

Spending Review 2020: levelling up at home - leading the world through science and skills

Rapid economic and social recovery from the Covid-19 pandemic is vital. But from crisis comes opportunity. Now is a key moment to reflect on the lessons of 2020 and create new opportunities and resilience for the future. The Britain of 2025 and beyond should be fairer, greener, healthier and more prosperous. Investment in people and ideas can deliver the transformation our economy needs: generating scientific discoveries and novel technologies, training an adaptable workforce of the future, and sparking prosperity in towns and cities and across the country.

The 24 globally outstanding Russell Group universities are based in every region and nation of the country, delivering high value education and graduates, ground-breaking research and thousands of quality local jobs. This unique combination makes them a crucial component in unlocking Britain's potential. Research-intensive universities already inject nearly £87 billion into the national economy every year – with enhanced support they could do even more.

Building on the Government's bold ambition for science and skills, our proposals acknowledge the economic challenges Britain faces, offering solutions on ways to invest efficiently and deliver a substantial return for investment. Now is the time to double down on our competitive advantage in education and research: levelling up at home - leading the world.

Making the UK a science superpower

The scientific response to Covid-19 has drawn on exceptional British capabilities in research and innovation across a range of disciplines. Homegrown scientific ingenuity has never been more important, while the renown of our universities and the new fairer immigration system will play a part in Global Britain continuing to attract the best talent from around the world. We can turn challenges such as carbon neutrality into opportunities that deliver high quality jobs across the country and support the work of a new ARPA-style agency.

For every £1 of public research funding they secure, our research-intensive universities deliver an average return of £9 to the UK economy. The Government has made a very welcome commitment to increase public spending in R&D to £22bn per year by 2024/25. To ensure these funds deliver maximum return for the UK taxpayer, as a priority we propose the Government should:

- Focus on long-term and low-bureaucracy investments in people and ideas by introducing a significant uplift in quality-related (QR) research funding and equivalent streams in the devolved nations. This approach to funding the best research creates maximum competitive advantage for the UK. The flexibility helps universities respond to the needs of their communities while advancing fundamental research; and the multi-year allocation process focused on academic excellence and real-world impact delivers efficiency and allows for long-term planning.
- Ensure research funding is sustainable for the future by increasing the level of full economic costs (FEC) covered on all public grants, so universities have the capacity to deliver the cutting-edge R&D the country needs without compromising on the excellence of British research as the volume of our activity increases. The ambition should be to deliver at least 90% FEC through a combination of grant support for projects and research capital, helping secure our research sovereignty.
- Exploit the strength of our world-class higher education and research system to facilitate discussions with other countries, where student and researcher exchanges and joint R&D programmes can enhance the attractiveness of the UK for new trade deals and inward business investment. Negotiating a fair and balanced deal for the UK to associate to Horizon Europe will ensure we can attract the best researchers globally and work seamlessly with universities, institutes and businesses across Europe on shared global challenges.

Levelling up

Universities are at the heart of regional clusters of excellence, coordinating substantial partnerships with SMEs, multinational companies, local and national governments, further education colleges, schools, charities and public sector partners such as the NHS. Our proposals will strengthen local and regional economies using the skills, knowledge and innovation in our universities to drive economic growth in collaboration with British business and new trading partners. Supporting over 260,000 jobs up and down the country, our universities are all major employers and hubs of investment that radiate out to surrounding towns.

To help universities maximise their potential in generating opportunity and productivity right across the country the Government should:

- Boost capital investment to ensure shovel-ready projects that have been paused due to the pandemic can re-start as soon as it is safe to do so. Russell Group universities have had to put over £2bn worth of projects on hold, which could potentially support around 28,000 jobs.
- Channel a portion of the additional R&D investment into a major scale-up of schemes with a proven track record of fostering university-business partnerships and extending local innovation capacity and training. These include the Higher Education Innovation Fund (HEIF), Strength in Places Fund, Knowledge Transfer Partnerships and the Connecting Capability Fund. Efficiencies can be achieved by working through these existing processes and taking advantage of the excellent research infrastructure and extensive links our universities already have in place. Governments in the devolved nations should work closely with the relevant funding bodies to launch similar schemes where they are not already established to ensure businesses and partners in all parts of the country can benefit.

Superb education, training and skills

Russell Group universities pride themselves on delivering academic excellence, training the highly skilled and entrepreneurial graduates the country needs. A robust university education delivers for the individual *and* for Britain: a single cohort of UK-domiciled students at Russell Group universities is estimated to contribute more than £20bn to the economy over the course of their working lives, including a total of £11bn in tax and NI contributions. Improving access to high-value degrees alongside investment into higher level technical skills will ensure a steady supply of talent to boost all regions of the country and give Britain a commanding lead in the recovery and beyond.

To put the next generation, and the talent of the future, at the heart of this spending review, the Government should:

- Seek to maintain the highest quality university education by guaranteeing teaching grants on a *per student* basis for the duration of this spending review at levels that at least match existing funding. Options to redistribute the grant to provide more support for the highest-cost – and highest priority – subjects (such as chemistry, engineering, physics, medicine, dentistry and veterinary science), where there are currently the greatest deficits, should also be considered.
- Create a new deal for funding postgraduate research, as proposed in the R&D Roadmap, to ensure UK businesses, universities and research establishments can secure the pipeline of future researchers who will be crucial to building up our R&D capacity as investment is scaled. Doubling the level of full economic cost recovery for this high-level training (up from 45% FEC now) and enhancing stipends for training researchers will open up opportunities to a more diverse range of people and put PhD provision on a more sustainable footing for the future.
- Consider ways to bring Global Talent visa costs in line with those in other research-intensive nations, including revisiting requirements to pay the immigration health surcharge up front, to support the Government's ambition to become the top destination for international talent.

1. Making the UK a science superpower

Summary of key recommendations:

The Government has made a very welcome commitment to increase public spending in R&D to £22bn per year by 2024/25. To ensure these funds deliver maximum return for the UK taxpayer, we propose the Government should:

- **Deliver an ambitious five-year plan setting out annual R&D spending increases to 2024/25** to draw the attention of an international audience and stimulate business confidence in the UK's R&D environment. BEIS could be responsible for convening a cross-departmental committee, along with the Government Office for Science and NIHR, to ensure coordination and collaboration for public R&D investment across Government.
- Focus on long-term, low-bureaucracy investments in people and ideas through **a significant uplift in quality-related (QR) research funding** and equivalent streams in the devolved nations. This approach to funding the best research creates maximum competitive advantage for the UK. The flexibility helps universities respond to the needs of their communities and advance fundamental research. The multi-year allocation process focused on academic excellence and real-world impact delivers efficiency and supports long-term planning.
- Take forward the commitment in the R&D roadmap to work with research funders to “consider opportunities to fund a greater proportion of the full economic cost of research projects in universities” and to ask “whether government should fund at a higher rate, to safeguard the sustainability of the research we fund”. **Increasing the level of full economic costs (FEC) covered on public grants, including from Research Councils, government departments and NIHR**, will ensure universities have the capacity to deliver the cutting-edge R&D the country needs without compromising on the excellence of British research as the volume of our activity increases. The ambition should be to deliver at least 90% FEC through grant support for projects and research capital, helping secure our research sovereignty.
- **Boost core Research Council budgets** used for bottom-up, responsive mode projects and supporting research talent – this is especially important if a substantial uplift in R&D intensity in the UK is to be achieved and quality standards maintained.
- Exploit the strength of our world-class higher education and research system to facilitate discussions with other countries, where student and researcher exchanges and joint R&D programmes can **enhance the attractiveness of the UK for new trade deals and inward business investment**. **Negotiating a fair and balanced deal for the UK to associate to Horizon Europe** will ensure we can attract the best researchers globally and work seamlessly with universities, institutes and businesses across Europe on shared global challenges. However, association should not be pursued at any cost and we commit to helping Government develop a package of alternatives if a fair and balanced deal cannot be reached.
- **Clarify the overall mission and objectives of a UK ‘ARPA’** and how it fits into the wider R&D and innovation funding landscape early on to ensure its long-term success. The Government should act as an ‘intelligent customer’ and **use its substantial public procurement power** to create a dynamic ‘innovation pull’ effect for the UK.
- Encourage UKRI to look at opportunities to **reduce red tape** within the system by seeking to harmonise more processes and reducing the bureaucracy of reporting requirements wherever possible, as well as encouraging a consistent approach across all funders to issues such as research culture and research integrity.

Research and innovation for a healthier, greener and more prosperous society and economy

- 1.1 The UK undoubtedly has one of the best research systems in the world.¹ The scientific response to Covid-19 has drawn on exceptional British capabilities in research and innovation across a range of disciplines. As we emerge from the devastating impacts of the coronavirus pandemic, we must play to our strengths as a nation. At the heart of our globally recognised science ecosystem are the UK's research-intensive universities, who will be central to driving the R&D-led economic recovery the Government is ambitious for.
- 1.2 A healthy research ecosystem has many far-reaching benefits, but in the current crisis its role in protecting public health now and for the future is paramount. Research-intensive universities are driving forward vaccine trials, working on new virus treatments, producing ventilator technologies and developing outbreak simulation models, amongst numerous other areas.² Our world-class science base is also essential in seizing opportunities to confront grand challenges such as climate change – helping achieve the ambition for net zero carbon emissions by 2050 – and an ageing society. Investment in R&D puts the UK in a prime position: not just to respond positively to key societal and technological changes, but to take the lead globally. With universities in England, Wales, Scotland and Northern Ireland collaborating extensively on these scientific challenges, the country's extraordinary performance in research and innovation is something that unites the four nations of the UK.
- 1.3 The economic benefits of R&D investment are clear. For every £1 of public research funding they secure, Russell Group universities deliver an average return of £9 to the UK economy.³ This includes the direct impact of university research and the impact of productivity spillovers associated with their R&D. Indeed, the strength of the UK's science base, our world-leading universities and the talented academics we have are critical in attracting inward investment in R&D, as exemplified with recent investment plans from major global pharmaceutical companies in the UK worth over £1bn.⁴

A five-year plan for R&D investment to attract foreign direct investment and power growth in all regions of the UK

- 1.4 Achieving the potential set out in the Government's R&D Roadmap for stronger and faster economic and social recovery from Covid-19, boosted productivity across the country and solutions to some of the UK's most pressing challenges, will require steady and sustained investment. We therefore welcome the Government's commitment to increase public spending on R&D to £22bn per year by 2024/25. In order to make these plans a reality the spending review will now need to set out how these increases in investment will be achieved. This should include a five-year trajectory with clear annual investment milestones in order to track progress against the Government's commitments.
- 1.5 **An ambitious five-year plan setting out annual spending increases to 2024/25 should draw the attention of an international audience and go a significant way in stimulating business confidence in the UK's R&D environment.** Our priority is to help the Government ensure these funds are spent in the most efficient and effective way possible,

