About Universities UK

Universities UK (UUK) is the collective voice of 141 universities across the UK. Our mission is to help UK universities be the best in the world, through their research and teaching, knowledge exchange and commercialisation activities, and through the positive impact they have locally, nationally and globally.

Executive Summary

UUK welcomes the government's commitment to drive growth through investment in research and innovation in our regions and nations. Universities play a fundamental role in the innovation ecosystem, both as anchor institutions translating commercialised research into local impact and as a foundational sector for national RD&I excellence, attracting and retaining highly skilled graduates and researchers. Universities are uniquely placed to deliver the high-level skills and cutting-edge research that the ecosystem needs. Our response reflects this in its assessment of the efficacy of government policies and policy levers.

To strengthen universities' ability to contribute to growth and the wider innovation ecosystem, government should:

- Provide mechanisms that allow universities in England that are outside of Mayoral Strategic and Strategic Authorities to grow clusters, connect skills strategies into the innovation ecosystem and contribute to the Industrial Strategy.

- Ensure that wider and deeper devolution does not impact core research and innovation funding, which should continue to be distributed according to excellence across regions.

- Allocate additional long-term funding for regional innovation that removes cliff-edges, provides policy stability and encourages private investor confidence.

- Ensure the UK is positioned as a destination of choice for the world's leading researchers.

- Work closely with devolved governments and universities, in Scotland, Wales and Northern Ireland to determine how best to support and enable innovation outside of England.

- Ensure the financial sustainability of the higher education sector so that universities can maintain and grow their research and innovation capacity and expertise.

1. How does the Government drive research and innovation in our regions?

How effective are the government's policies in supporting the innovation ecosystem across the UK's nations and regions, particularly through commercialisation initiatives?

There is a broad range of government policies to support the innovation ecosystem. These vary in success according to how effectively they allow universities to commercialise research, build local partnerships and contribute to national missions. Universities, in their capacity as a foundational sector for national economic growth, and at the local level as anchor institutions, are essential to the success of the innovation ecosystem.

We are supportive of policies that encourage private sector investment into the innovation ecosystem, such as the new industrial strategy. However, we note that policy churn has affected the confidence of private investors. We support devolution policies that encourage greater collaboration between local government, industry and universities, but question how these will work in practice across the whole of the UK. Finally, financial sustainability of the higher education sector underpins the extent to which universities can undertake research and commercialisation activities. Therefore, policies in this space need to be effective, to ensure universities' continued contribution to the innovation ecosystem.

Innovation Funding

We are supportive of current interventions that use public funding to stimulate private investment into innovation. This includes the Higher Education Innovation Fund (HEIF), UK Research Partnership Investment Fund (UKRPIF) and Innovation Accelerator pilot, which was extended for 1 year in the autumn budget. Ideally these initiatives will be continued and expanded in future years, particularly HEIF, which is critical to developing and retaining the agile capacity needed for universities to support local economic development and inclusive growth. The flexibility of HEIF provides a foundation for investing in collaborative projects and developing local innovation ecosystems across England. It also allows universities to resource technology transfer offices (TTOs), which are crucial for commercialisation, fulfilling varied functions such as filing patents, forming business plans, negotiating licences, finding investors, and providing vital proof of concept funding. TTOs ensure that universities extract maximum value from innovation funding, ensure a pipeline of entrepreneurial academics, and support start-up and spinout generation.

The Innovation Accelerator pilot is an important driver towards place-based funding initiatives. However, we are mindful of the direction of travel when it comes to English devolution and would want to avoid future policy disadvantaging some universities based on their geographic location. Already, UUK member universities in English Mayoral Strategic Authorities (MSAs) and across London receive 86% of UKRPIF and 77% of Research England Development (RED) funding, despite representing 61% of the sector. Glasgow City Region

receiving Innovation Accelerator funding demonstrates that non-MSA regions have ample ability to use innovation funding impactfully, and we hope this is accounted for in future funding initiatives.

