Place 2025: How R&D can drive growth across the UK

This briefing sets out recommendations to strengthen the UK's regional R&D, synthesised from Campaign for Science and Engineering's (CaSE's) longstanding work in this area. Our recommendations are informed by a wide range of evidence, including from our members in leading R&D institutions and from our landmark public opinion research.

Why place matters

Driving economic growth and raising productivity in every region of the UK is the number one mission of the UK Government. At the same time, the UK has more regional inequality compared to other developed countries.

R&D is a powerful engine to drive economic growth. Public R&D investment increases private sector output and productivity, leading to significant rates of economic return. The latest estimate suggests an average rate of return to public R&D investment of up to 40% after 6 years, with the possibility of even greater returns over a longer period.

Investing in regional R&D should play a major role in the UK Government's mission to drive growth across the whole of the UK. The UK Government is preparing policy changes that recognise this and present an opportunity to strengthen regional innovation through devolution and regional investment. The Industrial Strategy, expected in June 2025, will set out a 10-year plan to drive economic growth across the UK. The UK Government has also published a white paper committing to the English Devolution Bill, which will grant new powers to local government, expected to be introduced in this parliamentary session.

About CaSE

CaSE is the leading independent voice for UK R&D. We are a charity supported by a diverse membership including businesses, universities, professional bodies, research charities and individuals. Our members span the whole breadth of R&D – including discovery research, science, engineering, and innovation across the public, private, and charitable sectors.

We collaborate with our members, partners and the public to lend our clear, expert voice to decisions about research and development. We specialise in developing non-partisan, responsive solutions that help research and innovation to thrive in ways that improve people's lives and livelihoods.

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What's inside the English Devolution White Paper and Industrial Strategy Green Paper?

English Devolution White Paper

- Outlines an aim for all of England to be covered by new 'Strategic Authorities' of councils working together, similar to existing Combined Authorities. Some of these will be led by Mayors and will have additional devolved powers. Mayoral Authorities that meet specified criteria will be designated Established Mayoral Strategic Authorities and will be granted further devolution, including more flexible funding from central government.

- Mayors will have a statutory duty to produce Local Growth Plans setting out a vision and roadmap for achieving growth in their region over the next decade. Strategic Authorities without mayors will be expected to set out a vision for growth that builds on existing economic strategies – it is unclear if they will receive any additional support.

- The UK Government will work with Established Mayoral Strategic Authorities to develop bespoke innovation support offers. Established Mayoral Strategic Authorities will also be consulted on strategies by the Department of Science Innovation and Technology (DSIT), and UK Research and Innovation (UKRI). Innovate UK will collaborate with all Mayoral Authorities to produce joint plans shaping long-term innovation strategies and investments.

- The White Paper's proposed changes will not apply to Scotland, Wales and Northern Ireland.

Industrial Strategy

- Will focus on eight growth-driving sectors, all of which are underpinned by R&D[1]. It will concentrate on places with the greatest potential for these growth sectors across the UK.

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[1] The growth-driving sectors are advanced manufacturing; clean energy industries; creative industries; defence; digital and technologies; financial services; life sciences; professional and business services.