¹ With only 3% of the world's researchers, the UK produces 7% of the world's publications and 14% of the world's most highly-cited research. In addition, around 25% of the world's top 100 prescription medicines were discovered and developed in the UK (BMI Research (2016) *United Kingdom Pharmaceuticals & Healthcare Report Q1 2016*)

² Examples of how Russell Group universities are contributing to the national and global efforts to combat the virus can be found here: <https://russellgroup.ac.uk/media/5873/rg-unis-fighting-covid-19.pdf>

³ The economic impact of Russell Group universities (2017): <https://russellgroup.ac.uk/news/economic-impact-of-russell-group-universities/>

⁴ For example, Merck is planning to build a £1bn UK hub including research laboratories and GSK is launching a £10m UK AI hub: <https://www.ft.com/content/c96e79e1-ec9b-49db-9c32-a1fc789f1c3a> and <https://www.standard.co.uk/business/glaxo-gsk-ai-machine-learning-kings-cross-a4538461.html?linkId=100000014879056>

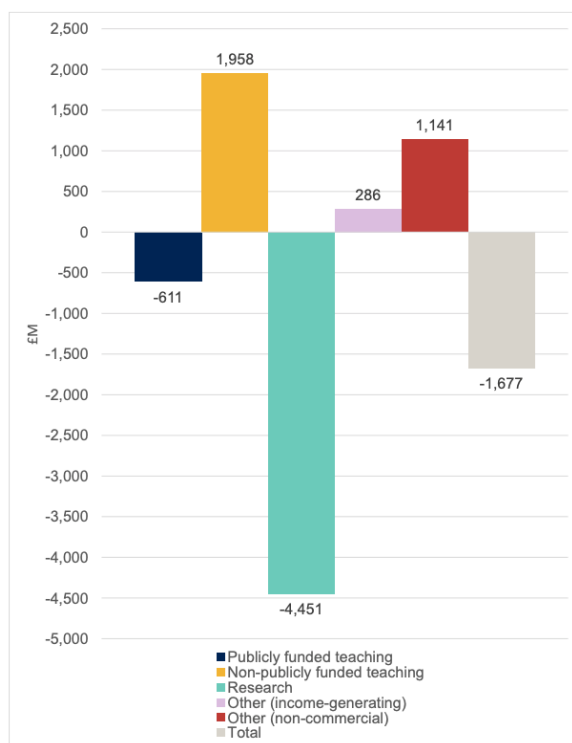
recognising the need to deliver value for the tax payer and positive economic, social, environmental and health impacts across the whole country.

- 1.6 To deliver value for money, reduced bureaucracy and a united vision for R&D spending across the piece, we propose that BEIS, in collaboration with No 10, should be empowered to coordinate the distribution of R&D investment in line with the Government’s R&D Roadmap. They could be responsible for **convening a cross-departmental committee**, along with the Government Office for Science and NIHR, to ensure coordination and collaboration for R&D investment right the way across Government.

Putting research on a more sustainable footing

- 1.7 The Covid-19 pandemic has exposed the fragility of the current funding model for research. This spending review is therefore a timely opportunity to put research on a more sustainable footing to deliver the scientific, social and economic returns needed for the UK to recover and prosper. While the Research Councils have previously committed to supporting 80% of the full economic costs (FEC) of research grants, data from the OfS shows funding from the Councils has hovered between 72%-74% FEC since at least 2016.⁵ Overall this has contributed to an annual deficit of £4.5bn in university research (see figure 1).

Figure 1: TRAC full economic cost surplus/deficit by activity, 2018/19, UK HEIs⁶



- 1.8 As a key area of university activity which generates a surplus, income from international student fees plays an important role in maintaining the sustainability of research, along with revenue generated from business conference hire, endowments and the provision of some student accommodation. The result of the pandemic is such that these income streams are likely to be unreliable for a number of years, putting financial pressure on universities and impacting their ability to meet the full costs of their research, particularly as public R&D

⁵ OfS Annual TRAC reports [2016-17](#), [2017-18](#), and [2018-19](#)

⁶ OfS Annual TRAC Sector Analysis 2018-19 https://www.officeforstudents.org.uk/media/1866c816-2c9f-423f-8f28-fe37a232e477/ofs2018_28-updated_31_january_2019.pdf

investment rises.⁷ **Increasing the level of full economic costs (FEC) recovered on grants, including from Research Councils, government departments and NIHR, will ensure universities have the financial capacity to deliver the world-leading R&D the country needs.**

- 1.9 If we do not take this opportunity to put research on a more sustainable footing, we are missing the chance to secure the sovereignty of our research. Furthermore, if the UK's top universities struggle to make it financially viable to bid for new grants, we risk making the system less competitive. In the context of an increasing budget for research there should be scope for the volume of research activity to increase alongside a sensible increase in the FEC that universities can recover, which will be necessary to maintain the highest quality outputs expected of world-leading British institutions.
- 1.10 The R&D Roadmap makes a welcome commitment to "consider opportunities to fund a greater proportion of the full economic cost of research projects in universities. This includes asking whether government should fund at a higher rate, to safeguard the sustainability of the research we fund". Previously, the Research Councils were meant to fund programmes at 80% of FEC, with funding for research capital intended to top this FEC level up to around 90%. To put research on a more sustainable footing in line with historic investment levels, we propose Government aims to return to supporting publicly-funded research at 90% of FEC (through a combination of project grants and research capital) as a matter of priority in this spending review.
- 1.11 Charities fund a great deal of research in the UK, particularly in biomedical sciences. They are a very important part of our research ecosystem and have long-established links with research-intensive universities. However, they fund a relatively low level of FEC on grants (around 60%), putting significant pressure on the sustainability of this research for universities. If this continues, there is a risk that charity-funded research could become financially unviable for some universities. We recognise that many charities are facing difficulties as a result of the pandemic. A collaborative approach between charity funders, universities and UKRI to discuss how to fund this research more sustainably would be welcome. This should include consideration of how cost recovery levels and the Charities Research Support Fund (CRSF) could be used in tandem to address funding shortfalls and put charity research on a more secure footing for the future in the interests of the UK's research base.

Dual support: redressing the balance of funding

- 1.12 The UK's dual support system is the envy of other countries and has enabled us to maintain a strong focus on quality, even as UK investment in research has declined in comparison to our competitors.⁸ Quality-related (QR) funding has been crucial in the UK's success internationally due to several unique characteristics, which are not replicated by other types of funding. QR provides institutions with the autonomy to deploy funding strategically – both to commit to long-term investments and to respond quickly to new challenges. This has been exemplified during the Covid-19 crisis, where our universities have used internal QR funding to support the swift redeployment of researchers to pandemic-related work even before government schemes were put in place. It also allows universities to build expertise and capacity in areas which they anticipate will become the priorities of the future. Stability and predictability are key to unlocking new discoveries and long-term knowledge building – it is

⁷ Under the current model, for example, a £1bn increase in Research Council spend would require universities to find around an additional £260m to meet the full costs of the research, at a time when other university income streams are in decline.

⁸ Whilst the UK and China invested a similar amount in R&D as a proportion of GDP in 2010 for example (1.6% and 1.7% respectively) by 2018, China's investment had climbed to 2.2% while UK investment was still at 1.7% of GDP: OECD, GDP spending on R&D: <https://data.oecd.org/rd/gross-domestic-spending-on-r-d.htm>

very hard to build a strategic and long-term sustained research effort based on three-year grants alone.

- 1.13 In addition, QR funding allows universities to pursue high-risk, high-reward ideas deemed too risky for the Research Councils or business to invest in; it helps them leverage funding from business and support smaller companies to grow and innovate; and it is used for training and career development for staff, especially early-career academics who may not yet have won independent research funding, but who show potential.⁹ QR also frees researchers from red tape and bureaucracy by allowing universities to invest in teams to focus on long-term objectives so they do not have to re-apply for grant funding every few years.¹⁰

Case studies: QR funding supporting the UK's Covid-19 response:

Having identified future pandemics as a key global threat, **University of Oxford** used QR funding to help establish the Jenner Institute in 2005, specialising in vaccine development. Decades worth of investment meant the team working on the SARS virus was already in place and able to be rapidly re-deployed at the outbreak of Covid-19, thus allowing the team to develop the most promising vaccine candidate to date.

UCL used QR funding to collaborate with industry partners to create breathing aids to keep Covid-19 patients out of intensive care. UCL's Technology Transfer Office also worked to make the design of these breathing aids freely available for others to manufacture worldwide.

QR funds allowed **Queen Mary University London** to help set up the Nightingale hospital in London and to provide leadership and direction to the clinical research programmes that flowed from the new hospital. QR funding also supported the design and testing of the genomic platforms at the university that now underpin the on-going UK-wide analysis of how Covid-19 patient genomes relate to clinical outcomes.

- 1.14 With UKRI grant approval rates at around one in four¹¹, QR funding provides a low bureaucracy mechanism to get public funds into the hands of researchers and to do this quickly.¹² Empowering universities to make decisions on how and which projects and people to support ensures the funding is used efficiently and effectively, backed up by the established cycle of Research Excellence Framework (REF) assessment exercises as a robust external validation mechanism of the excellence and impact of university research activity overall.
- 1.15 Despite its vital role in driving the UK's research and innovation performance, since 2010 QR funding has declined by 13% in real terms.¹³ This has happened at a time when funding for research has increased from £9.7bn in 2007 to £12.9bn in 2018.¹⁴ Indeed, the balance of funding between QR and Research Council funding has fallen from 80p in the pound in 2007, to 50p in the pound in 2018. **Figure 2** illustrates the relationship between the two arms of the dual support system and how funding has become increasingly unbalanced over time.
- 1.16 **Now is the time to shift towards long-term and low bureaucracy investments in people and ideas by introducing a significant uplift in quality-related funding for research. Doubling the QR grant and its equivalents in the devolved nations over the next five**

⁹ UKRI estimates around 20% of QR funding is used by universities to support their research talent directly: UKRI (2019) UKRI Annual Report and Accounts 2018-19.