It is vital that sufficient funds are available to drive partnerships between universities and small- and medium-sized enterprises (SMEs). **The overall scale of public funding for innovation has decreased since 2020**. The loss of European Structural and Investment Funds (ESIF), including European Regional Development Funding (ERDF), without a suitably funded replacement has led to a reduction in innovation projects and partnerships, particularly between universities and SMEs, who play a critical role in local growth. The £60 million Regional Innovation Fund (RIF) pilot was a welcome attempt to replace some of the lost funding, but the quantum was less than half of what was available to universities via ERDF (an average of £135 million a year between 2014 and 2020). While the UK Shared Prosperity Fund (UKSPF) was also offered as a replacement, very little funding was allocated towards innovation or SMEs.

Overall, ESIF replacement funds have been short-termist, limiting the ambitions of recipients and undermining partnerships. Short-termist funds have also affected the confidence of private co-investors. Funding initiatives need long-term stability in order for impact and crowding-in to be measured. Return is typically 3 times greater 10-15 years after public investment than when measured 1 year after investment, and recent policy churn has negatively affected how investment is measured and promoted to private investors.

The loss of ERDF led to a cliff-edge for over 100 university innovation, skills and business support projects across the UK, with many people with industry-facing roles in universities being made redundant. It is likely that we will see the impact of this cliff-edge in the next round of Knowledge Exchange Framework (KEF) results. Innovation ecosystems are fundamentally driven by relationships, which take time to build but can easily be lost. Looking forward, **there are lessons to be learned about the efficacy of policies that encourage short-termist outlooks, churn and cliff-edges**.

Devolution

We welcome the fact that the drive to devolution in England has encouraged areas to draw up local growth plans. Local growth planning has provided an opportunity to create greater stability, consistency and coordination where there previously may have been a short-termist outlook, an absence of effective, joined-up government, and poor understanding of what works well through a lack of evaluation. The establishment of Strategic Authorities (SAs) has, in some parts of England, created an effective mechanism for universities to engage with other education providers, business and the public sector to meet local needs. This matters because the most impactful innovation ecosystems have a triple-helix model of innovation embedded, where universities, local politicians and industry work together towards shared goals.

At the same time, **government policy needs to acknowledge that devolution takes time,** and local leaders need resources to build up their innovation ecosystems. **Universities have a significant role to play in supporting their local authorities towards devolution and supporting growth**, through policy support and analysis and fulfilling their roles as convenors, to give just two examples, but **the extent to which they can do this is limited by their financial instability**.

Government policy must also acknowledge that **English devolution leaves local authority leaders in Scotland, Wales and Northern Ireland, as well as leaders outside of MSAs, at risk of missing out on opportunities only afforded to English mayors**. For example, the Devolution White Paper proposes that established mayoralties will get an annual meeting with the science minister and will develop joint innovation action plans with Innovate UK to shape long-term strategies and investments. The selective nature of these opportunities risks disenfranchising university and political leaders who do not belong to MSAs, and risks their valuable expertise being ignored and significant opportunities not being pursued.

Across England, Scotland, Northern Ireland and Wales **there are currently 52 UUK member universities who sit in regions that have no devolution deal pending or in existence**. Nonetheless, **many of these members are part of clusters or functional economic areas that are vital to the success of the industrial strategy**, such as the University of Plymouth, which has expertise across clean energy, advanced manufacturing, digital and defence sectors. Similarly, the University of Stirling's role in connecting the Glasgow-Edinburgh corridor with the Highlands and rural Scotland will be key to the diffusion of advances from the industrial strategy.

In 2022-23, the 52 UUK member universities who sit in regions that have no devolution deal pending or in existence generated over £107 million in intellectual property income. Universities in Scotland, Wales and Northern Ireland returned £11.52 billion to the economy in 2021-22 from research and knowledge exchange activities. To leave these universities and their localities out of strategic conversations would be a huge blow to local and national commercialisation efforts.

In England, evidence points to significant economic activity from innovation across non-SA areas. For example, there is currently no devolution deal in place for Oxfordshire and yet the University of Oxford created 15 new companies, including 10 spinouts, 2 social ventures and 3 start-ups between August 2023 and July 2024. Likewise, Cranfield University in Bedfordshire hosts a Rolls-Royce university technology centre (UTC) supporting Rolls-Royce's work on aerodynamics, engine installation and more sustainable and 'cleaner' aviation. Research from Cranfield's UTC has fast-tracked the application of aviation technologies, creating substantial savings and re-investment opportunities for Rolls-Royce. If resources and engagement are disproportionally focused on mayoral regions in future it could limit the ability of universities and their partners in other regions to realise these kinds of opportunities.

