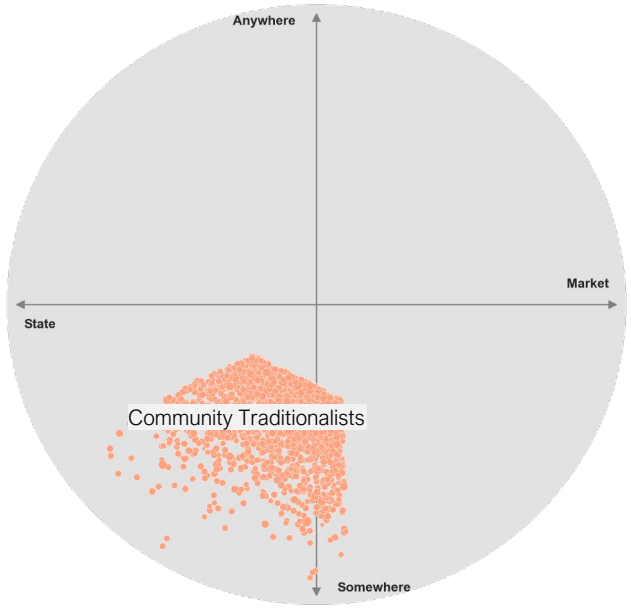
40%

Of Gen Z and Millennials are searching for a new job that enables them to improve their local area

"Shaping their towns" means improving local community prosperity

What does improving towns mean for career switchers?

1. Protecting and creating more green spaces
2. Keeping local streets and public areas clean
3. Improving local amenities, activities, and public services
4. Supporting the growth of local businesses and locally made products
5. Having a long-term plan to improve local community life



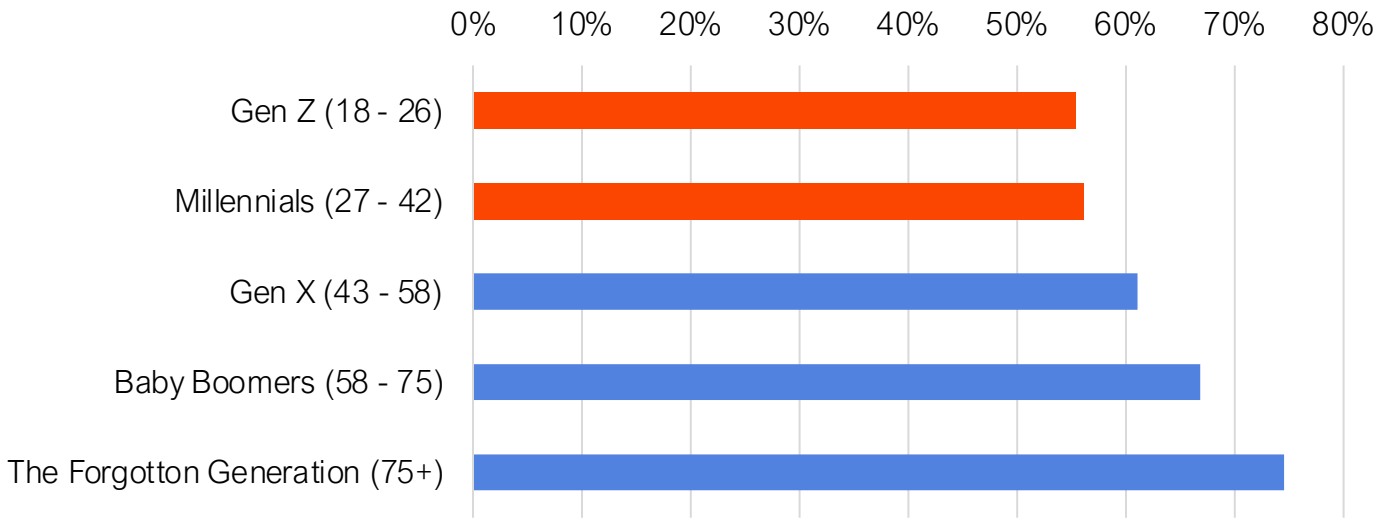
Stonehaven Modelling, Proprietary Insight Platform: Compass