¹⁰ For more information on QR funding with practical examples of how Russell Group universities use these funds, see our briefing here: <https://russellgroup.ac.uk/media/5875/underpinning-our-world-class-research-base-the-importance-of-qr-july-2019.pdf>

¹¹ UKRI (2019) UKRI Annual Report and Accounts 2018-19

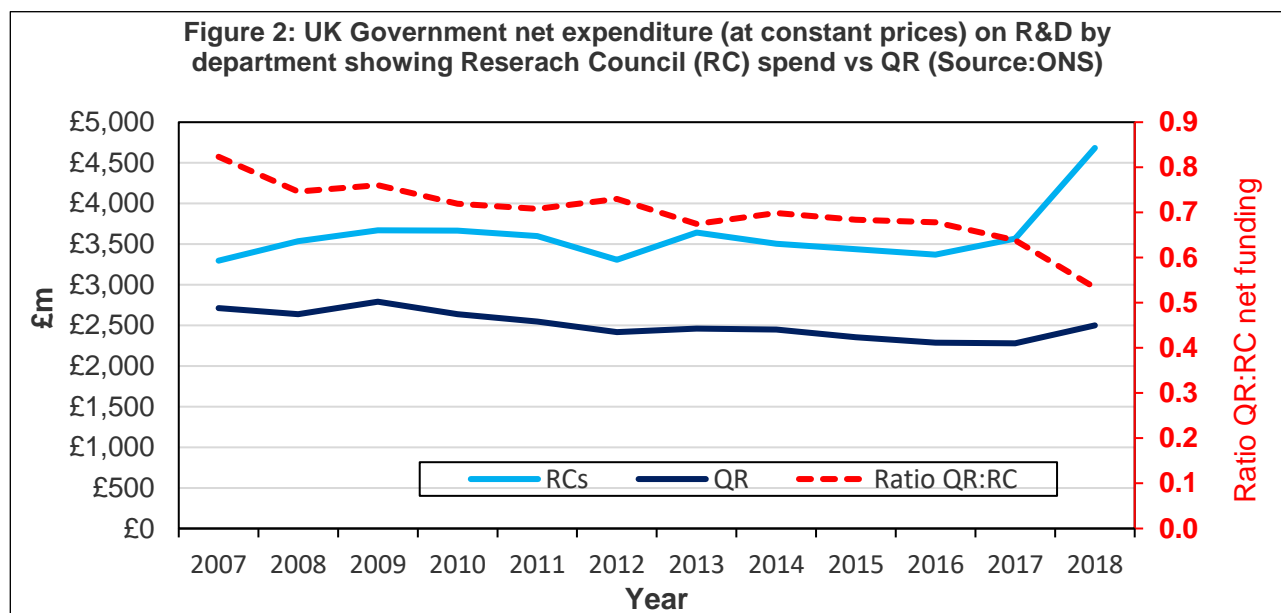
¹² The cost of REF 2014 has been estimated to be only around 2.4% of the £10.2 billion in QR research funds projected to be distributed between 2015/16 and 2020/21, which compares highly favourably against the cost of administering Research Council grants.

¹³ Russell Group analysis of HEFCE data: <https://wonkhe.com/blogs/the-invisible-hand-that-supports-quality-research/>

¹⁴ Source: ONS

years would help Government realise its aims of supporting breakthroughs in blue-skies research while also boosting the research talent pipeline.

- 1.17 As devolution settlements differ across the UK, it is important that increases in QR funding delivered by Research England should also be cascaded by the devolved governments. We recognise that other mechanisms may be needed to ensure this happens in practice, which UKRI could explore. However, a substantial boost now for fundamental research across the whole of the UK will strengthen cohesion and ensure the UK can continue to hold its own alongside other research-intensive nations.



Core funding for the Research Councils

- 1.18 Whilst overall funding to UKRI has increased in recent years, budget allocations to UKRI and the wider ring-fences managed by BEIS published for the years 2017/18 to 2020/21 reveal that six out of the nine Research Councils have experienced real-terms cuts to their core budgets over this period, impacting responsive mode grants and training.¹⁵
- 1.19 Responsive mode grants are highly valuable because they allow researchers at the forefront of their disciplines to identify the research challenges of the future. They are also crucial for supporting fundamental basic research. Major advances can often be traced back to fundamental research where the applications could not have been foreseen at the start. Lasers, DNA, genetics and magnetic resonance imaging are a few examples where there are a growing range of applications in everyday use. While blue skies research is vital to the creation of new knowledge and discoveries, research investors, such as business and charities typically underinvest in these areas as the path to impact is long and typically deemed high risk. Within the research funding system, Government is thus often the only actor willing to fund this sort of fundamental research at scale.
- 1.20 Building additional research capacity into the R&D system over the next five years will be dependent on the UK's ability to ramp up training at all levels of the research talent pipeline. The long-term squeeze on core Council budgets has resulted in postgraduate research training being funded at only 45% of full economic costs.¹⁶ This is not sustainable if the UK

¹⁵ BEIS (2018) The allocation of funding for research and innovation: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/731507/research-innovation-funding-allocation-2017-2021.pdf

¹⁶ OfS Annual TRAC Sector Analysis 2018-19.

wishes to grow its pool of talented researchers. Universities also report increasing demands to provide matched funding for research projects as a result of squeezed core funding. UKRI could usefully look into this in more depth to ensure the right balance between successfully leveraging private investment and ensuring a fair and sustainable approach to funding.

- 1.21 **Apportioning some of the additional R&D funds over the coming years to address core Council budgets would ensure excellence and the pipelines for radical ideas and talent are maintained alongside a substantial uplift in R&D intensity.**

UK ‘Advanced Research Projects Agency (ARPA)’

- 1.22 We strongly support the Government’s ambition to create a new agency in the vein of the US’ Advanced Research Projects Agency (ARPA) for the UK. We see a UK-ARPA as a clear complement to the UK’s flagship funding stream for high-risk, high-reward research (QR) by introducing a funding and support mechanism dedicated to high-risk, high-reward innovation. The creation of a UK-ARPA has the potential to inject innovation throughout the economy by tackling some of the major challenges of our time. **Its overall mission, objectives and how it fits into the wider R&D and innovation funding landscape will need to be clarified early to ensure its long-term success.**

- 1.23 For a UK-ARPA to be a success it will need customers for its innovations and testbeds that will enable it to demonstrate technological change at scale so that they can be de-risked ahead of wider application. Here **the Government should act as an ‘intelligent customer’ and use its substantial public procurement power¹⁷ to create a dynamic ‘innovation pull’ effect for the UK.** This is likely to require changes in public procurement rules to ensure innovation is included as a factor in procurement across the public sector.

Supporting a broad research base

- 1.24 To maximise the economic and societal impact of research requires a world-leading research capability in STEM. However, broad research capability is also essential and it is important that the UK does not lose its world-class position in many arts, humanities and social science disciplines while boosting STEM.
- 1.25 Social sciences, arts and humanities research capabilities must be embedded within technological R&D to ensure questions are determined in ways that enable effective translation to society and the economy. Technological change and benefits can be realised faster where policy, behavioural, ethics, law and business practices, amongst other disciplines, are an integral part of research. There is also an important economic value in SHAPE¹⁸ subjects: every £1 spent on research by AHRC delivers around £10 of immediate benefit and a further £15-£20 of long-term benefit.¹⁹

Case studies: the importance of Social Sciences, Humanities and the Arts for People and the Economy (SHAPE):

Researchers at the **London School of Economics and Political Science (LSE)** has developed a significant body of work on the pathways to prosperity for UK regions. The research covers areas such as: data-driven policy recommendations to catalyse local growth; how policy can promote inclusive growth to target those who feel they live in places that “don’t matter”; and how to tackle regional inequalities post-Brexit.²⁰ The Government is looking to address many of these issues

¹⁷ The Institute for Government estimates public procurement spend is around £300 billion per year.

¹⁸ Social Sciences, Humanities and the Arts for People and the Economy

¹⁹ Leading the world: The economic impact of UK arts and humanities research’ (2009)

²⁰ <https://info.lse.ac.uk/staff/divisions/communications-division/public-affairs-team/assets/documents/19-0535-party-conference-flyer-v5.3-web.pdf>

through its levelling up agenda and the role of SHAPE research in providing evidence-based policy options should not be overlooked.

Cardiff University's Centre for Cyber Security Research (CCSR) is a leading research unit for cyber security analytics - the fusion of artificial intelligence, cybersecurity and risk - facilitating research into these areas from human factors, data science and technical analytics perspectives. The Centre relies on a range of STEM and SHAPE specialists. For example, technical solutions in cybercrime must be rooted in a deep understanding of what motivates criminal behaviour, so the Centre employs criminologists. The CCSR also hosts a number of sociologists and ethicists, working to ensure that commercial and public AI tools, including machine learning, do not have subjective bias built into them e.g. those which help recruiters and sift through eligible candidates.

Opportunities to improve UKRI efficiency and reduce bureaucracy

1.26 The Nurse Review of Research Councils highlighted a number of opportunities for improving the overall operation and strategic efficiency of the Research Councils through the creation of UKRI. As UKRI reaches its second anniversary, this is a timely opportunity to revisit these recommendations and report on progress towards harmonisation and alignment. From Impact Accelerator Accounts, to terms and conditions of grant and auditing processes, the Research Councils continue to diverge in a number of their approaches. As part of BEIS' review of bureaucracy, UKRI could look at opportunities to reduce red tape within the system by seeking to harmonise more processes and reducing the bureaucracy of reporting requirements wherever possible. UKRI could also use its convening power to encourage funders across the UK research landscape (including the Councils themselves) to take a consistent approach to issues such as research culture and research integrity.

International research and innovation collaboration

1.27 Now the UK has left the EU, we have an opportunity to reimagine the UK's research funding landscape, both to capitalise on our country's strengths and ensure we can continue to benefit from research networks in Europe and around the world. Tough choices will need to be made about the future relationship with the EU, but one of the most important choices we should make is to **negotiate a fair and balanced deal for full association to the new Horizon Europe programme**. Horizon Europe will be the world's largest ever programme for multi-country collaborative R&D, bringing together not just European researchers but increasingly those from countries such as Australia, Canada and Japan. A commitment to ringfence sufficient funding to participate in Horizon Europe, as other countries have done, would send a welcome signal that the UK is serious in its desire to participate.

1.28 There are numerous benefits linked to the EU research programmes, including major breakthroughs, high-impact outputs and a draw for attracting and retaining world-leading scholars from across Europe.²¹ Collaborations within the network also generate positive spill-over effects on growth, trade and investment. It has been estimated that a euro invested through Horizon Europe could generate a return of up to 11 euro of GDP over 25 years.²² If the UK is not part of the next programme in some way, we risk losing the opportunity to be at the forefront of major scientific projects on climate change, AI and other grand challenges; we risk weakening links with private and public sector partners in other European countries; and we risk losing out on top researchers for whom European Research Council grants are critical for accelerating their careers due to their prestige and global recognition.

