



Graduate Destinations and Skills

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The challenge for Engineering

- Aging population

*There will be a 16 per cent decline in the number
of 18 year olds in the next ten years*

ie fewer potential starters



Future Skills shortages

- The manufacturing sector will need to recruit over half a million (587, 000) engineering and manufacturing workers with state-of-the-art-skills by 2017.
- The construction industry will need an additional 389,000 engineering technicians and other workers with skilled trades by 2017
- The transport sector will require an additional 366,000 people by 2017, 124,000 of whom will be machine and transport operatives



Future Skills Shortages

- The mining, quarrying; electricity, gas and water industries will need an additional 21,000 workers by 2017.
- The nuclear industry will need to recruit around 1,000 new employees per year until 2025, and even more if a new fleet of nuclear power stations are built, a move which could add £30bn to the UK economy.
- 60% of Aerospace and Defence engineers will retire in the next 20 years



The route of the problem

- Though attitudes of parents and influencers towards engineering are improving, young people are not yet as enthusiastic

7-16 year olds have the least positive perceptions of engineering

Only 18% perceiving engineering as a desirable career



The route of the problem

- This is based on a lack of understanding and experience

This group does not tend to associate being an engineer with the designing and creating that they enjoy so much in the classroom

Only 12% of 11-16 year olds currently claim to have some knowledge of what engineers do



Positive Signs

There are however, some positive signs

- Applications to Engineering and Technology degrees up 11 % this year
- Applications from women up 19% this year in chemical, process and energy engineering
- 10 % increase in the number of BME students achieving engineering and technology degrees.



Room for Improvement

- The 11% increase in engineering and technology degrees must be viewed in terms of an 8.8 % rise in degree applications overall
- Excellent news but there is still a way to go
- In particular, there has been a 17% decrease in the number of students applying to Production and Manufacturing Engineering degrees



- How do we address this situation....?



- By focusing on the benefits...
- Engineering and technology graduates are highly employable with latest figures showing 59% entered full time paid employment 6 months after leaving University, compared to only 55% for all subjects.



- Engineers have good starting salaries.
- Manufacturing engineering (£27,000),
- Mechanical engineering (£25,000),
- Electrical/electronic engineering (£24,488)
- Civil engineering (£24,000)
- Average £28k after 3 years, beaten only by the medics, vets and dentists following longer courses.

Back on track



- Tomorrow's Engineers
First hand experience
- The Big Bang
Motivating and enthusing
- The WISE Programme
Encouraging young women into engineering