

The Rt Hon Steve Barclay MP  
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13 October 2020

Dear Steve,

**RE: HMT and HMRC consultation on the scope of qualifying expenditures for R&D Tax Credits**

I am writing, on behalf of the Royal Society, to welcome the review of the scope of R&D tax credits. Updating the scope to reflect current research practices will send a strong signal to potential investors that the UK is a world-class location for cutting-edge research. It will also support the scale-up of existing R&D activity. A tightly defined broadening of the scope of activities that qualify for tax relief can ensure that companies conducting these desirable research activities receive a targeted boost in finances, enabling them to recruit talent and accelerate R&D activity. This is not, however, sufficient to achieve the UK's ambitions to increase private R&D intensity and should form part of a range of complementary financial reliefs that together effectively target the research that the UK wishes to incentivise.

While government support is critical, the UK will only maximise the benefits of increased public investment in R&D if it mobilises business, which currently accounts for around two thirds of the UK's total R&D spend<sup>1</sup>. Investment by foreign-owned business makes up approximately 53% of this expenditure<sup>2</sup>. To achieve the government's ambition to become a science superpower and for overall investment in R&D to total at least 2.4% of gross domestic product (GDP) by 2027, the UK must attract more private investment.

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<sup>1</sup> <https://royalsociety.org/-/media/policy/projects/investing-in-uk-r-and-d/2019/investing-in-UK-r-and-d-may-2019.pdf>

<sup>2</sup> ONS (November 2019) Business Enterprise Research and Development, Dataset 23 EXPENDITURE ON R&D PERFORMED IN UK BUSINESSES, UK OR OVERSEAS OWNERSHIP  
<https://www.ons.gov.uk/economy/governmentpublicsectorandtaxes/researchanddevelopmentexpenditure/datasets/ukbusinessenterpriseresearchanddevelopment>



President Sir Venki Ramakrishnan  
Executive Director Dr Julie Maxton

Founded in 1660, the Royal Society is the independent scientific academy of the UK, dedicated to promoting excellence in science.

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Delivering 2.4% relies on creating an attractive investment environment in the UK. This includes showcasing the UK's investment assets, ensuring that there is a skilled and highly qualified workforce, appropriate infrastructure and a market for the uptake and adoption of new technologies in the UK. There must also be clear financial benefits to locating research and development in the UK. R&D tax credits contribute to creating an attractive investment environment and to do so effectively, it is important that they are aligned to the world-leading research and development that the UK wishes to attract.

Research techniques change rapidly. The amount of data produced on a daily basis is growing exponentially in volume and the ability to analyse it is growing in power. Recent years have seen exciting advances in machine learning - a form of artificial intelligence that allows computer systems to learn from examples, data, and experience. As the field develops further, machine learning promises to support potentially transformative advances in a range of areas, and the social and economic opportunities which follow are significant. An environment that encourages the effective use of data will be key to enabling machine learning to be put to use, and hence to deliver its promised benefits. This includes ensuring that tax reliefs are sensitive to these new approaches.

For example, firms developing data-enabled technology generate large quantities of data, which play an important role in development and testing of their products. It is not practical to achieve the levels of compute that they currently need for R&D through physical servers, so they increasingly pay for data storage and cloud computing services to enable them to conduct research 'in the cloud'. These are considerable costs that are crucial to the research process but these essential overheads are not qualifying expenditure for R&D tax credits. It would be helpful to explore how tax reliefs sensitive to these types of analytical approaches could encourage firms to invest more in speculative development of their own systems, rather than having to win customers who will bear the cost of running their simulations.

Many impactful innovations are made at the cusp of one discipline, as it interacts with another. Targeted expansion of the scope of R&D tax credits may provide an opportunity to incentivise greater innovation in and between new sectors. For example, the creative industries have highlighted that broadening the scope of R&D tax credits to support R&D in the creative sector could help drive innovation in this sector, which may itself stimulate more valuable interdisciplinary working<sup>3</sup>.

Reviewing the scope of R&D tax credits is one factor that will contribute to an attractive environment to locate research and attract private investment. It is important to develop a range of complementary financial reliefs that together effectively target the research that the UK wishes to incentivise and showcase these effectively. These should be regularly reviewed as a whole to ensure that together they are an effective incentive to the mobile R&D investors that the UK wishes to attract.

Alongside this, the government should produce an FDI strategy with the aim of showcasing UK assets internationally and attracting new R&D investment. This should complement the anticipated BEIS R&D

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<sup>3</sup> Creative Industries Federation (2020) *Creative coalition: a plan to reimagine*

[https://www.creativeindustriesfederation.com/sites/default/files/inline-images/Creative%20Industries%20Federation%20-%20Creative%20Coalition-%20a%20plan%20to%20reimagine\\_0.pdf](https://www.creativeindustriesfederation.com/sites/default/files/inline-images/Creative%20Industries%20Federation%20-%20Creative%20Coalition-%20a%20plan%20to%20reimagine_0.pdf)

Strategy, which should signal clearly to investors how increased public investment in R&D will be delivered, showcasing opportunities, providing confidence and informing long-term planning. Getting this right will enable the UK to achieve and surpass its 2.4% target.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Sue Ion', written in a cursive style.

Dame Sue Ion DBE FREng FRS  
Chair, Science, Industry and Translation Committee

cc [rdtaxexpenditures@hmtreasury.gov.uk](mailto:rdtaxexpenditures@hmtreasury.gov.uk); Amanda Solloway MP Parliamentary Under Secretary of State (Minister for Science, Research and Innovation) BEIS

The Royal Society is the national academy of science for the UK. Its Fellows include many of the world's most distinguished scientists working across a broad range of disciplines in academia, industry, charities and the public sector. The Society draws on the expertise of the Fellowship and its Committees to provide independent and authoritative advice to UK, European and international decision makers.