²¹ Scientific publications from Horizon 2020 are cited more than twice the world average (European Commission's [interim evaluation of Horizon 2020](#)). The ERC is especially impactful, 19% of projects leading to a breakthrough and 60% to a major scientific advance ('Qualitative Evaluation of completed projects funded by the European Research Council (2017)').

²² https://ec.europa.eu/commission/sites/beta-political/files/budget-may2018-horizon-europe-regulation_en.pdf

- 1.29 Nevertheless, **we do not support association at any cost**, and whilst we hope association will be secured, we **fully support Government in pursuing a package of alternatives if a “fair and balanced deal” cannot be reached**. This includes the proposed Discovery Fund for high-risk, high-reward research based around world-leading talent, which should be implemented without delay. Funding at least equal to what we would expect the UK to win from Horizon Europe, as well as set-up and running costs, should be allocated, enabling alternative schemes to provide stability to the UK research base and community in any transition from being one of the core participants of Horizon 2020 to operating outside of these frameworks. **Funding for uncapped third country participation in Horizon Europe should be allocated if association is not secured** to enable the UK to continue to participate in the multilateral research projects which are open to third countries.
- 1.30 We note in previous spending reviews, funding for participation in these programmes was accounted for in our EU membership contributions. In this SR, the UK’s potential participation in Horizon Europe will be captured within the UK’s domestic budget for R&D. To achieve the significant boost in R&D capacity needed to fulfil the Government’s ambitions for the SR, domestic R&D investment should be increased over and above the potential costs of participating in Horizon Europe (either as an Associated Country or Third Country) from 2020/21 onwards.
- 1.31 Given the globally recognised strength of the UK’s science base, **the potential to establish joint research programmes can enhance the attractiveness of the UK for new trade deals and inward business investment**. Research funding agreements foster collaboration, de-risk investment and pool resources to achieve together what it would be challenging for a single nation to support alone. By establishing science and innovation agreements as part of or alongside trade deals, with incentives to attract international businesses to work with excellent UK research partners, the Government could unlock much-needed overseas private R&D investment. A joint doctoral training scheme, for example, with in-built international and industry collaboration, would help contribute to the UK meeting its ambition of training more researchers; it could also attract co-investment from global industry, helping the UK tap into additional FDI.

Global Challenges Research Fund

- 1.32 The Global Challenges Research Fund (GCRF) is a flagship programme for UK foreign diplomacy and global collaboration, delivering cutting-edge R&D which responds to some of society’s largest challenges. The GCRF has also been effective in extending the footprint of UK R&D into parts of the world which will provide the markets of the future, across Africa, Asia, Latin America and the Middle East.²³ Further, the new and more equitable partnerships forged by the GCRF between UK researchers and those in low- and middle-income countries have proved powerful in bolstering soft power, science diplomacy and long-lasting partnerships for the UK. As a key pillar of the UK’s international research landscape, which also enhances Britain’s global soft power, **we recommend GCRF continue to be funded from ODA budget**. However, if this budget is reprioritised then consideration should be given to continuing to support the scheme from the UK’s national research budget.

²³ Examples of current GCRF projects include: developing low-cost tools for dementia assessment with potential worldwide application, improving mineral processing, creating more sustainable approaches to dairy farming, improving bio-refining of agricultural waste, addressing metal contamination of rice supplies and addressing the motives for migration in Afghanistan.

2. Levelling up

Summary of key recommendations:

Universities are at the heart of regional clusters of excellence, coordinating substantial partnerships with SMEs, multinational companies, local and national governments, further education colleges, schools, charities and public sector partners such as the NHS. Our proposals will strengthen local and regional economies using the skills, knowledge and innovation in our universities to drive economic growth in collaboration with British business and new trading partners. Supporting over 260,000 jobs up and down the country, our universities are all major employers and hubs of investment that radiate out to surrounding towns.

To help universities maximise their potential in generating opportunity and productivity right across the country we propose Government should:

- **Boost capital investment** to ensure that shovel-ready projects that have been paused due to the pandemic can re-start as soon as it is safe to do so. Russell Group universities have put over £2bn of projects on hold, which could potentially support around 28,000 jobs.
- Channel a portion of the additional R&D investment into scaling up schemes with a proven track record of fostering university-business partnerships and extending local innovation capacity and training. These include the **Higher Education Innovation Fund (HEIF), Strength in Places Fund, Knowledge Transfer Partnerships and the Connecting Capability Fund**. Efficiencies can be achieved by working through these existing processes and taking advantage of the excellent research infrastructure and extensive links our universities already have in place. Governments in the devolved nations should work closely with the relevant funding bodies to launch similar schemes where they are not already established to ensure businesses and partners in all parts of the country can benefit.
- Introduce a new **Office for Tackling Inequality** responsible for centrally coordinating a 10-year national strategy with cross-departmental accountability to address the causes of educational inequality, championing a joined-up approach between universities, schools, local authorities, charities, employers and relevant public services.
- Incentivise SMEs to undertake R&D activity by **promoting and simplifying the excellent R&D tax credit scheme**, including introducing automatic eligibility for qualifying SMEs when they undertake R&D activities in collaboration with universities
- **Consider expanding the Innovation and Commercialisation of University Research (ICURe) pilot programme**, which helps university researchers explore opportunities for commercialisation, to other areas of the UK.
- Consider **ringfencing a proportion of the Shared Prosperity Fund for R&I capacity building and tertiary-level skills and training**. The funds could be used to invest in higher level technical skills linked to applied research and local industrial specialisms, and could also support small businesses to work with their local universities to identify opportunities for productivity gains and to invest in CPD for staff, amongst other ideas.

Universities' record of local R&D leadership and productivity development across the UK

- 2.1 Our universities are located in each of the nations and regions of the UK. They have extensive cross-sectoral links, including with businesses big and small, public sector partners such as the NHS, charities and partners across the whole education system. They are deeply embedded in their local communities, but with a global reach, providing a gateway to talent and ideas from around the world. Research-intensive universities are therefore uniquely and ideally placed to support the Government's ambitions for levelling up across the county and are willing to adapt to deliver on the country's key priorities. They are ready to help co-ordinate levelling up activities in the regions, including the devolved nations, which must be closely involved in a new UK-wide approach.

Case studies: universities are well placed to play a central role in levelling up

The universities of **Birmingham** and **Warwick** have set out plans to make the West Midlands the UK's "speed to scale region". Supported by public sector partners and high-value manufacturing businesses, the £460m proposal will establish manufacturing hubs in sectors where the West Midlands has market-leading capabilities, driving innovation and making supply chains flexible, responsive and reconfigurable. Economic analysis suggests the plan would deliver a GVA impact of £2.4 billion and support 22,000 jobs in low-carbon heating, new medical technologies, low-emission urban mobility and secure connectivity.

The **University of Cambridge** is working in partnership with local councils and the Local Enterprise Partnership having secured £1bn in funding to accelerate the building of thousands of new homes, underpinning further growth in high-value jobs and creating a fit-for-the-future transport network.

The **University of Edinburgh's** strategy for data-driven innovation is at the heart of their City Region Deal. The university is working to establish the region as the data capital of Europe, attracting investment, fuelling entrepreneurship and delivering inclusive economic growth.

University of Sheffield has built the Advanced Manufacturing Research Centre, creating high value jobs and catalysing investment from companies including McLaren, Boeing and Rolls-Royce.

- 2.2 The diffusion and uptake of innovation into the economy is crucial for productivity growth.²⁴ Whilst UK universities are world leading at generating innovation and applied research, the absorptive capacity of business and the local economy is a significant barrier to the diffusion of this innovation into the economy. To overcome this, our universities have become proven drivers of innovation adoption and diffusion. In areas with low absorptive capacity, our universities have led the creation of new innovation ecosystems, such as the Helix in Newcastle (see below) and the Nexus in Leeds. These long-term collaborations between universities, local government and business have led to vibrant new communities centred around R&D-intensive business, accompanied by new infrastructure, homes and high-value jobs – creating significant new "pull factors" into communities and the surrounding towns.

Newcastle University's Helix is a purpose-built community created to house and foster a new collaborative ecosystem of innovators, entrepreneurs, start-ups and business brought together by university-led R&D. On a 24-acre site previously a disused brewery, the university has built an innovation testbed for new research around the themes of healthy ageing, urban planning and data. Space for new incubators and business, alongside cutting-edge R&D and sustainable urban housing have been built in collaboration with the local authority and other partners.

²⁴ Government Economic Service Group on Growth: Innovation (2014): https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/370187/bis-14-1169-government-economic-service-group-on-growth-innovation.pdf

- 2.3 In other areas, a different approach is needed and universities inject their innovations into the economy through the financing and creation of new businesses. Universities have an excellent track record in this area, not only creating new spin-out companies, but ones which survive, scale-up and have impact. Nine out of 10 university spin-outs which received private investment between 2011 and 2015 survived into 2018, compared to less than one in two new enterprises surviving over a five-year period in the wider start-up environment.

Case studies: universities driving spin-outs and start-ups in their local economies

The universities of **Bristol, Exeter and Southampton** have partnered with the universities of Bath and Surrey to create SETsquared, the world's leading university business incubator, which turns university research and innovation into thriving businesses. Since 2002, more than 4,000 entrepreneurs have received wraparound support, helping them raise £1.8bn investment. Independent analysis shows companies supported by SETsquared delivered £8.6bn of economic impact and created 20,000 jobs across the UK. By 2030, the economic impact of SETsquared businesses is forecast to grow to £26.9bn.

The **University of Nottingham's** local business network, the Ingenuity Gateway, is targeted at helping small and medium businesses, with over 160 new and early stage start-ups benefitting from support from the university. This includes through investment from the university's £360,000 Ingenuity Fund. Successes include Footfalls & Heartbeats, which manufactures face masks knitted with antimicrobial yarns, as well as electronically conductive yarn for sensor networks.

The Institute of Electronics, Communications, and Information Technology (ECIT) at **Queen's University Belfast** has developed a unique model of business engagement which involves creating spin-out companies, assisting external (spin-in) companies, working with InvestNI and UKTI to promote Foreign Direct Investment and working with companies nationally and internationally to promote technology transfer of research. ECIT's in-house commercial and business development team has supported the creation of nearly 100 technology start-ups, with 2,700 new jobs in the regional economy. An additional 1,800 roles have been created via a cutting-edge cybersecurity cluster, with businesses working in fields such as visual speech recognition, intrusion detection and secure platforms for automatic and intelligent image and video processing.