Closing the admiration-consideration gap

05

Gen Z and Millennials are the least positive about engineering's impact on the planet

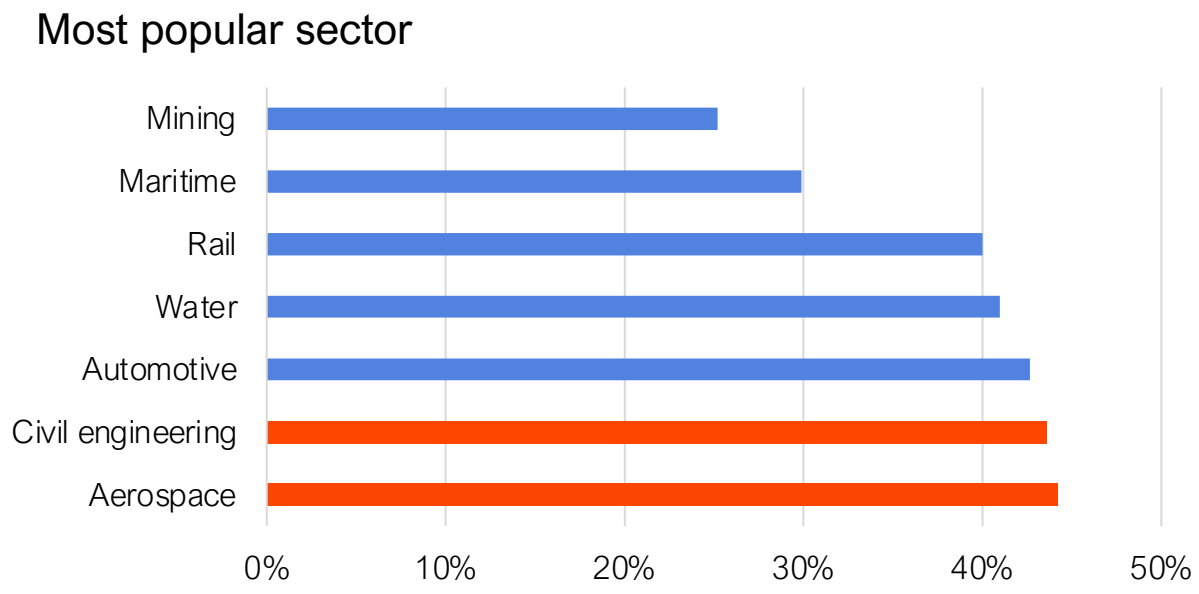
Which of the following jobs do you think has a positive impact on the planet (engineering)?



The engineering industry is currently not getting the credit it deserves with younger generations

Aerospace and civil engineering offer hope to improve negative industry perceptions, as a starting point

Please rank the following based on what you most and least associate engineering with:



1 in 2

Gen Z & Millennials rank aerospace and civil engineering as the most popular engineering sectors

Plus, a hidden benefit that no-one has associated with engineering before: engineering promotes local community prosperity

Proportion of engineering employment

These are the UK's engineering hotspots defined as those areas where a high proportion of the population (between 1 in 3 and 1 in 2 adults) are employed in the engineering economy.

1. Aberdeen City and Aberdeenshire
2. Berkshire
3. Cambridgeshire
4. Derby
5. East Lancashire
6. Flintshire and Wrexham
7. Gwent Valleys
8. Mid Ulster
9. North and North East Lincolnshire
10. South and West Derbyshire
11. Telford and Wrekin
12. West Cumbria
13. West Lothian

