**The Institution of Engineering and Technology**

The Institution of Engineering and Technology (IET) is a global organisation, with over 150,000 members representing a vast range of engineering and technology fields. Our primary aims are to provide a global knowledge network promoting the exchange of ideas and enhance the positive role of science, engineering and technology between business, academia, governments and professional bodies; and to address challenges that face society in the future.

As engineering and technology become increasingly interdisciplinary, global and inclusive, the Institution of Engineering and Technology reflects that progression and welcomes involvement from, and communication between, all sectors of science, engineering and technology.

The Institution of Engineering and Technology is a not for profit organisation, registered as a charity in the UK.

For more information please visit [http://www.theiet.org](http://www.theiet.org)

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**IET Skills Surveys**

Since 2006 the IET has carried out annual surveys of businesses to gauge the state of skills in the engineering and technology sector.

- **IET Skills Surveys 2006-2014**
  [http://www.theiet.org/skills](http://www.theiet.org/skills)
**Issues**

These are the key issues raised in the survey.

The 2014 study shows that the demand for engineers and technicians remains high with over half of companies looking to recruit in order to expand their business and of those, more employers are finding it difficult to do so.

The UK continues to lack expertise in STEM subjects at all levels. It is estimated that the UK will require 87,000 engineers each year for the next decade if it is to meet demand\(^1\). To increase the supply of skilled engineers and technicians, we need to create a system of engineering education and training that satisfies the aspirations of young people while delivering the high calibre engineers and technicians that businesses need.

Almost half of organisations have said that they do not do anything specific to improve workforce diversity.

The UK still remains ineffective at attracting women into engineering and IT professions, despite the ongoing call from government and industry to do more in this area. This year’s survey suggests that 43% of employers are not taking any specific action to improve diversity within their workforce.

There are growing inconsistencies between the skills employers expect new recruits to have and the ability they possess.

This is particularly the case for school leavers; results show that 30% of employers felt that school leavers do not have enough practical experience and 25% believe that they do not have sufficient technical expertise. To bridge the gap between employers’ expectations and what the education system delivers, better collaboration is needed to ensure that young people are suitably prepared both academically and practically.

It is promising that since 2013, the number of Intermediate Apprenticeships (Level 2) has more than doubled, but disappointing to see that the number of Higher Apprenticeships (Level 4) has not increased in line with this.

A highly skilled workforce is important to help ensure that the UK is globally competitive and can meet the growing demands of industry, now and in the future. Learners should be encouraged and supported by employers to progress to Higher Apprenticeships, as an equally valuable route of progression to academia.

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**Actions**

These action points are IET recommendations to key stakeholders.

**Employers**

- Employers should offer networking and coaching opportunities within their female engineering workforce to build the confidence to apply for senior roles and improve workforce diversity.
- Promote flexible and part time working, together with planned routes of progression that can accommodate career breaks.
- Employers must be realistic about what the curriculum can offer and be prepared to help bridge the gap from school to employment via training and mentoring.
- Employers should continually develop the skills of their workers to meet the growing and changing demands of industry.
- Learners should be encouraged to pursue routes that are most appropriate to their strengths - whether this be through the vocational or academic route.

**Engineering Community**

- The engineering community should work with government to support the engagement of smaller businesses with the apprenticeship system, in particular to increase the provision of Level 4 Higher Apprenticeships.

**Government**

- A system for applying to vocational education, similar to or via UCAS, would bring much needed clarity to the vocational application process and make clear that there is an equivalent choice between HE and FE.
- There should be a clear escalator of progression through both vocational and higher education routes into engineering, both of which should be seen as an equally viable route into the profession.
- Government should provide stronger incentives, especially for SMEs to engage with the education system.
- There should be consistency within education policy to allow for long term stability and planning.

**Schools**

- Teachers should be supported and encouraged to take up opportunities for spending time in industry to gain awareness of the skills required and the wide range of opportunities available for their students.
- Schools must also engage as fully as possible with employers through, for example, work experience to bridge the gap between education and employment to raise awareness about what working in industry requires.

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**Overall recommendation**

There needs to be consistent and better quality engagement between employers and the education system to bridge the skills gaps in order to meet the needs of industry and inspire the next generation of engineers and technicians.