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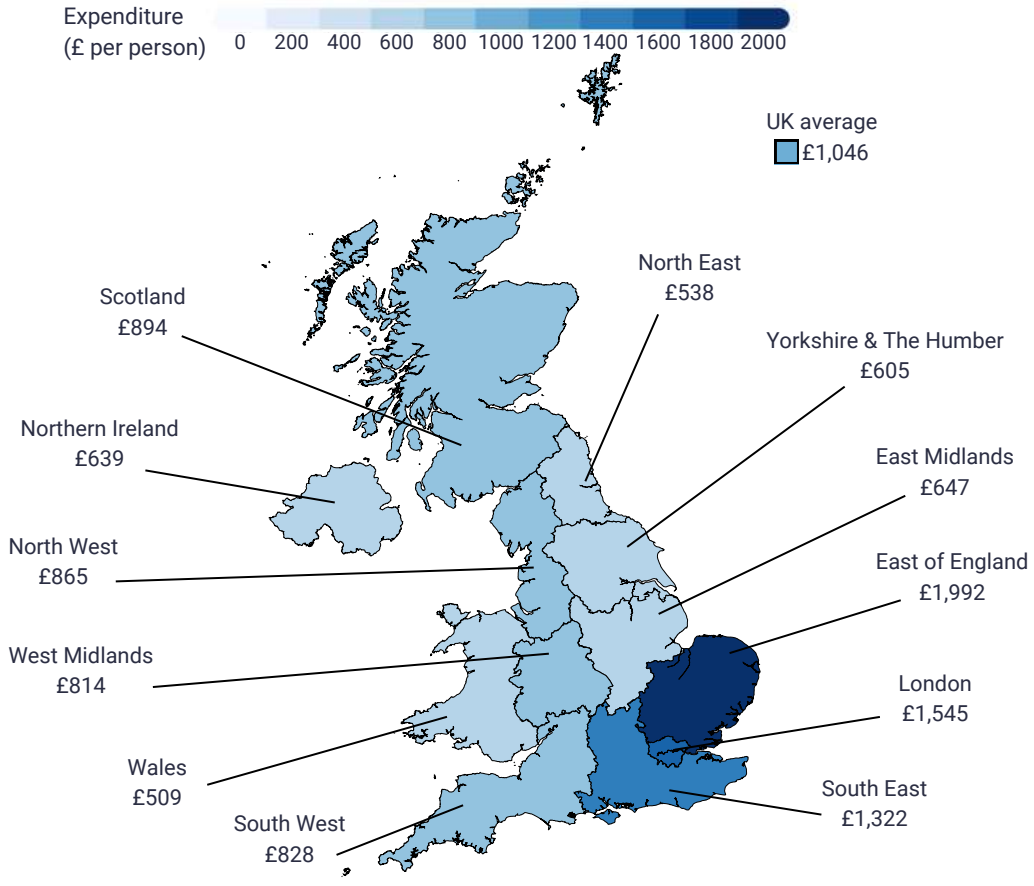
R&D investment is not spread equally across the UK

Currently, R&D expenditure is concentrated in certain regions of the UK. The UK invests 2.77% of GDP into R&D nationally, representing £1,046 per person – however some regions attract much more investment. Per capita R&D expenditure is highest in the East of England, London, and the South East of England, and lowest in Wales, the North East of England, and Northern Ireland[2]. The highest region, the East of England, attracts nearly double the UK per capita average, while the lowest region, Wales, attracts less than half.

R&D expenditure is not spread equally across the UK

2022 expenditure on R&D across UK regions in £ per person



Sources: ONS, Gross domestic expenditure on research and development, UK: 2022; ONS, Estimates of the population for the UK, England, Wales, Scotland, and Northern Ireland: 2022

[2] Gross domestic expenditure on research and development, UK - Office for National Statistics, Estimates of the population for the UK, England, Wales, Scotland, and Northern Ireland - Office for National Statistics – data for 2022 was used.