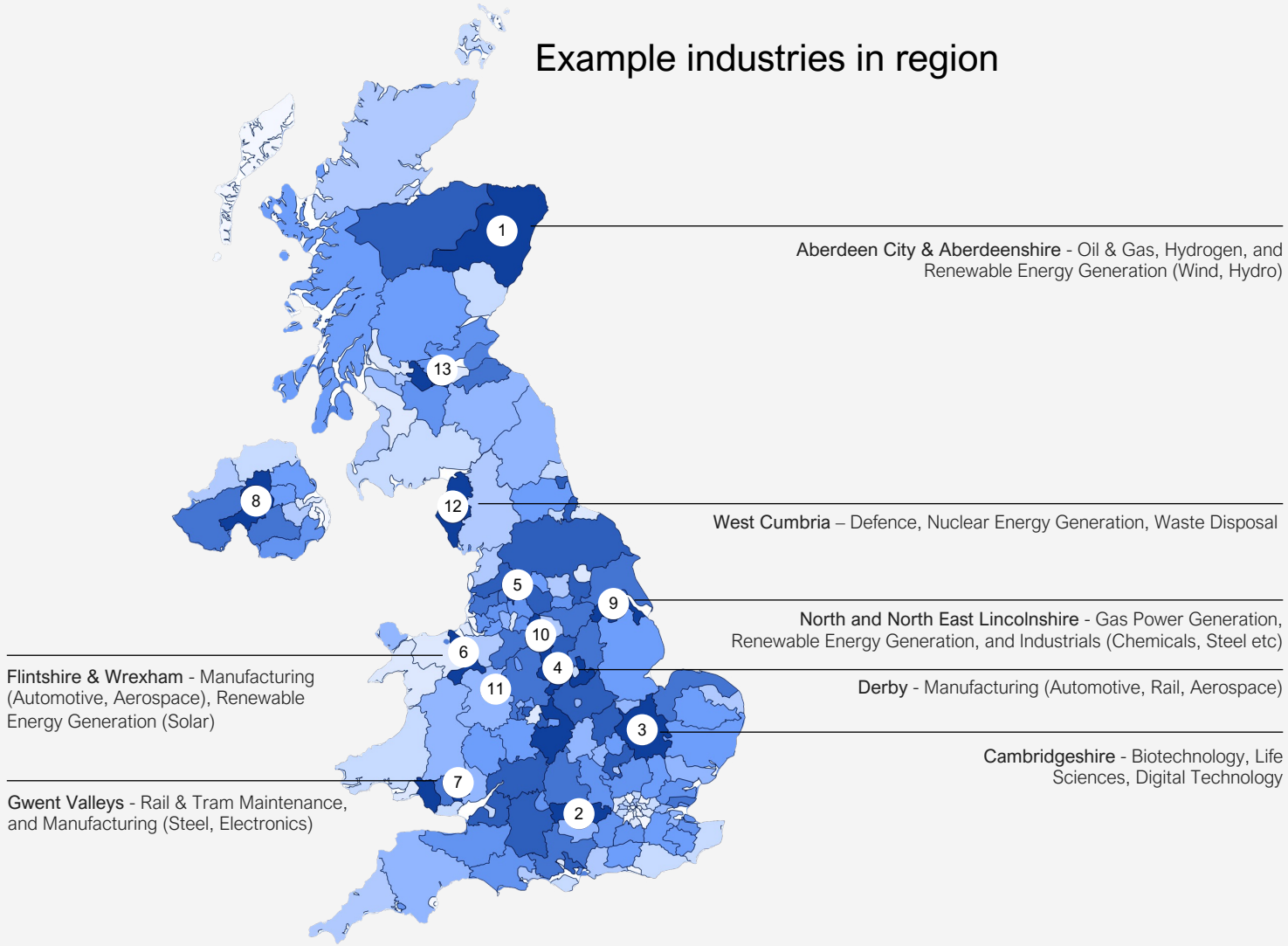
Hotspots ordered alphabetically

Key

% of the working population employed in engineering

- 16.1% - 19.5%
- 19.6% - 21.7%
- 21.8% - 23.1%
- 23.2% - 24.7%
- 24.8% - 26.1%
- 26.2% - 27.3%
- 27.4% - 27.9%
- 28.0% - 29.9%
- 30.0% - 32.0%
- 32.0% - 44.0%

Example industries in region



Aberdeen City & Aberdeenshire - Oil & Gas, Hydrogen, and Renewable Energy Generation (Wind, Hydro)

West Cumbria – Defence, Nuclear Energy Generation, Waste Disposal

North and North East Lincolnshire - Gas Power Generation, Renewable Energy Generation, and Industrials (Chemicals, Steel etc)

