

## **Standing Committee for Education and Training**

### **Strategic Plan: 2011-2015**

Engineering is at the heart of society. It is vital to the life of the nation and is a primary driver of technological, environmental, economic and social progress. Engineering is about using experience, creativity, scientific knowledge and ideas to produce practical solutions to specific problems. It is also about improving on what has gone before and creating value and economic benefit. As the UK's national academy of engineering we bring together the most creative, successful and talented engineers who work to promote excellence in the engineering performance of the UK.

The ability to learn and to communicate that learning is fundamental to engineering. In addition to providing oversight of the Academy's programmes in education and training and of our partnerships with the wider engineering community through E4E, Tomorrow's Engineers and the Technician Council, key priorities for the Standing Committee for Education and Training are:

#### Longer term (next 5-10 years)

- To build a compelling case to UK and Devolved Governments for the economic value obtained from the supply of engineering skills to the labour market.
- To ensure that the education and training of engineers and technicians in the UK is recognised around the world for its excellence and for the way that it meets the needs of industry and of the economy.
- To provide guidance to university departments and staff on how to achieve excellence in the teaching and learning of engineering and how to attract the brightest and the best students to those courses. The changes to Higher Education funding and to student support should be seen as an opportunity to re-position engineering as an aspirational subject, taught in a practical way (as with medicine).

#### Shorter term (next 2-5 years)

- To compile evidence on the demand for engineers and technicians in the UK workforce, today and into the future.
- To compile evidence on sectors of the economy where engineering skills contribute to a world-leading advantage.
- To compile evidence on where engineering skills can be applied to promote new sources of economic growth.
- To work with Government, Industry and the wider engineering profession to promote excellence in the teaching of STEM subjects in schools and colleges.
- Compile evidence on the levels of engagement with STEM needed at key transition points in the education system to ensure growth of the national economy: in primary schools, secondary schools, post-16 institutions and universities.
- To research the wider skills sets needed by new entrants to engineering higher education.
- To research the theme of sustainability and whole-life approaches as a context for engineering education.
- To provide leadership to the engineering profession on raising levels of diversity in the profession.
- To consider the needs of engineering research when funding for research studentships is being limited.

In delivering these priorities, we will be evidence-driven, rigorous in our analysis and interpretation of data and we will state our position clearly. We will draw on the significant experience of our Fellows as well as drawing in expertise from beyond the Fellowship. We will provide a bridge between industry, academia, government and schools. We will measure our success in terms of meeting the needs of key stakeholders:

- Government needs: the number of engineers and the skills that are required for economic recovery and growth; single point of contact with the engineering profession; impartial advice on engineering education; evidence provided on which decisions can be based; diversified professions.
- Employer needs: skills pipeline; *engineering graduates for industry* agenda; technicians agenda; skills training agenda (upskilling the workforce); diversifying the skills base with the best talent drawn from all sectors of society.
- Eng Institution needs: Partnership working between the 39+ organizations involved; UKSPEC; registration (CEng, IEng and EngTech); diversifying the profession
- University needs: teaching quality and standards; *engineering graduates for industry* agenda; funding concerns; diversifying the profession
- FE & Skills needs: provision of data on the engineering taught in the sector; raising the profile of FE with government, employers, universities, individuals; CPD for lecturers; curriculum development; diversifying the profession
- Schools needs: Engineering outreach; STEM curriculum and assessment; expert STEM teachers; teacher CPD; industrial awareness; diversifying the profession
- Individuals' needs: Careers Information, Advice and Guidance; wage premium from engineering careers; social mobility concerns; widening participation; diversifying the profession; employability; full career development (CPD)