1. The chemical sciences are a crucial component of the UK’s world-leading science base, a key contributor to growth, and an important vehicle for creating jobs. The UK chemical sector has an annual turnover of £60 billion and sustains over 500,000 jobs. Our strong chemical science sector relies on the availability of suitably skilled employees, for example, in healthcare, clean-energy technologies and new material development. Employers regularly report to us that they have particular difficulty recruiting and retaining technical staff and research highlights that the supply of technicians is not meeting demand.

2. The CBI and Pearson Survey of 2015 found that nearly half of all businesses faced a shortfall in technicians. In addition, the Science Industry Partnership Skills Strategy 2025 projected there would be a cumulative demand for up to 73,000 technical level employees (broadly apprentice entry roles) in science industries between 2015 and 2025 because of both sector growth and replacement demand. The Technical Council and Chemistry Growth Strategy Group have also projected there will be large shortfalls of technicians.

3. The STEM sector has a long way to go before it is able to meet the demand for technicians. Of the ~500,000 people that started an apprenticeship in 2016 only 420 were laboratory technicians.

4. Employers have tended to recruit graduates for technician level roles, which has resulted in high staff turnover, and the misconception that a degree is needed to enter the sector.

5. Technical/vocational education and apprenticeships have the potential to address the STEM skills shortages. However, we are concerned that only a small number of training providers offer chemical science programmes and apprenticeships, and that these providers are often clustered in areas that may not be accessible for all. Many chemical science employers need higher levels of skills up to degree level and beyond; there are even fewer providers of apprenticeships at this level.

6. Employers, training providers, the Government, foundations and professional bodies must work together to ensure the UK has an adequate supply of the highly skilled individuals who will be needed to drive growth in the high-tech chemicals and chemistry-using sectors within the UK.

7. As a Professional Body we provide support to individuals following a technical pathway and to chemical science employers. We aim to strengthen relationships between the employers, the learning providers and the individuals. Some recent initiatives include:
   a. Accreditation of vocational programmes from level 3 and upwards. We have extended our well established Degree and Masters’ accreditation to include vocational programmes. In time this will provide parity of esteem between vocational and academic pathways and act as a quality measure to potential employers and learners.

   b. We have collaborated with FE colleges to enhance and promote chemical sciences provision.

   c. We have provided grants of up to £6,000 to small employers who recruit an apprentice in the chemical sciences for the first time.

   d. We are licensed by the Science Council to award Registered Science Technician (RSciTech) and Registered Scientist (RSci) to members in scientific and technical roles so they can receive professional recognition and further their careers.

8. We are also working closely with the Department for Education and other key stakeholders to help define the new “Health and Science” pathway in the 16-19 Skills Plan.
9. We would welcome the opportunity to discuss any of these areas and our thoughts in more detail.

**About the Royal Society of Chemistry**

With over 50,000 members and a knowledge business that spans the globe, the Royal Society of Chemistry is the UK’s professional body for chemical scientists, supporting and representing our members and bringing together chemical scientists from all over the world.

A not-for-profit organisation with a heritage that spans 170 years, we invest in educating future generations of scientists, we raise and maintain standards and work with industry and academia to promote collaboration and innovation. We advise governments on policy and we promote the talent, information and ideas that lead to great advances in science.

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[6] *FE data Library: apprenticeships* [last accessed 12/01/2017]
[7] An example is a formal partnership we have established with Wirral Metropolitan college.
[8] RSciTech and RSci are competence based awards aimed at technical level (non-graduate) employees.