Derby - Manufacturing (Automotive, Rail, Aerospace)

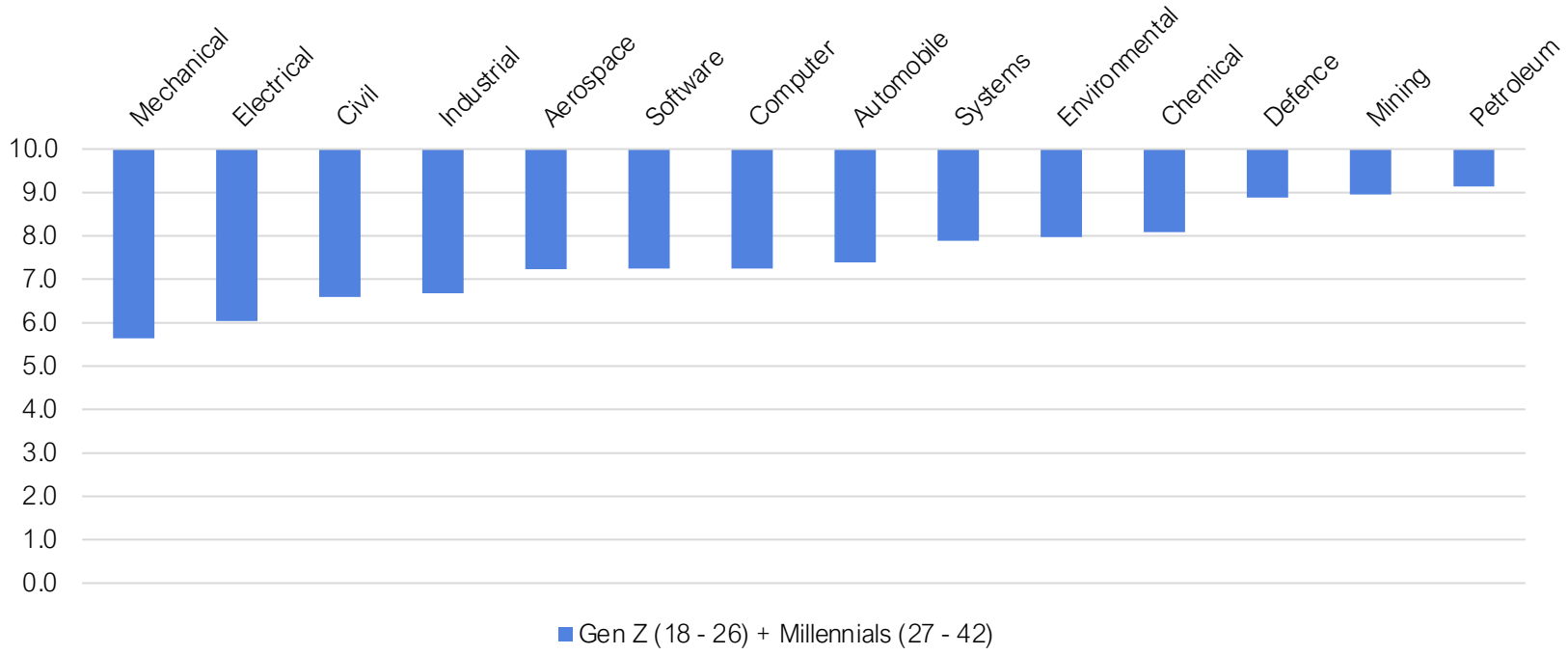
Cambridgeshire - Biotechnology, Life Sciences, Digital Technology

Flintshire & Wrexham - Manufacturing (Automotive, Aerospace), Renewable Energy Generation (Solar)

Gwent Valleys - Rail & Tram Maintenance, and Manufacturing (Steel, Electronics)

With the potential to improve the relatability of the entire industry, and even the least considered sectors

When you think of engineering, rank which comes to mind first? (1 – comes to mind first, 12 – comes to mind last)



1 in 10

Gen Z & Millennials think about careers opportunities in defence, mining, and petroleum the least

Want to hear how we'd solve the engineering skills crisis?

Get in touch.

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