

We want to encourage more young people to make engineering their career. But there are some barriers that we need to overcome. What we know is that engineering and manufacturing are vital to the UK and the global economy. How? Here's the evidence:

KEY ENGINEERING FACTS

The engineering sector generates turnover of around

£115
trillion

which is a quarter of all turnover in the UK

The importance of the manufacturing sector to the UK economy

In 2009, the UK was the world's seventh largest manufacturer, behind USA, China, Japan, Germany, Italy and France. Total turnover for manufacturing in 2009 was **£449 billion**¹, or put another way **50 times** the cost of building the Channel Tunnel.

The value of the low carbon economy

The global market for low carbon goods was worth **£3 trillion** in 2008 and is projected to reach

£4.5 trillion by 2015

Size of the engineering sector

The engineering sector employs **5.6** million people, 4 times the number of people working in the NHS, the largest employer in the UK.

Manufacturing

In 2009, the UK produced **2.9%** of world manufacturing (by turnover) were:

- Manufacture of food products **£67.8** billion
- Manufacture of vehicles, trailers and semi trailers **£38.6** billion
- Manufacture of chemicals and chemical products **£33.8** billion
- Manufacture of machinery and machinery equipment **£31.3** billion
- Manufacture of coke and refined petroleum **£31.2** billion

Workers needed in manufacturing

Between 2007 and 2017 the manufacturing sector will need to recruit **587,000** new workers. This is equivalent to three quarters (76%) of all adults who will have their 18th birthday in 2012.

Automotive

In 2010, UK car production rose sharply with carmakers manufacturing **1.27** million cars, a rise of **27.1%** on the previous year.² Automotives are the UK's largest manufactured export. The automotive industry accounts for nearly half a million jobs, and exports finished manufactured goods worth **£8.9** billion annually.

Women in ENGINEERING

The UK has the lowest proportion of female engineering professionals (8.7%) across the EU.

76% of women in the UK who finish their education and are qualified in science, engineering and technology (SET) are not employed in the SET sector.

The majority of the UK's 550,000 engineering firms are SMEs and entrepreneurialism is a driving force behind our industry. A very small proportion of these businesses are run by women.

Removing barriers to women working in occupations traditionally done by men and increasing women's participation in the UK's labour market could be worth 1.3% to 2.0% of GDP.

Decarbonising the UK infrastructure

To replace, upgrade and decarbonise the UK's infrastructure will cost between £800 billion and £1 trillion by 2030, or £40-50 billion per year. Equivalent to building at least 9 Heathrow terminal 5's each year.

IMPACT OF THE BIG BANG FAIR AND TOMORROW'S ENGINEERS

The Big Bang and Tomorrow's Engineers have a positive impact on teachers and young people

"A career in engineering is desirable" (pupils 12-16)

All UK 26%
Big Bang visitors 51%
Tomorrow's Engineers pupils 47%

"A career in engineering is desirable" (teachers)

All UK 47%
Big Bang visitors 63%
Tomorrow's Engineers pupils 81%

"I know what engineers do" (pupils 12-16)

All UK 11%
Tomorrow's Engineers pupils 45%

Girls were more likely to say 'very enjoyable' (92%) than boys (83%)

FUTURE ENGINEERS

31,898 level 3 engineering apprenticeships started in 2009/10

Graduate starting salaries

The mean engineering graduate salary 6 months after graduating is £22,364. Those graduating in engineering and technology have a mean salary of

£24,952

Graduate premium

The graduate premium associated with an engineering degree is 33% more valuable to the individual than the average across all degrees

ENGINEERS ARE MOST TRUSTED BY THE PUBLIC TO GET THE COUNTRY BACK ON TRACK.

Helping young people make their choice

79% of teachers say they would provide careers advice based on their own knowledge and experience but 13% of science, technology, engineering and maths teachers said they don't know much about what engineers do and a fifth said a career in engineering was undesirable.

78% of parents would recommend a career in engineering to their children.

Graduate destinations

- 56.9% of engineering and technology graduates were in full-time employment 6 months after graduate, compared to 53.1% of all graduates.
- 61.2% of engineering and technology first degree graduates who went into employment went into an engineering related role.

For more information contact:

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