

We call on the UK government to:

1. Plan for and deliver increased public sector investment in R&D

2. Safeguard the UK's diverse R&D funding landscape

The UK government must reverse the long-term erosion of core research budgets to protect our national research capacity and capability.

Core research budgets are at the heart of the UK's national research capacity, supporting postgraduate training, infrastructure, early-stage research and core research activities.^{9 10} Quality related (QR) funding has seen a real-terms fall in its value of 13% over the last 7 years¹¹ and whilst the uplift in QR funding announced in the summer is welcome,¹² the longer-term erosion of core budgets¹³ risks damaging our national research capacity.

Failing to do so will leave universities' core budgets stretched even further. This could be particularly damaging for strategically important subjects like chemistry that are more expensive to teach.¹⁵

Investment should range from world-class UK university labs to world-leading national facilities like Diamond Light Source, regional hubs like the Daresbury Laboratory, and e-infrastructure that enables advancements in digital technologies.

Funding to support regional growth is vital. Funding to support R&D from the ESI Funds, such as the European Regional Development Fund (ERDF), which has a track record of supporting businesses to grow, invest and create jobs in regions across the UK. Domestic replacements, such as the UKSPF must flexibly support R&D to secure sustainable regional growth.

The UK has been allocated €17.2bn in ESI Funds for 2014-2020, of which €5.8bn is via the ERDF.¹⁶

Discovery research underpins current and future research and innovation activities, leading to ground-breaking discoveries, new technologies or completely loJEvIU14.58 tp5 supp34m1 g1834m1 g/F1sy0 595.32 841.92 reW*ñBT/F1 12 Tf1 0 0 1 34.02 4.02gg13(0

3. Work across departments to deliver the skilled workforce the UK needs

The UK government should develop a cross-departmental strategy to deliver the skilled workforce the UK needs to support future economic growth and attract R&D investment to the UK.

Access to a skilled and talented workforce, particularly the availability and quality of researchers, is among the top three factors in attractiveness for private investment.²⁴ It is also a key determinant for UK-based companies to decide whether to invest in the UK or elsewhere and a key barrier to growth for UK scale-up businesses.²⁵

For chemistry, strengthening the foundations of excellent STEM education in the UK requires increasing the number of high-quality chemistry teachers by improving retention and progression and improving the quality of and access to technical and further education routes, for example by investing in more high-quality apprenticeships and providing sustained, long-term funding for further education.^{26,27}

Increasing retention and progression of women in STEM will increase workforce participation as well as innovation and productivity. Female chemists in academia experience considerable barriers for progression and are often lost from the STEM workforce.^{28,29}

For investments in international R&D collaboration to deliver their potential, the UK immigration system needs to do more to attract scientists and innovators to the UK – this means both welcoming messaging and streamlined rules.³⁰

Contact

The Royal Society of Chemistry would be happy to discuss any of the issues raised in our statement in more detail. Any questions should be directed to Kathy Page

- ¹ [G20 GDP Growth – Fourth quarter of 2018](#), OECD, March 2019
- ² [Gross domestic spending on R&D \(indicator\)](#), OECD, 2019, doi: 10.1787/d8b068b4-en (Accessed on 21 March 2019)
- ³ [European Innovation Scoreboard 2019](#), [European Commission](#), June 2019
- ⁴ [International comparative performance of the UK research base](#) – 2016, Elsevier and Department for Business, Energy and Industrial Strategy (BEIS), October 2017
- ⁵ [From ring-fence to 2.4%](#), Campaign for Science and Engineering (CaSE), February 2019
- ⁶ [CaSE Briefing - The Economic Significance of the UK Science Base](#), CaSE, May 2014
- ⁷ [The 2018 EU Survey on Industrial R&D Investment Trends](#), Joint Research Centre, European Union 2018
- ⁸ [Intramural R&D expenditure \(GERD\) by source of funds](#)