

Key facts about the state of Engineering



Britain is great at engineering

Engineering turnover has grown **2.2%** over the past four years to

.....



in the year ending
March 2012

.....

Which is **24.5%**
of all UK turnover



**5.4
million**

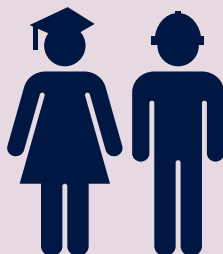
people are employed across
565,320 engineering
enterprises

...but we need many more engineers

Engineering companies are projected to need

1.86 million people
likely to need engineering skills from
2010-2020.

That means we need to **double**
the numbers of engineering related
apprentices and graduates coming
out of colleges and universities.



We need more young people studying STEM subjects

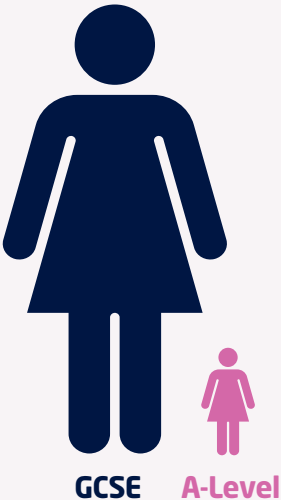
2013	11 year olds: 679,000	
GCSE†	Maths: 437,858 Physics: 145,947	 
A-LEVEL†	Maths: 71,593 Physics: 26,285	 
DEGREE	Engineering: 13,680	

† Grades A* to C



The number of girls gaining **physics GCSE** at A*-C is now almost equal to the number of boys, and **the achievement rate for girls (91.1%) is higher than for boys (90.5%)**.

However in 2013 only **one fifth** of A-Level students were **girls**.



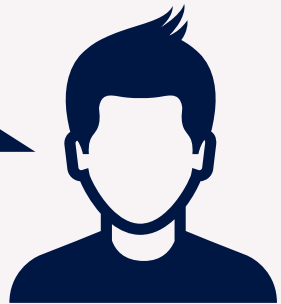


In 2013, almost **two-thirds (64%)** of the general public could cite the engineering development of the last 50 years that has had the greatest impact on them - **up from 38% in 2010.**



11-16 year olds see a career in engineering as **desirable.**

One in six
11 to 16 year olds said they knew what people working in engineering do



Great prospects

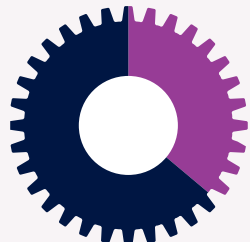
£26,019

Average graduate starting salary for engineering & technology

Around a fifth **more** than for all graduates



Two thirds who went into employment **went to work for an employer whose primary activity was engineering and technology.** Just 2-3% go into the financial services sector.



The engineering sector needs collaborative action:

The evidence and trends presented in this year's Engineering UK report confirm that the long-term (2020) recommendations remain the same as last year:

- **We need a two-fold increase in the number of engineering graduates.** This is vital to meet the demand for future engineering graduates and to meet the shortfall in physics teachers and engineering lecturers who will play a vital role in inspiring future generations of talented engineers.
- **We need to double the numbers of young people studying GCSE physics as part of triple sciences and grow the numbers of students studying physics A level to match those of maths.** There should be a particular focus on increasing take-up and progression by girls.
- **We need a two-fold increase in the numbers of under-19s studying vocational level 3 qualifications.** In particular, we need to increase numbers studying the Advanced Apprenticeship frameworks in engineering and manufacturing technology, construction planning and the built environment, and information and communications technologies.
- **We need to provide careers inspiration for all 11- to 14-year-olds.** This should include opportunities to meet technical leaders from across a range of scientific, technological, engineering and business sectors and, where possible, experience the workplace. This inspiration must highlight the value placed on STEM skills and promote the diversity of engineering careers. When required, it should be backed up with consistent, face-to-face careers information advice and guidance that highlights the subjects needed and the variety of routes to those careers.
- **We need to support teachers and careers advisors** in delivering careers information that helps students understand the range of modern scientific, technological, and engineering career paths – including vocational/technician careers – and recognise the value employers place on STEM subjects. Students also need to have the opportunity to experience a 21st century engineering workplace for themselves.

The Engineering UK report was produced with the support of the members and fellows of the following Professional Engineering Institutions:

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Energy Institute	Institution of Mechanical Engineers
Engineering Council	Institution of Railway Signal Engineers
Institute of Acoustics	Institution of Royal Engineers
Institute of Cast Metals Engineers	Nuclear Institute
Institute of Highway Engineers	Royal Aeronautical Society
Institute of Marine Engineering, Science and Technology	Society of Environmental Engineers
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Institution of Agricultural Engineers	The Royal Academy of Engineering
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Institution of Civil Engineers	The Society of Operations Engineers
Institution of Diesel and Gas Turbine Engineers	The Welding Institute

EngineeringUK partners with business and industry, Government and the wider science and engineering community: producing and sharing evidence on the state of engineering, inspiring young people to choose a career in engineering and matching employers' demand for skills. EngineeringUK leads two programmes: The Big Bang and Tomorrow's Engineers.

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