Government fires up R&D across the country to cement the UK as science superpower

$CTA * Government to ensure UK is the best place in the world for scientists, researchers and entrepreneurs with new and ambitious R&D Roadmap * Roadmap sets out vision to attract global talent, cut unnecessary bureaucracy and cement the UK as a world-leading science superpower * significant £300 million government investment will upgrade scientific infrastructure across the UK * new Office for Talent set up to make it easier for leading global scientists, researchers and innovators to come to the UK

New plans to cement the UK as the world's leading research and science superpower have been set out by the Business Secretary Alok Sharma today (1 July 2020).

The Research and Development Roadmap, published today, puts pursuing ground-breaking research, attracting global talent, and cutting unnecessary red tape at the forefront of our long-term plan to ensure the UK is the best place in the world for scientists, researchers and entrepreneurs to live, work and innovate. This will help to power up economic recovery and level up the UK.

£300 million will also be brought forwards to upgrade scientific infrastructure across the UK through the government's World Class Labs funding scheme. This funding will enable research institutes and universities to make sure UK researchers have access to better lab equipment, digital resources, and to improve and maintain current research facilities.

The Roadmap will also support the government's efforts to address global challenges from eradicating our contribution to climate change by 2050 and developing new medicines, to improving life at home by strengthening national security and improving public services.

To achieve this, the government has today committed to:

- Increasing investment in ground-breaking research, cutting unnecessary bureaucracy and setting ambitious new goals for research to keep the UK ahead in cutting-edge discoveries.
- Attracting, retaining and developing top talent to ensure the UK is the best place for researchers to work, offering careers at all stages that attract a diverse range of people. The government will also establish a new Office for Talent, making it easier for top global science, research and innovation talent to come to the UK.
- Securing the economic and societal benefits of world-class research across the UK by setting up a new Innovation Expert Group to review and improve how the Government supports research, from idea stage right through to product development.
- Supporting our innovators and risk-takers by backing entrepreneurs and

start-ups with the funding needed to scale up their innovations, as well as ensuring the UK is making the most of its first-class industries and technologies.
- Boosting international collaboration to ensure the UK benefits from global scientific partnerships. This will create new opportunities for trade, growth and influence for the science and innovation communities and research institutions.
- Aiming to maintain a close relationship with European partners by seeking to agree a fair and balanced deal for participation in EU R&D schemes. If the UK does not associate with programmes such as the EU's research programme, Horizon Europe, the government will commit to meeting any funding shortfalls and putting in place alternative schemes to support vital UK research.

The new Office for Talent is a team based in No10 with delivery teams across government departments. It will ensure the UK's talent offer is stronger than ever for students, those building their careers, and those who are already world leaders in their fields, and will make it easier for those with the most talent, potential, energy and creativity to come to the UK from around the world.

The Office will begin work immediately to review the effectiveness of the current rules and ensure excellent customer service across the immigration system, so that it is simple, easy, and quick. They will also help those coming to the UK better understand the opportunities on offer and break down any barriers they might face.

The government announced today, as part of the new graduate route, international students who complete a PhD from Summer 2021 can stay in the UK for 3 years after study to live and work. As previously announced, students who have successfully completed undergraduate and master's degrees will be able to stay 2 two years after study. This will make it easier for some of the best, young international graduates to secure skilled jobs in the UK and contribute to economic growth.

In addition, when the student route opens this autumn as part of the UK's new points-based immigration system, there will be a number of improvements which will further streamline the immigration process. These include extending the window in which prospective students can make visa applications, removing study time limits at postgraduate level and allowing all students to switch any other type of visa from within the UK. Existing students and those who start their course this autumn will benefit from these changes, once they have been introduced.

The global talent scheme will also be opened up to EU citizens which will allow highly-skilled scientists and researchers to come to the UK without needing a job offer.

To attract the top digital and tech talent from across the UK and from overseas into government itself, a flagship innovation fellowship programme will be launched, sponsored by No10. Those admitted to the programme will help transform the delivery of public services by accelerating the adoption

of cutting-edge technologies and approaches from industry, academia and civil society.

