

The Rt Hon Rishi Sunak MP
HM Treasury
1 Horse Guards Road
London
SW1A 2HQ
United Kingdom

12 October 2021

Dear Chancellor,

We welcome this Government's ambition to ensure the UK is a 'science and technology superpower', by placing investment in research and innovation at the heart of the Plan for Growth and the Integrated Review. Delivering on this vision is now crucial. This Spending Review presents an opportunity to invest in research and innovation to build strong and innovative public services, level-up across the UK, lead the transition to Net Zero, advance Global Britain and deliver the Plan for Growth.

We urge you to use this Spending Review to deliver the commitment made in the 2020 Budget to increase public investment in research and development (R&D) to £22bn by 2024/25 and signal, at home and abroad, that the UK is serious about becoming a science and technology superpower.

Setting out steps to £22bn by 2024/25 will fuel economic growth and boost productivity, enabling researchers and innovators to continue driving the high-skill sectors and cutting-edge technologies that will help shape the UK's future. **Crucially, certainty around public funding will help leverage the private investment needed to achieve the Government's ambition** of raising total UK investment in R&D to 2.4% by 2027, and 3% in the longer term. For example:

- Each pound of public investment in R&D crowds in roughly two pounds of private investment.ⁱ
- The leveraging effect of public investment in R&D is most substantial within the first year, while the majority of private investment is crowded in by the fifth year.ⁱⁱ
- Recent analysis shows that if Government were to delay the £22bn target by three years it would lose leveraged private investment of over £11bn by 2027/28 and miss the target of 2.4% of GDP invested in R&D by 2027.ⁱⁱⁱ

As you noted in the Plan for Growth "[innovation] drives economic growth and creates jobs"^{iv}, resting on the UK's world-leading research base. However, the UK is not keeping pace with other leading scientific nations when it comes to investment in R&D. The UK's target to invest 2.4% of GDP is a race to below the OECD average, which now sits at 2.5%^v, while many individual countries boast much higher levels of investment than the UK, including France (2.2%), China (2.2%), the US (3%) and Germany (3.2%) – **see Table 1**^{vi}.

The last 18 months have shown the immense value of UK research and innovation to the nation's health and wealth. Across universities, industry, medical research charities and the NHS, researchers and innovators have accelerated our understanding of COVID-19 and our ability to tackle it, as well as its impacts on our lives. From diagnostics, treatments and vaccines to the way we manage built environments and safeguard our mental health, UK research and innovation has saved and improved the lives of millions, while making it possible for society and the economy to reopen.

The recent success of UK research and innovation has been a lesson in long-term investment, as years of previous funding were shown to have created the conditions for quick and effective delivery of benefits to the public.

To continue realising the benefits of research and innovation for all in the years to come, and build our resilience against future crises, it is crucial that Government invests strategically now.

Government must use this Spending Review to set out how public investment in R&D will rise through genuine new investment to £22bn by 2024/25.

Yours sincerely,

Association of British Pharmaceutical Industry (ABPI)

Academy of Medical Sciences

Alzheimer's Research UK

Association of Medical Research Charities (AMRC)

BioIndustry Association (BIA)

The British Academy

British Heart Foundation (BHF)

Cancer Research UK

Campaign for Science and Engineering (CaSE)

The Francis Crick Institute

The Institute of Cancer Research (ICR)

MSD

National Centre for Universities and Business

Royal Academy of Engineering

Royal Society

Royal Society of Chemistry

Russell Group

Universities UK

Versus Arthritis

Wellcome

UK engineering organisations:

Chartered Institutions of Highways and Transportation CIHT

The Chartered Institute for IT (BCS)

The Chartered Institute of Plumbing and Heating Engineering (CIPHE)

Engineering UK

The Institution of Engineering and Technology (IET)

Institution of Gas Engineers & Managers (IGEM)

Institute of Healthcare Engineering and Estate Management (IHEEM)

Institute of Physics and Engineering in Medicine (IPEM)

The Institute of Measurement and Control (InstMC)

Institute of Lighting Professionals (ILP)

The Nuclear Institute

Society of Operations Engineers (SOE)

TWI

Cc:

Secretary of State for Business Energy and Industrial Strategy, The Rt Hon Kwasi Kwarteng MP

Minister for Science, Research and Innovation, George Freeman MP

Logos



Logos continued



Table 1: GDP invested in R&D by leading scientific nations, 2017 to 2019^{vii}

Country	2017 Investment in R&D (% of GDP)	2019 Investment in R&D (% of GDP) (green = increase since 2017; black = no change since 2017; red = decrease since 2017)
Israel	4.69	4.93
Korea	4.29	4.64
Japan	3.17	3.20
Germany	3.05	3.19
United States	2.85	3.07
OECD average	2.35	2.48
France	2.20	2.20
United Kingdom	1.68	1.76
Canada	1.69	1.59

ⁱ [The relationship between public and private R&D funding \(publishing.service.gov.uk\)](https://publishing.service.gov.uk)

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ⁱⁱⁱ [CaSE | Delaying R&D target would cost UK billions in private investment \(sciencecampaign.org.uk\)](https://sciencecampaign.org.uk)

^{iv} [Build Back Better: our plan for growth \(HTML\) - GOV.UK \(www.gov.uk\)](https://www.gov.uk)

^v [Research and development \(R&D\) - Gross domestic spending on R&D - OECD Data](https://data.oecd.org)

^{vi} [Main Science and Technology Indicators - OECD](https://data.oecd.org)

^{vii} [Main Science and Technology Indicators - OECD](https://data.oecd.org)