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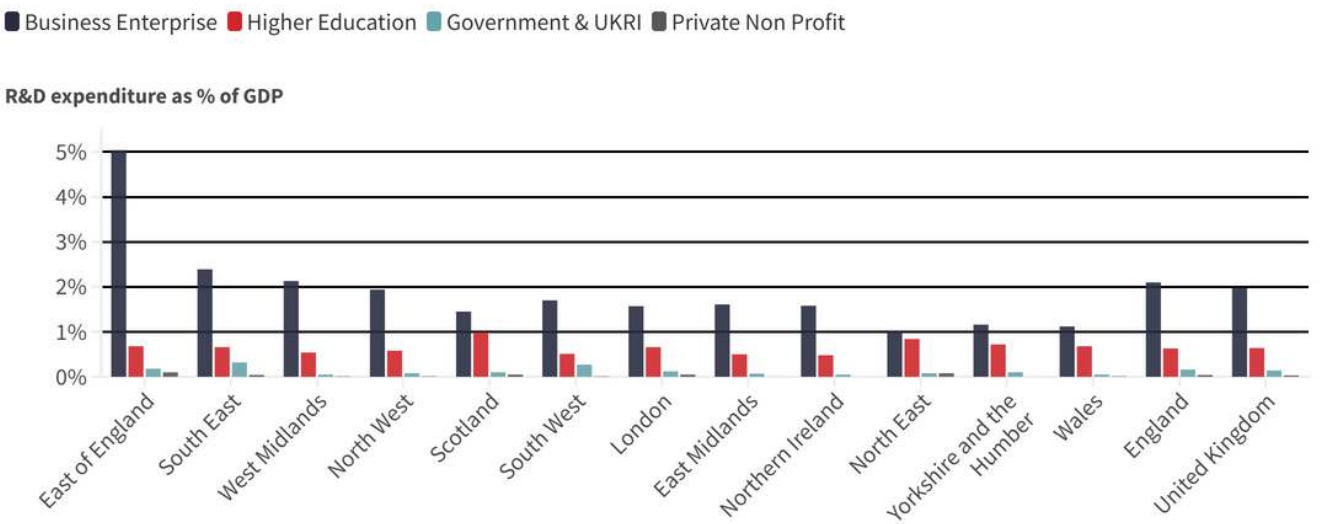
Digging deeper into the data shows significant regional disparities in R&D expenditure performed by different sectors, particularly business R&D. In all UK regions, business enterprise is the largest performer of R&D, and this sector is the biggest driver of regional variation. At one extreme, business R&D is 5% of regional GDP in the East of England, whereas in the North East, Yorkshire and the Humber, and Wales it is just over 1%. It is worth noting that despite having the second highest R&D expenditure per capita, London has a relatively low R&D expenditure as a proportion of its GDP. This is due to the large size of its economy.

Business R&D is the largest driver of regional variation

2022 R&D expenditure as a proportion of regional GDP - broken down by sector of performance



Sources: ONS, Gross domestic expenditure on research and development, UK: 2022; ONS, Estimates of the population for the UK, England, Wales, Scotland, and Northern Ireland: 2022

Across the UK, the public support more R&D in their area

CaSE's public opinion research has found that most people would support more regional R&D. In our July 2022 survey, a majority in all regions said it was important that their region carries out a lot of R&D, peaking in Scotland (80%) and the North East (79%). Across the UK, respondents who felt this way were motivated by local jobs (71%) and inward investment (64%).

Our research also shows that this support extends to an even more local level. In our February 2023 survey, a majority in all regions said they would support a new research lab being built in their area, roughly equivalent to support for a new school. Of those who supported a lab being built, the most common reasons were that it would benefit the local economy (62%) and bring more well-paid jobs to the area (60%).

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Recommendations

The following recommendations are a synthesis of recommendations CaSE has made in our work on place since our 2020 report, The Power of Place, updated to suit the current context.

Empower regional government

It is important that all regions of the UK are empowered to develop thriving R&D and innovation ecosystems. The English Devolution Bill is an opportunity to explore how new mayoral and local government structures in England can take on stewardship of regional R&D and innovation funding. At the same time, it is important that the UK Government, devolved Governments and local authorities work together to improve national coordination between local and national R&D priorities.

- **The UK and devolved Governments should support all local authorities to build regional innovation offers** with the funding and freedom to enact effective policies at a local level. It is important to ensure that places without regional mayors or new local government structures do not lose out on innovation funding support.

- **Local authorities should convene a diverse mix of regional stakeholders** to articulate a distinct R&D narrative for their region. This should include the perspectives of residents, research institutions, and businesses.

- **All local authorities should assess what levers they have for intervention** to support regional R&D and make the case to the UK or devolved Governments for more levers if needed.