Business Secretary Alok Sharma said:

> The UK has a strong history of turning new ideas into revolutionary technologies – from penicillin to graphene and the world wide web. Our vision builds on these incredible successes to cement Britain's reputation as a global science superpower.
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> The R&D Roadmap sets out our plan to attract global talent, cut unnecessary red tape and ensure our best minds get the support they need to solve the biggest challenges of our time.

Today's announcement, is on top of the £280 million provided to universities to continue their cutting-edge work during the coronavirus pandemic, such as research into antibiotics resistance and the effects of coronavirus on society, by covering the costs of equipment and salaries. A new research funding scheme also opens this Autumn to cover up to 80% of a university's income losses from a decline in international students.

Science Minister Amanda Solloway said:

> Coronavirus has shown us the agility, creativity and innovative thinking of our world-leading institutions, scientists and researchers to tackle this disease and save people's lives. We want to harness this expertise to rejuvenate science and research across the UK, building a future that is greener, safer and healthier.
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> The R&D Roadmap will help us achieve our ambitions by unleashing the potential of science and research to embrace diversity, resilience and adaptability while tackling our biggest challenges such as achieving net zero carbon emissions by 2050.

Chair of the Royal Academy of Engineering Research Committee Professor Karen Holford CBE FREng FLSW said:

> This is unquestionably a time of uncertainty and challenge for research and innovation in the UK, yet we are also faced with a great opportunity to build back better with R&D at the heart of the economy. The publication of the R&D Roadmap confirms the government's ambition to make that a reality. We are looking forward to working with the full breadth of the community and being part of the conversation that will follow. Investing in R&D is investing in the future.
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> We are a community of many parts – from the researchers in our universities pushing the boundaries of knowledge, the start-ups and

> entrepreneurs embracing risk, the innovators and businesses that are powered by R&D, to the institutions providing expertise and facilities. But working in collaboration with government we can be greater than the sum of our parts and deliver even more for the economy and society. I am particularly encouraged by the ambition to work across the devolved administrations and key stakeholders, the opportunity to maintain the positive collaborative behaviours emerging as a result of COVID-19 and the recognition of equality, diversity and inclusion as a critical aspect of research culture.

UK Research and Innovation Chief Executive Professor Dame Ottoline Leyser said:

> Research and innovation are national strengths, central to our well-being, our economy, and our prosperity. The government's R&D Roadmap emphasises this importance, sets out a clear ambition and recognises the vital role UK Research and Innovation will play in unlocking its full potential.
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> UKRI welcomes the continued commitment to a record increase in public investment in R&D to £22 billion a year by 2024/25. This investment will allow us to build, with others, an inclusive knowledge economy across the UK, a system we are all part of and proud of, which we can all contribute to and benefit from.

Notes to editors

Following the government's commitment to increase R&D investment to £22 billion a year by 2024/25, the Roadmap will drive collaboration between government, industry, research organisations and local authorities to ensure research funding is accessible, boosts productivity, improves public services, creates high-quality jobs and delivers economic and societal benefits to communities across the UK.

World-leading projects already taking place in the UK, include:

- The University of Manchester has developed nuclear robotics that can map floor spaces to detect radioactive contamination without people needing to enter harmful environments.
- Creo Medical has developed a device for a new less invasive and safer method to remove complex polyps, abnormal tissue growths, from patients diagnosed with gastric carcinoma, the fourth most common cancer worldwide. This has helped the NHS save £5,000 per procedure and can also reduce the length of hospital stays for patients.
- The Satellite Applications Catapult is building the UK's first private standalone 5G network in Milton Keynes, embossing satellite connectivity into the network to ensure access and reach for all. This could improve health and social care in the community, including early diagnosis and screening, home monitoring and telemedicine. In addition, Milton Keynes

Council will look at how 5G could transform the town’s transport by connecting autonomous vehicles such as delivery robots – which have been providing food deliveries for those shielding during the Covid-19 pandemic.