- 2.4 Both SETsquared and Queen's University Belfast have been supported by the Innovation and Commercialisation of University Research (ICURe) pilot programme. The programme helps university researchers explore opportunities for commercialisation, offering research teams with commercially promising ideas up to £30,000 to 'get out of the lab' and undertake intensive market assessment. **The Government could consider expanding the ICURe scheme to other areas of the UK.**
- 2.5 Our universities are one of the few local actors with the experience and capacity required to work with LEPs, business and other community partners to develop local innovative capacity and promote the creation of highly-skilled jobs. Universities have also demonstrated leadership in the face of major crises, playing a central role in shaping the economic response to the Covid-19 pandemic in their local regions in partnership with others.

Durham University's Centre for Innovation and Technology Management (CITM), has reviewed over 1.7 million businesses in the Midlands and North of England since the Covid-19 pandemic started. After finding nearly 1/3 of them at risk of collapse due to how their supply chains operate, the CITM has been offering free business advice to local businesses across the Northeast.

Investing in innovation and place-based funding with proven returns

- 2.6 The different needs of the UK's regions are diverse and funding for levelling up should allow universities and other local actors to be able to tailor their approach. We do not need to reinvent the wheel – there are several existing funding streams which have a proven track record in delivering economic impact in the regions and supporting universities to improve collaborations with new partners. The issue is more one of scale. Channelling additional funds through these schemes would be much more efficient with quicker returns than trying to create new programmes from scratch.
- 2.7 The Higher Education Innovation Fund (HEIF), for example, has been hugely valuable in this regard as it has allowed universities to implement targeted long-term strategies for innovation in partnership with local businesses and others. Evidence shows every £1 of HEIF results in a return on investment of £9.70 in benefits for the economy and society.²⁵ On this basis, **increasing HEIF funding by £250 million per year could lead to benefits of around £2.4bn, and lifting the caps on the amounts of funding available to individual universities would allow institutions with the most success in this area to do more.**
- 2.8 But with HEIF funding currently only available in England, it means the UK as a whole is missing out on a significant and proven investment initiative. Where other nations do have somewhat similar funds (UIF in Scotland and NI HEIF in Northern Ireland), the level of funding is well below optimal levels. **Extending HEIF and boosting funds available to all nations in the UK should now be a top priority for the Government.**
- 2.9 Matching increases in HEIF with **additional investment in the Connecting Capabilities Fund (CCF)** would also boost commercialisation efforts and incentivise private investment in innovation. To date, the programme has already trained over 2,000 people in commercialisation and engaged over 100 businesses directly and over 1,500 in wider networks to the programme. It has set in train over 1,000 projects to create new products or services, helped set up 28 new spin-out companies, and levered £37m in additional external funding, together with nearly £60m in access to finance funding.²⁶
- 2.10 **Knowledge Transfer Partnerships (KTPs) are also a proven success and the number of KTPs could easily be doubled.** KTPs are a highly effective way of injecting university expertise and innovation into businesses to improve absorptive capacity, especially within SMEs, who struggle to take on new innovations to boost productivity.

At the **University of Liverpool**, on average businesses forming a KTP increase profits by over £365,000 annually before tax, whilst over 75% of businesses participating in the programme go on to plan further R&D collaborations with universities.²⁷

- 2.11 The **Strength in Places (SIP) fund** has also boosted collaboration between business, local Government and research-intensive universities to translate local pockets of research excellence into growth, bringing high-value jobs to communities where employment rates have lagged behind the rest of the UK. Given the relatively small scale of SIP, several high-quality projects which scored highly in the last round of funding could not be funded. Scaling up the scheme could allow UKRI to fund some of these high-scoring proposals, thus reducing the burden of HEIs re-submitting bids for a duplicated evaluation process.

²⁵ Assessing the Economic Impacts of the Higher Education Innovation Fund: a Mixed-Method Quantitative Assessment' (October 2015).

²⁶ <https://re.ukri.org/news-opinions-events/blog/connecting-capability-fund/>

²⁷ <http://www.liverpool.ac.uk/research/collaborate/knowledge-transfer-partnerships>

Case studies: Strength in Places (SIP) projects delivering in the devolved nations

A **Cardiff University**-led consortium involving Welsh universities, local businesses, Welsh Government and UK Government Catapults secured £44m from UKRI's SIP fund. Cardiff University's Institute for Compound Semiconductors (ICS) is at the core of the collaboration, which aims to make South Wales a compound semiconductor (CS) powerhouse. The university is currently creating a Translational Research Facility to develop new CS products from the research. This could help to grow the ecosystem cluster developing in the region and drive economic growth and job creation in areas such as Newport, which have high levels of deprivation and inequality.

A **University of Glasgow**-led Consortium will receive £38m from SIP to create a 'Living Laboratory'. The project involves eight private sector firms, Glasgow City Council and various Scottish Government bodies, such as Precision Medicine Scotland. The Living Lab will focus on translating cutting-edge precision medicine R&I into a real-world clinical setting. The Living Lab is projected to deliver around 450 high-value jobs and over £135m GVA over an eight-year period.

Invest in 'shovel ready' capital projects to ramp up regional R&D intensity

2.12 University capital expenditure drives local economic growth, supporting thousands of jobs in every part of the UK. A sample of Russell Group universities revealed capital projects to a total value of over £2bn have been paused or deferred as a result of Covid-19. Based on analysis of jobs linked to previous Russell Group capital spend, we estimate these projects alone have the capacity to support more than 28,000 jobs.

Case studies: capital projects paused due to covid-19

UCL has paused construction of the UCL Institute of Neurology and UK Dementia Research Institute. This is a £280m project to build a new facility for the UCL Institute of Neurology and the national hub for the UK Dementia Research Institute. It is being supported by the Medical Research Council (£40m), Research England (£29m) and has been the subject of a national fundraising campaign - to date £39m has been raised toward a £60m target.

The **University of Leeds** has been forced to pause construction for the Institute for High Speed Rail and System Integration (IHSRSI), which has the potential to revolutionise rail travel in the UK, to the benefit of passengers in towns across the whole country. Through the impact of research and innovation at the Institute aimed at addressing system integration issues experienced on major rail projects, it has been conservatively estimated that just a one per cent improvement in UK rail operations could generate around £3 billion in value to the UK economy.

2.13 The Government should consider bringing forward **targeted measures aimed at ensuring high-value university capital projects which deliver on strategic economic priorities can proceed without further delay**. Using existing programmes such as the UK Research Partnership Investment Fund (UKRPIF) as a vehicle to deliver enhanced support would be one option for this. This scheme has already had success in enhancing regional R&D intensity and adapting existing programmes would reduce red tape for universities, businesses and Government. Given the impact of Covid-19 on business confidence and availability of funds, loosening the 2:1 matched funding requirement from business for this programme may be advisable in the short term to incentivise new private investment.

2.14 **Our universities deliver value well beyond their local economies and regions as the funding they receive, and the research they do, has far reaching geographic impact**. Through extensive cross-sectoral collaborations they create positive economic and social benefits in towns and cities across the country and overseas too, forming a vital part of the UK's soft power advantage. For example, the University of Birmingham's High Temperature

Research Centre is a joint partnership with Derby-based Rolls Royce and the University of Liverpool is working with Kent Police to provide solutions to terror incidents. Scientists at Imperial College London have developed coronavirus outbreak simulation tools for 137 countries and their research has influenced the White House's strategy to prevent millions of additional deaths in the US.

- 2.15 Levelling up strategies should focus on how we can extend the *impact* of R&D into communities which have not traditionally benefited from the spillover effects of research, and not simply on the location of the research performing organisation. Inequality between tightly defined geographies also exists in areas such as the South East, so levelling up strategies must not take a simplistic view of geographical issues. To ensure value for money, it will be important for place-based investment to be made on the basis of excellence, so that high-quality research continues to be funded whilst taking into account regional impact factors. The CCF has been a particularly good example of how these two factors can be considered.

Incentivising SMEs to invest in R&D

- 2.16 Levelling up will depend on increased R&D activity in UK universities and business, and increased investment by Government and the private and third sectors. We invite Government to consider further reforms to incentivise extra business investment by working with local councils and business groups **to promote the R&D tax credit scheme**. This should be targeted at SMEs in industries which will likely benefit from R&D. While the tax credit scheme is generous, we understand that there may be a lack of awareness of the scheme among SMEs who could benefit commercially from R&D. In addition, the scheme could be simplified to reduce bureaucracy by **introducing automatic eligibility for qualifying SMEs when undertaking R&D activities in collaboration with universities**. Similarly, for these partnerships, the requirement to submit a summary of 'how this could not easily be worked out by a professional in the field' should be reviewed as part of streamlining the application process.

Social mobility and widening access

- 2.17 The most under-represented students are now 60% more likely to enter university than they were ten years ago, and 30% more likely to enter Russell Group universities than five years ago.²⁸ This represents solid progress, but there is more work to be done. Gaps by social and geographical background and by ethnicity and disability persist. Young people from the most highly represented neighbourhoods are around five times more likely to be placed at a higher tariff institution than those from the least represented neighbourhoods.²⁹ There are particular differences in access to higher education by region as 18-year-olds from London are 35% more likely than those from elsewhere in England to progress into higher education.³⁰
- 2.18 There are a range of factors which affect a person's decision and ability to access higher education. Perhaps the most pertinent is gaps in attainment which persist from early years through to sixth form. Students not classified as disadvantaged are over four times more likely to achieve grades ABB or better at A-level than those who are disadvantaged.³¹
- 2.19 To address some of these challenges, the Russell Group has proposed a joined-up approach with partnership working between universities and schools, as well as colleges,

²⁸ UCAS, End of cycle report (2019); OfS access and participation dataset entry number for POLAR Quintile 1 students over the five years to 2017/18.

²⁹ UCAS End of cycle report (2020)

³⁰ UCAS End of cycle report (2019)

³¹ Russell Group, Pathways for Potential (2020)

local authorities, charities, employers and relevant public services.³² As part of this approach we recommend central co-ordination through a **10-year national strategy with cross-departmental accountability to address the causes of educational inequality. To deliver on this and to align with other Government priorities, the Russell Group recommends that the Government introduces a new Office for Tackling Inequality.**

Education partnerships

2.20 Russell Group universities are working closely with colleges and businesses to address local skills needs. For example, this year, Newcastle University, the University of Exeter, Queen Mary University London and the University of Birmingham joined up with colleges, employers and other universities in their regions to form four of twelve new Institutes of Technology. These institutes will specialise in delivering higher technical education (at Levels 4 and 5) with a focus on STEM subjects, including engineering, digital and construction. Our universities are also working with local schools to address skills gaps by improving attainment and supporting aspiration from early years onwards (see case studies below).