Develop regional R&D brands

Branding is important for R&D centres of excellence. Foreign direct investors require a strong understanding of different regions and their strengths and capabilities to make investment decisions. It is also important to build local support for and engagement with R&D.

- **R&D funders should support regions to develop regional R&D identities** to engage the public and attract international investment. The perspectives of residents, existing regional identities, and tools like DSIT's UK Innovation Cluster Mapping Tool should drive this.

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- **Local authorities, devolved Governments and research institutions should build the profile of regional R&D** by engaging residents about research activity in their area, foregrounding its place and purpose. There must be mechanisms to ensure regional R&D messengers are adequately incentivised and recognised.

Build regional capacity for R&D

The Industrial Strategy aims to support high-potential clusters. For regions to benefit from R&D investment, they must have the capacity to carry out R&D.

Provide a continuity of funding

- **Funding agencies should provide long-term and flexible regional funding support** to incentivise international investment and sustain newly built capacity, skills, collaborations, and culture shifts. Long-term support doesn't need to mean guaranteed funding but should provide efficiency and streamlining for future funding applications.

Invest in infrastructure for regional R&D growth

R&D capability cannot be considered in isolation from infrastructure, including non-R&D infrastructure like housing and transport. There are challenges across the UK around access to the R&D infrastructure that supports businesses to scale and grow.

- **Map scale-up infrastructure across the UK** to identify regional gaps and encourage and assist wider access to the infrastructure needed to grow innovative businesses. This should include UKRI continuing to maintain their infrastructure mapping databases.

- **Local authorities should ensure access to R&D and innovation infrastructure across all stages of commercialisation**, with UK or devolved Government support or joint industry funding to lower costs and broaden availability.

- **The UK and devolved Governments should invest in housing, transport, and utilities to support regional R&D growth** – making places more attractive for skilled talent and equipping them for increased research intensity.

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Grow regional skills bases for R&D

Businesses often decide where to operate based on the availability of skilled workers. The skills needs of businesses are not always communicated effectively to education institutions and more can be done to engage residents with R&D career paths.

- **Local authorities should align skills development with regional employer needs** by fostering partnerships between businesses and education providers. In England, Local Skills Improvement Plans need to engage with businesses to match skills provision to evolving market demands and should be closely aligned with Local Growth Plans where these are being developed.

- **Local authorities should raise awareness of regional R&D career opportunities** through targeted careers guidance and regional campaigns, while creating demand for future skills training by aligning education with employer needs and fostering industry-education partnerships.

- **The UK and devolved Governments should map skills demand across sectors and across the UK** to better understand gaps and provision needs. As skills needs vary by region and skills policy is devolved, governments across the UK should co-ordinate and share data to provide a full picture of UK wide skills supply and demand.

Ensure financial sustainability for universities

Universities play a crucial role in developing R&D capacity, especially in regional settings. In addition to providing a skilled workforce, they are a focal point and anchor for regional institutions and clusters. However, universities across the UK are currently facing massive financial pressures, threatening their long-term sustainability.

- **The UK and devolved Governments should take short-term action to support universities while longer-term reform is carried out.** A holistic review of the funding mechanisms for university-led R&D (and universities more broadly) is needed to increase 'end-to-end' coverage of the costs of research activity and protect the UK's world leading research sector.

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Foster collaboration and build on strengths

To maximise the regional economic impact of R&D, it is important to create an environment that is collaborative rather than competitive between regions.

- **The UK Government and funding agencies should promote inter-regional collaboration over competition** by designing funding and strategy to support joint planning across complementary regions in early stages, fostering place-based networks and aligning regional and national R&D priorities.

- **Promote cross-sector collaboration at all levels** to respond to emerging challenges by sharing best practices, knowledge and skills. In particular, there needs to be greater support for smaller businesses to form partnerships with academia and big businesses.

- **Focus R&D investment on existing areas of excellence** with growth potential. This should recognise and support clusters with potential for cross-sector innovation, as well as clusters with activity exclusively in the same sector. This should build on DSIT's Innovation Clusters Mapping Tool.