

Parliamentary and Scientific Committee

'Delivering the Industrial Strategy'

A meeting held in partnership with the Institution of Chemical Engineers

Parliamentarians, policy professionals, researchers and industry figures attended our recent discussion meeting to debate science and technology strategy, and in particular the contribution of chemical engineers. Sam Carling MP, P&SC Co-Chair outlined some aspects of the recent government Science and Technology Strategy, which aims to encourage industry and deliver change over the next 10 years. A proper strategy is long overdue, driving the direction of research; there is a focus on housing, water supply, education, clean energy, data and skills, with emphasis on the life sciences sector. Advances in manufacturing are underpinned by the chemical industries, needing new materials, manufacturing resilience, and recycling. Our education system must provide a suitable skills base, and enable life-long learning for the new jobs likely to be created.

We were introduced to Professor Raffaella Ocone OBE, School of Energy, Geoscience, Infrastructure and Society, Herriott Watt University, also current President of the Institution of Chemical Engineers (IChemE). Chemical engineers can assist in developing new processes, improving efficiency and boosting profits. To deal with innovation there is a requirement for upskilling; some chemical engineers are not good at dealing with the transition from laboratory to large scale applications, but new technology is essential for industrial growth. The current challenge, in her opinion, is that people are not prepared to take enough risks, and are not innovative enough. Co-operation in research clusters can be a good idea, especially in areas like Scotland, transitioning from older industries, and investors need more encouragement. Diversity in employment is essential, with apprenticeships, not just university graduates; we must ensure the right skills are available in the right places to assist innovation and investment.

Our second speaker was Professor Kate Barclay MBE, Skills Strategy Consultant from the BioIndustry Association (BIA), an innovative life sciences trade association. She described her career path in the chemical industry, highlighting the value of her initial sandwich degree course, working in the pharmaceuticals industry. For a chemical engineer, apprenticeships are a good path to chartership, but there are currently not enough places. This route should be available to all, as well as the more traditional university degree. SMEs in the life sciences are the rocket fuel of innovation, but scaling them up is essential; often great new ideas, but bought up by foreign investors, and jobs moved from the

UK. Chemical engineers contribute to multi-disciplined teams, but our current national educational curriculum doesn't encourage inter-disciplinary thinking and working. We have many talented people but we need far more diverse career pathways for them.

Q&A session topics included UK demographics, declining graduate numbers in the future, and increasing closures of university life sciences departments, often the origin of our SMEs, were a concern. Many universities have financial challenges, expensive lab-based courses are not covered by domestic student fees, and income from foreign students is declining.

Better school science education is needed especially in deprived areas, and the Covid impact is still felt; more science should be taught in primary schools. Our education system doesn't encourage risk taking and thinking differently; education should meet the needs of employers.

Universities are still not taking enough people from lower social groups, but how to tackle such inequalities? Degrees are expensive, so apprenticeships are very important for those who cannot afford to train, certainly when local courses and student loans are unavailable. Apprenticeships are underfunded, difficult to find, and many SMEs don't have the resources to offer them; neglecting diversity means we can miss out on talent. To increase the pool of suitably trained employees chemical engineering needs to be promoted as a more attractive career, and we should also consider employing expertise from overseas.

Private investment in UK industry is still quite low, but how do we change this, and improve scaling up to commercial success? The country is not attractive to inward investment, with high costs, old factories, and some off-putting regulatory research issues.

Researchers/SMEs are still innovating, just in need of more funds and support.

There was some scepticism about perpetual industrial strategies. Companies need long term investment strategy and stability, or they tend to go overseas; even 10 years is not long enough. Government stability is needed, with consistency and clarity of leadership. Sam pointed out that the government has committed funds, especially for the life sciences, and there will be ongoing monitoring of the strategy.

Sue Wharton

P&SC Discussion Meeting 'Delivering the Industrial Strategy'

13th Oct 2025

P&SC Discussion Meeting 'Delivering the Industrial Strategy'

13th Oct 2025: Dinner Conversations

Discussions continued over dinner, returning to Q&A topics especially demographic concerns, more flexibility in training opportunities, and university and school issues. Better training opportunities are needed, China and India are really working hard on training people in necessary skills. We require both academics and technicians for the future, university degrees don't mean technical expertise, there should be more flexibility in training. Students who had industrial placements for interdisciplinary degrees do far better in their careers.

Many UK universities are struggling financially at the present time, and depend on foreign students to bring in income to support their activities. School science education needs improvement and co-ordination, especially at primary level.

The continuing issue of SMEs not being able to scale up is a continuing concern, with the UK not so attractive for new enterprises. A spirit of more risk taking is needed; we should allow suitably qualified people to come here from other countries, there can be huge benefits to high tech industries, we need to invest in people.

It was suggested we should be more upbeat about the UK situation; we must look and act more positively, especially globally.

Issues for the Committee to take forward on behalf of IChemE are -

How can we improve the negative UK cultural attitude to STEM and scientific careers?

We need to deal with current barriers to scaling up businesses

The value of chemical engineers to industrial progress and society generally should be better known