Case studies: Russell Group universities working with schools across the country

The **University of Manchester** has developed a long-term programme to recruit and place academic and professional staff and alumni from the university as school governors. The scheme has trained over 1,000 people. Of the schools where staff are governors, 92% (142 schools) were rated good or outstanding in 2019. The links created with senior leaders in schools also support the promotion of widening access activities and events, leading to an improvement in attendance and take up of widening participation programmes.

The **University of Exeter and King's College London** have established maths schools, which act as hubs by engaging with schools throughout their regions to support maths education more widely through outreach and professional development work with teachers. This includes offering pupils the opportunity to be mentored by maths university students and enabling teachers to undertake further training and mentoring with some of the world's leading mathematicians and other academics. **Imperial College London** also plans to open a Maths school in 2023 in collaboration with Woodhouse College.

The **University of York's Shine** programme works with young people from the final year of primary school right through to year 11, providing a range of activities to inspire and motivate participants to succeed at school and to consider applying to university. In 2017/18, 89% of pupils said that as a result of taking part in Shine, they are now more likely to apply to higher education.

Queen Mary University of London is involved in several innovative partnerships with state schools in East London. The university co-sponsors the Drapers' Multi-Academy Trust (MAT) in the London Borough of Havering and supports the MAT's specialisms in maths and science through close collaboration with academic departments to enrich the curriculum and support improvements in pupil attainment. Queen Mary also supports the involvement of student volunteers (primarily in offering maths tuition) across state schools, many of whom are from disadvantaged backgrounds, providing role models for school pupils.

³² For a more in-depth view of our work around tackling educational inequality, see our latest publication 'Pathways to Potential' (May 2020): <https://pathwaysforpotential.russellgroup.ac.uk/>

Boosting skills in the regions

- 2.21 Our universities are driving the growth of skills in their regions and it is a myth that all top graduates end up working in London. Over half of all graduates remain in the region in which they studied five years after graduation, with 70% of Russell Group graduates working in areas outside of London five years after their studies.³³
- 2.22 Across all forms of work, Russell Group graduates are significantly more likely to occupy high-skilled roles than graduates from other UK universities (see Section 3). By bringing their skills to these regions post-graduation, highly-skilled university graduates are contributing to the prosperity of all parts of the UK over the long-term.
- 2.23 Not only are graduates contributing their skills to these regions, they are also investing their significantly higher salaries there as well. Compared to the average university, going to a Russell Group institution adds around an extra 10% to a graduate's income (even after prior achievement, social and other factors are taken into account).³⁴

The Arts

- 2.24 Creative industries across the UK are driving local and national economic growth. Research by NESTA in 2018 found that local economies have grown their creative industries employment by an average of 11%: twice as fast as other sectors. They further estimated if creative industries continued growing at the same pace, 900,000 new jobs could be created by 2030.³⁵ To realise this potential, the UK will need graduates with a range of different skills and expertise, including from creative arts programmes as well as technological capabilities.
- 2.25 Our universities are often at the heart of city, regional and national cultural activities and institutions – such as museums, art galleries, theatres and sport – and we are working hard to ensure they remain viable. They can have an economic value in their own right, but more important is the wider contribution they make to society and culture right across the country – as an important anchor for health and wellbeing in all regions.

Shared Prosperity Fund to level up R&I capabilities in the regions

- 2.26 Now we have left the EU the UK can define its own priorities for regional funding in line with national interests through the new Shared Prosperity Fund (SPF) to ensure that regional funding can drive local growth and deliver lasting impact. To do this, the SPF should seek to further integrate R&I into regional economic development in all areas of the UK and the **Government should consider ringfencing a certain proportion of the SPF for research and innovation capacity building and tertiary-level skills and training.** The funds could be used to invest in higher level technical skills, linked to applied research and local industrial specialisms, to create new opportunities and pathways for young people and adults to access high quality, well-paid jobs. In addition, they could support small businesses to work with their local universities to identify opportunities for productivity gains, to invest in CPD for staff and to tap into the expertise and knowledge of the academic base. The Government made a welcome commitment in the March 2020 budget that the SPF will at least match current levels of EU structural funding. The process for allocating funds between regions and for doing so efficiently and effectively needs to be developed in conjunction with the Devolved Administrations and key stakeholders such as universities to maximise returns.

³³ Graduate Outcomes (LEO) data, Department for Education, June 2020 relating to tax year 17/18.

³⁴ IFS, *Family background has an important impact on graduates' future earnings, but subject and institution choice can be even more important*, June 2018.

³⁵ <https://www.nesta.org.uk/press-release/creative-industries-are-driving-economic-growth-across-the-uk-on-track-to-create-one-million-new-creative-industries-jobs-between-2013-and-2030/>

3. Superb education, training and skills

Summary of key recommendations:

Russell Group universities pride themselves on delivering academic excellence, training the highly skilled and entrepreneurial graduates the country needs. A robust university education delivers for the individual *and* for Britain: a single cohort of UK-domiciled students at Russell Group universities is estimated to contribute more than £20bn to the economy over the course of their working lives, including a total of £11bn in tax and NI contributions. Improving access to high-value degrees alongside investment into higher level technical skills will ensure a steady supply of talent to boost all regions of the country and give Britain a commanding lead in the recovery and beyond.

To put the next generation, and the talent of the future, at the heart of this spending review, we make the following proposals:

- Maintain the highest quality university education by **guaranteeing teaching grants on a per student basis for the duration of this SR at levels that at least match existing funding**. Options to redistribute the grant to provide more support for the highest-cost subjects (such as chemistry, physics, medicine, dentistry and veterinary science), where there are currently the greatest deficits, should also be considered.
- Create a new deal for funding postgraduate research, as proposed in the R&D Roadmap, by **doubling the level of full economic costs for this high-level training up from 45% FEC and enhancing stipends** offered to training researchers. This will open up opportunities to a more diverse range of people and put PhD provision on a more sustainable footing for the future.
- To deliver successfully against the Government's aim of growing apprenticeship provision and achieving a level playing field between apprenticeships and other university and college routes it is crucial there is **stability around funding and regulation, with appropriate flexibility for employers to innovate standards as the needs of our economy evolve**.
- We want to work with DfE, the OfS and other bodies to **review current regulatory requirements and ensure these are proportionate and intelligent**, including due consideration to dropping the highly-bureaucratic subject-level TEF, exploring alternatives to provider-level TEF and reducing reporting requirements where possible.
- Negotiate a **fair and balanced agreement for continued participation in the Erasmus** programme to maintain the benefits for students, staff and soft power. If this is not possible, create an ambitious and effective domestic scheme with appropriate funding to support students with the costs of living and studying abroad.
- Consider ways to **bring Global Talent visa costs in line with those in other research-intensive nations**, including revisiting requirements to pay the immigration health surcharge up front, to support the Government's ambition to become the top destination for international talent.
- Undertake an **international marketing campaign aimed at overseas students as part of promoting a Global Britain** using the British Council's experience and involving the DfE, DIT and universities. This campaign should target key markets – particularly where there are opportunities to diversify international student recruitment.

Highly skilled graduates driving productivity

- 3.1 Investing in the talent pipeline for future high-level skills will be critical for the UK's economic recovery. It will also provide opportunities for individuals whose prospects have been hit by the pandemic. People at the start of their careers are impacted disproportionately by recessions. Increasing the options open to them will help mitigate the challenges they are facing and deliver social mobility as well as wider prosperity.
- 3.2 A robust university education delivers for the individual *and* for Britain. Numerous studies link the accumulation of graduate skills and higher education qualifications with increased productivity and GDP growth in the economy^{36,37,38} Indeed, a single cohort of UK-domiciled students at Russell Group universities is estimated to contribute more than £20bn to the economy over the course of their working lives, including a total of £11bn in tax and NI contributions.³⁹ In addition, 15 months after graduation, 82% of UK-domiciled Russell Group graduates are either in full-time employment or have progressed into further study (61% and 21% respectively). Of those in full-time paid employment, 88% were in skilled roles (compared to the sector average of 77%) and almost half (47%) were already earning over the student loan repayment threshold. There is an even greater premium from postgraduate study, with 91% of Russell Group postgraduates in work securing high skilled roles.⁴⁰

Sustainable funding for undergraduate teaching

- 3.3 Funding for high cost subjects such as science, medicine and engineering is essential to ensure universities can deliver the skills needed for the UK's future knowledge economy. While a large part of the funding for undergraduate degrees is now paid for through tuition fees in most parts of the country, Government investment plays a vital role in ensuring choice and quality for students and in promoting excellence.
- 3.4 The current system of combined tuition fees and grants came into force during the 2012/13 academic year when the Coalition Government raised fees to £9,000 per year. Despite a £250 increase in fees in 2016, inflation has eroded the real-terms value of the tuition fee by more than 8% since 2012/13, amounting to a value of £8,261 in 2018/19.⁴¹ Across UK institutions, there is currently only a 96.2% recovery of FEC on publicly funded teaching, which creates a deficit of over £600m.⁴² This fall in the real value of undergraduate fee income has created an ever-widening gap between income and costs of provision. For example, at many research-intensive universities, lab-based subjects, such as chemistry, physics and engineering (Price Group B, very high cost), are reporting average deficits of £1,750 per year per student, while deficits for medical and dental provision will range from £1,000 to 3,000 per student in 2020/21. Even the least expensive classroom-based subjects (Price Group D) are now running at a £700 deficit, making it impossible for them to cross-subsidise higher-cost subjects.⁴³ These deficits put high quality provision in priority areas such as STEM and medical education at risk and threaten future provision in all subjects.

³⁶ ONS estimates about a fifth of the rise in productivity between 1994 and 2019 can be attributed to improvements in the quality of the workforce, especially those with HE qualifications: Written answer to Parliamentary Question to Lord Duncan of Springbank, 7 Jan 2020.

³⁷ National Institute for Economic and Social Research found that an accumulation of graduate skills is likely to be even more strongly correlated with productivity growth in future as a result of rapidly-developing technology in the workplace: 'Graduates boost productivity', NIESR <https://www.niesr.ac.uk/blog/graduates-boost-productivity>

³⁸ Between 1994 and 2005 the accumulation of graduate skills was the driver of between 14-20% of GDP growth in the UK according to BIS 2013 'The relationship between graduates and economic growth across countries'.

³⁹ Economic impact of Russell Group universities (2017)

⁴⁰ HESA [graduate outcomes survey](#), June 2020. Analysis performed by the Russell Group comparing graduate outcomes from member institutions to those from other HEIs.

⁴¹ For more detail on how this real-term value has declined over time, see Russell Group briefing, [Investing to meet the skills needs of the UK's future knowledge economy](#), December 2019.

⁴² Annex B, Table 4, UK sector data summary in 2018/19 TRAC data.

⁴³ Based on analysis of 2018/19 student numbers and TRAC data for Peer Group A.

- 3.5 If there are no changes to the current funding arrangement, forecast inflation will mean that total income value across all subjects will have fallen by a further 10% by 2024/25. This trajectory will be accelerated if the Government continues with plans to cut the teaching grant. If tuition fee levels are cut, as proposed in the Augar Review, universities would need a cast-iron guarantee that teaching grants would cover the funding shortfall in full and meet future demand for university places as the number of 18 year olds grows. Without this, British universities would not be able to maintain high quality education, it would impact student support services and the student experience, some courses would have to be stopped altogether (those at most risk would be high cost subjects which have the greatest deficits) and the global reputation of UK higher education would be impacted in the long term.
- 3.6 Russell Group universities are determined to focus on academic excellence and ensure that high quality teaching provision can continue across the UK. To maintain this for the future, investment in teaching needs to be sustained and, ideally, enhanced so that funding more closely matches the real cost of providing undergraduate courses. We therefore recommend:
- (a) Providing HEIs with greater certainty by **guaranteeing teaching funds on a *per student* basis for the duration of this SR and at levels that at least match existing funding**. This will help HEIs plan for high quality teaching by ensuring Government investment is not diluted in years where more domestic students start courses
 - (b) Considering options to **redistribute the teaching grant to provide more support for those price groups experiencing the most severe deficits**, including the very high cost subjects such as chemistry, physics, medicine, dentistry and veterinary science in Price Group B. Increasing grants for these subjects could be achieved by reducing the grant for Price Group C1.⁴⁴
- 3.7 Russell Group universities have made every effort to accommodate as many of the additional students who met the terms of their offers to study because of the use of teacher-assessed grades for A-levels and other qualifications this year as possible. The Government has made available £10m in teaching grants for high-cost subject provision and £10m in capital funding for HEIs accommodating those extra students. Ensuring additional funding is provided for the duration of this cohort's studies (3-5 years), with a commitment to ensure *per student* funding levels are sustained overall, will be important to help maintain a high quality student experience for these students.

Growing postgraduate skills and the pipeline of future researchers

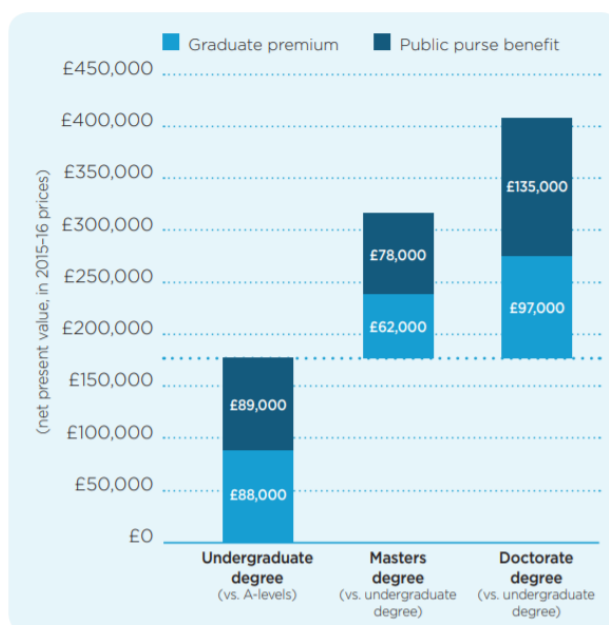
- 3.8 Russell Group universities are world-renowned for offering excellent postgraduate teaching and research. **Figure 3** shows that the higher the level of the qualification, the higher the returns for both the individual and the Exchequer through enhanced taxes and NI contributions, which help support public services across the country.
- 3.9 Universities and Government have an important role in supporting both the current graduating cohort, and the post-Covid economy, by increasing high-quality postgraduate provision. The pandemic is expected to have a severe impact on the job market for new graduates. Historically, in periods of economic downturn, demand for postgraduate courses has been higher so graduates are able to delay their entry to the labour market.⁴⁵ This has proved to be an effective failsafe: those who undertook postgraduate study were more likely to be in employment than first-degree graduates following the 2008 financial crisis and postgraduate employment levels were slower to fall and recovered more quickly.⁴⁶

⁴⁴ C1 is intermediate-cost subjects of archaeology, design and creative arts, information technology, systems sciences and computer software engineering, media studies, and pre-registration courses in nursing (OfS Guide to funding 2019-20).

⁴⁵ Resolution Foundation, Class of 2020: Education leavers in the current crisis (2020)

⁴⁶ HEPI, Postgraduate Education in the UK (2020)

Figure 3: financial benefits to the graduate and the public purse of undergraduate, masters and doctorate degrees at Russell Group universities⁴⁷



- 3.10 Alongside providing graduates with the subject-specific knowledge to enter career professions, postgraduate courses build on the foundations of an undergraduate degree by further developing analytical, interpretative, critical, technical and creative skills, as well as the ability for independent research and learning.⁴⁸ Investment in postgraduate study as an alternative to early labour market entry can be considered an investment in the necessary skills needed to rebuild the UK economy after the pandemic, as well as preparing a work force for increased automation in future work places.
- 3.11 Investment in postgraduate study will also support the development of a future pipeline of researchers. Russell Group universities train 59% of postgraduate research students.⁴⁹ The Chair of UKRI has suggested that if R&D funding is to increase by 50% to meet 2.4% of GDP, the UK will need 50% more researchers.⁵⁰ This will require creating significantly more places for PhD students and increases in core funding for the Research Councils should be set aside to support this.
- 3.12 Targeted investment should ensure that a greater proportion of the costs of postgraduate research training are met from public funds, particularly given the limited opportunity to secure matched funding from business and other partners at this time. **Doubling the level of economic costs that can be recovered for postgraduate research training up from 45% (FEC) and enhancing stipends offered to training scientists will open up opportunities to a more diverse range of people and put PhD provision on a more sustainable footing for the future.**⁵¹
- 3.13 Research charities play an important role in funding PhD students. As many charities may be forced to scale back research investment as a result of Covid-19, UKRI may need to compensate for this loss in the talent pipeline by investing more heavily in this area.
- 3.14 UKRI's Future Leaders Fellowships can help the UK attract and retain new talent and boost our researcher base to support high-growth R&D, but the scheme could be improved to

⁴⁷ The economic impact of Russell Group universities (2017): <https://russellgroup.ac.uk/media/5634/fact-sheet-2-207bn-v5.pdf>

⁴⁸ HEPI, Postgraduate Education in the UK (2020)

⁴⁹ HESA student data 2018/19 new entrants. Russell group universities train 56% of overall PGR students.

⁵⁰ <https://www.ukri.org/files/news/jk-speech-301018-pdf/> - speech by John Kingman, Chair of UKRI

⁵¹ FEC rate taken from OfS Annual TRAC Sector Analysis 2018-19.

extend its impact. UKRI has encouraged increased applications from some institutions but has not been able to award higher numbers of fellowships. Increasing funding for the scheme, alongside considering how to set clearer expectations for potential award winners, would be helpful. The low rate of cost recovery on the grants could also be usefully reviewed.

Technical skills and Further Education (FE)

- 3.15 Russell Group universities are driving up UK technical skills by delivering high-quality apprenticeships across a range of disciplines in partnership with local employers and FE colleges. Seventeen Russell Group universities already deliver degree apprenticeships, many of which are targeted to increase participation from under-represented groups including students from less advantaged backgrounds and women in STEM disciplines.
- 3.16 Despite the challenging context of Covid-19, our universities have reported increasing interest among some employers for apprenticeships. This signals both the value and the resilience of these types of qualifications at our institutions, with many employers regarding them as a vehicle through which they can equip their teams to respond and adapt to the lasting effects of the pandemic.
- 3.17 For the government to deliver successfully against their aim of growing apprenticeship provision and achieving a level playing field between apprenticeships and other university and college routes it is crucial there is **stability around funding and regulation, with appropriate flexibility for employers to innovate standards as the needs of our economy evolve**. In recent years, changes have been made to the funding available for a number of different apprenticeship standards, alongside a lack of clarity about when existing funding thresholds will next be reviewed. For example, there have been recent reductions to the funding of both the Digital and Technology solutions and Chartered Management degree apprenticeships. This compromises the affordability of existing provision, while also creating obstacles to those who are not yet delivering but are considering offering degree apprenticeships in the future.

Research-informed teaching delivering skills employers need

- 3.18 Across all types of provision, Russell Group universities strive to provide an outstanding and diverse student experience within a research-intensive learning environment, ensuring all students can develop the personal and professional skills needed to realise their ambitions. This will be the same even as we adhere to the necessary social distancing limitations that the pandemic imposes and change the way some course elements have to be delivered.
- 3.19 Before Covid-19, demand for graduates was growing, with 85% of businesses either maintaining or increasing their graduate recruitment.⁵² The pandemic has created a lot of uncertainty for employers,⁵³ but our universities are responding rapidly to the changing landscape to ensure new graduates are prepared for employment and are able to meet the needs of a changing workforce. They are responding by diversifying their portfolio of courses and delivery modes, such as more online, part-time and foundation courses, as well as more sandwich degrees, integrated masters and degree apprenticeships. While the future economic outlook may be uncertain, our research suggests that the core qualities, capacities and skills that employers look for in graduate recruits have remained broadly constant.⁵⁴ These include:

⁵² CBI/Pearson Education and Skills Survey report 2019

⁵³ Almost 40% of firms still have not finalised next year's hiring plans according to the Institute for Student Employers, 'Covid-19: The impact of the crisis on student recruitment and development', p. i-ii.

⁵⁴ Interview with James Darley of Transform Society, which represents 3,500 public sector jobs including Teach First. August 2020.

- (a) **Critical thinking and problem solving** as a means of creating innovation, anticipating issues, and leading change⁵⁵
- (b) **Resilience and adaptability** to be able to re-set goals, and recover quickly and effectively across a range of contexts (even more important as the whole workforce adapts to new ways of working due to the Covid-19 pandemic)⁵⁶
- (c) **Self-awareness and cultural sensitivity**, as employees' interpersonal skills help organisations negotiate globalisation and the spread of digital technology⁵⁷

3.20 A research-informed learning experience equips Russell Group graduates with these important skills as students critically engage with existing forms of knowledge, as well as becoming co-creators of new knowledge and innovation. The close links between research and learning within research-intensive universities also mean that a student's learning is closely connected with emerging findings, giving them the skills and knowledge to problem-solve in the context of the very latest developments in their field of study. The rigours of this education further create an environment in which students are challenged to adapt their understanding and approaches as knowledge grows and expands.

3.21 At **Queen Mary University of London**, for example, staff are pioneering a model of undergraduate education which embeds opportunities to develop employability skills and social capital into all degree programmes, helping students enhance their professional development and get ready for the workplace. The **University of Nottingham** has also recently introduced 'magpie', an AI-enabled Learning Recommendation Engine that provides their students with 24/7 personalised support to develop their professional competencies and skills, including resilience, commercial awareness and communication skills among others.

Intelligent regulation to drive efficiencies

3.22 Along with many other organisations across the country, universities are facing real pressure as a result of the pandemic and institutions have had to redouble efforts to ensure they are being as efficient as possible in their operations and that public funds and student fees are spent furthering their core missions of research and teaching excellence. But the burden of regulation represents a significant administrative challenge to our institutions. We are therefore determined to work constructively with the Department for Education, the Office for Students (OfS) and other bodies to review current regulation and ensure this is proportionate and intelligent. The areas where we consider efficiencies could be made include:

- (a) **Dropping subject-level Teaching Excellence Framework (TEF) and exploring the use other existing mechanisms to assess teaching quality in different departments within institutions, including use of Condition B3**
- (b) **Exploring the use of Condition B3 as an alternative to provider-level TEF, whilst recognising the need to dissociate such use of the condition from OfS' regulatory powers (above meeting the baseline threshold)**
- (c) **Reducing regulatory reporting requirements and ensuring the OfS provides greater clarity on their regulatory approach**
- (d) **Retaining OfS as the regulator of degree apprenticeship (rather than transferring this to Ofsted).**

3.23 We would also stress that if the OfS acquires an expanded remit and becomes responsible for regulating all non-apprenticeship provision at levels 4 and above, their expanded scope may need to be complemented with an increase to their budget to ensure they are

⁵⁵ Employers are consistently cited as valuing critical thinking and reflection: Lee Harvey, *New Realities: The Relationship between Higher Education and Employment*. *Tertiary Education and Management* 6, p. 3–17 (2000).

⁵⁶ This is frequently cited by employers as both a desirable quality and one that they find often lacking in recent graduate recruits.

Society for Research into Higher Education, '[Graduate Resilience: A review of the literature and future research agenda](#)', March 2019.

⁵⁷ Pearson, Nesta & The Oxford Martin School, *The Future of Skills Employment in 2030*, p. 14.

adequately resourced. These budgetary increases should either be publicly funded or sourced through a registration fee for further education colleges, as applies to higher education providers. The OfS should, of course, also seek to make other efficiency savings so that the cost to those it regulates is reduced as far as possible.

Investing in international educational mobility

- 3.24 Programmes for international educational mobility provide opportunities for students to work and study abroad, improve language skills, cultural awareness and increase independence and maturity. These skills and experiences are highly sought-after by employers and strengthen the UK's capacity for R&I. Research finds a correlation between student mobility and improved academic and employment outcomes, with even more favourable outcomes for those from disadvantaged, black and minority ethnic groups who study or work abroad.⁵⁸
- 3.25 Over 16,700 students from the UK undertook a period of study or work abroad through the EU's Erasmus+ programme in 2017/18.⁵⁹ Now the UK has left the EU, our ongoing participation in the Erasmus+ successor programme is a matter for negotiation. It is welcome that the Government will "consider options for participation in elements of Erasmus+ on a time-limited basis, provided the terms are in the UK's interests".⁶⁰ **Our universities strongly support reaching a fair and balanced agreement for continued participation. However, if this is not possible, the UK should seek to create its own scheme to ensure students continue to benefit from international work and study placements.** Whether the UK associates to Erasmus+ or sets up a domestic alternative, the Government should make a funding commitment for schemes for educational mobility to support students with the costs of living and studying abroad.
- 3.26 The UK is an attractive location for students to undertake a short placement: it is the third most popular destination for Erasmus students, for example.⁶¹ As the Government looks to secure new trade deals across the globe, they should **consider taking advantage of the strength of our world-class universities by establishing student exchange schemes alongside new trade deals** to facilitate discussions, enhance the pull of the UK and increase our soft power in the longer term.

Research culture and environment

- 3.27 The UK's research environment is high performing, due in part to the quality of its research environment. Our universities are committed to enhancing this environment further, both to improve the productivity of the research base, and to make the UK an international magnet for excellent science and talent – one which welcomes researchers from a diverse range of backgrounds and encourages talented individuals to pursue a career in research.
- 3.28 To this end, we warmly welcome the Government's R&D Roadmap commitments to support strong and positive research environments. Given the diversity of the research ecosystem across business, university, institute, charity and other environments, this work must be undertaken in a spirit of collegiality with funders and research organisations. The Russell Group will be releasing work on how positive research cultures can be supported in partnership with funders this autumn, and we look forward to working with partners including UKRI on this issue.

⁵⁸ UUKi (2017) Gone International: Mobility Works <https://www.universitiesuk.ac.uk/policy-and-analysis/reports/Pages/gone-international-mobility-works.aspx>

⁵⁹ <https://www.erasmusplus.org.uk/statistics>

⁶⁰ HM Government, The Future Relationship with the EU – The UK's Approach to Negotiations, February 2020, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/868874/The_Future_Relationship_with_the_EU.pdf

⁶¹ Erasmus+ Programme Annual Report 2018 (published January 2020)

- 3.29 We welcome the intention in the UK R&D Roadmap to “adopt long-term approaches to investing in research” and consider “supporting projects for a longer timeframe”. At the moment, researchers can often be reliant on contracts that are relatively short-term. **A key way to improve career stability for researchers would be for funders to lengthen research funding periods to a three to five year norm** to provide greater career stability.
- 3.30 Attention must also be paid to the uncertainties facing early career researchers (ECRs). Much of this arises from a system in which ECRs are continually competing for short-term funding with low success rates. Fellowship schemes should invest in potential and talent over sufficiently long periods (e.g. 5-8 years, not the more typical 3-4 years) to address this.
- 3.31 At PhD level, UKRI should consider providing funding to allow for studentship stipends to be increased and to be funded over a longer period of time. While the demands of PhD training have increased to include additional personal, professional and career development training, this has not been well reflected in the average length of Research Council studentships. Anecdotal evidence suggests these increased workloads can be a contributing factor in poorer student mental health. Exploring ways to support students who need more time to complete their work could also be explored with university partners.
- 3.32 While stable career paths benefit all researchers, they provide particular value from an equality, diversity and inclusion (EDI) perspective. It tends to be more difficult for those with caring responsibilities – disproportionately women – to move between research institutions for example. Longer contracts provide greater stability, which is more compatible with caring responsibilities. Similarly, longer contracts make it more feasible for individuals from widening participation backgrounds to forge a research career.

Attracting international research talent

- 3.33 Alongside investment in our domestic talent pipeline, the success of UK research and innovation will depend on attracting and retaining a range of skilled people from around the world, including technicians, PhD students and scientists. We have welcomed the Government’s new points-based visa system, which supports the recruitment of skilled migrants while maintaining public confidence. Key changes in the system – such as the new Global Talent route, the removal of the costly RLMT, allowing students an extended period to stay in the UK to look for work after their studies, and lowering the salary threshold – will help UK businesses and universities to recruit a wide range of research talent, reduce bureaucracy and help Britain become a global hub for research. Allowing these positive reforms to bed-in through 2021 and beyond will help businesses and research-intensive institutions to act decisively in their pursuit of international talent.
- 3.34 Building on these helpful developments, we **invite the new Office for Talent to consider ways to bring the costs of a Global Talent visa more closely in line with those of other nations** in order not to deter talented individuals from applying. The costs for a single individual to obtain a Global Talent visa will be £3,728 as of October 2020, compared to £258 for a similar visa in the US, £170 in Japan, £170 in Australia or £608 in India.⁶² The immigration health surcharge, paid in addition to NI contributions and charged in-full up-front, is the most significant cost facing researchers. From October, a researcher applying for a 5-year Global Talent visa with a partner and two children will face upfront costs of £13,372 (£2,432 in application fees and £10,940 in immigration health surcharge payments). Revisiting this requirement could help improve the attractiveness of the UK’s offer.

⁶² Calculations of Global Talent visa costs include the scheduled rise in immigration health surcharge from £400 to £624 for adults and £400 to £470 for dependents under 18. Figures for international visas informed by Royal Society briefing, with updates where we have found more recent data: <https://royalsociety.org/-/media/policy/Publications/2019/international-visa-systems-explainer-july-2019.pdf>

- 3.35 International students confer significant cultural, educational and economic benefits to the UK.⁶³ However, Covid-19 could drastically dampen international recruitment in the coming years.⁶⁴ To ensure the UK maintains its hard-won reputation as a global leader in international higher education, we **invite Government to undertake an international marketing campaign as part of promoting a Global Britain using the British Council's experience and involving the DfE, DIT and universities.** This campaign should target key markets – particularly where there are opportunities to diversify international student recruitment – to promote the following messages:
- (a) UK universities are leading the development and trial of Covid-19 vaccinations
 - (b) UK universities have supported international students during Covid-19 with teaching and assessment approaches to minimise risk, providing health and well-being support and visa flexibilities
 - (c) Teaching standards remains world-class, even where elements of courses must be delivered remotely
 - (d) The UK has an extended post-study work offer, comparable to international competitors.⁶⁵
- 3.36 Proactive Covid-19 flexibilities in the visa system for students have set the UK apart from international competitor and should be reinstated in the event of any subsequent 'waves'. In addition, Government should consider making Covid-19 visa concessions permanent where these have cut red-tape without compromising rigorous compliance processes. For example, right to work checks have been conducted very effectively remotely, using online systems.

⁶³ These benefits are set out in detail in the Russell Group input to the Migration Advisory Committee inquiry into international students: <https://www.russellgroup.ac.uk/media/5679/rg-evidence-to-mac-commission-on-international-students-jan-2018.pdf>

⁶⁴ Polling shows perceptions of the UK's response to Covid-19 falling below countries such as Australia, Canada and New Zealand: https://resources.idp-connect.com/hubfs/IDP-Connect_Student-Survey_2020_infographic_FINAL.pdf

⁶⁵ A recent survey showed just 6% of prospective students interested in studying in the UK were aware of the timeframe of the post-study work visa: QS World University Rankings study of International Students, April 2020.