Industrial Strategy

The development of an industrial strategy, put forward in the *Invest 2035: The UK's Modern Industrial Strategy* green paper, with growth-driving sectors, is a positive example of government policy supporting the innovation ecosystem. If the strategy develops with coherent links between university research development and innovation (RD&I) and specific 'long cycle' future technologies that are going to deliver growth over the coming decades, the UK will be well-placed to compete on an international stage. To this end, we are pleased to see higher education sector expertise represented on the Industrial Strategy Advisory Council, as this reflects the criticality of universities to the strategy's delivery.

Any ecosystem needs a capable and agile workforce with high level skills. Data shows that all eight industrial strategy growth-driving sectors report a higher proportion of graduates than the UK workforce as a whole (50%), and for five of the eight sectors, more than 60% of the workforce are graduates, suggesting higher-level skills are needed for those sectors to further enhance their productivity. Interdisciplinarity will also be key to the success of the industrial strategy. Universities have a unique opportunity to develop graduates with a versatile set of skills who can combine and apply expertise across sectors – e.g. cross-cutting AI and the financial sector, or thinking creatively about the Life Sciences sector – as traditional professions continue to transform.

Universities' financial sustainability

The financial sustainability of universities is a significant concern for innovation. The UK is highly reliant on the excellence of our university sector as a transmission system for RD&I. Consequently, an adequately funded and resilient sector is critical to developing an effective innovation system.

RD&I has proven societal and financial impacts. Every £1 invested in university research activities generates an additional annual economic output of £4.95 through positive productivity spillovers to the UK private sector. However, university research faces intensifying financial pressure and rapidly increasing global competition. The current system relies on a disproportionate and growing cross-subsidy from universities to make research viable, and this is worsening. In 2022-23, UK universities incurred a £5.3 billion deficit on their research activity. Sustainable and adequate funding is needed to allow the sector to better absorb the costs of undertaking research.

More widely, OfS analysis in November 2024 indicated that, by 2025-26, up to 72% of providers could be in deficit, and 40% could have low liquidity (based on current trends and not accounting for significant mitigating actions). Under such conditions, in 2024, 34% of UUK members suggested that they would consider reducing academic research activity in efforts to cut costs. This is in addition to almost 40% seeing voluntary redundancies, and almost a quarter closing courses. Redundancies can also severely deplete the capacity of university TTOs. In short, **the financial precarity of the sector negatively impacts the pipeline of research, talent and enterprise that the innovation ecosystem depends on**.

Under financial strain, there is risk of reduced collaboration between universities. This matters because collaboration is essential to the success of the innovation ecosystem. The expertise of academics at one university often complements and enhances the expertise of academics at another, allowing for the application and translation of ideas across disciplines. University collaboration across regions strengthens the case for inward regional investment, which is absolutely critical when it comes to the government's ambitions for innovation and growth.

The government's decision to increase university tuition fees and maintenance support for 2025/26 has been a welcome first step towards putting the sector in England onto a sustainable footing, and therefore supporting research and commercialisation activity. However, further action is needed, particularly for universities in Scotland, Wales and Northern Ireland who are facing continued financial pressures.

How should devolution be harnessed to support innovation across the regions and nations, and what role should local government play in supporting research and development?

We agree that a strong local network of public and private institutions, including universities, focused on RD&I, the diffusion of ideas and relevant skills provision is one of the factors which sets highly productive local economies apart. Devolution has been shown to be able to strengthen such networks.

However, as indicated above, it will take time for devolution deals to be agreed and ratified across England. Not all local authorities have the capacity to make immediate and significant changes. Therefore, if devolution is leveraged as a mechanism to support innovation without alternative mechanisms being identified or developed, there will be inconsistent support for regions with deals of differing maturities.

Moreover, devolution deals are not on offer at all within any of the devolved nations. If devolution is harnessed to support RD&I, there needs to be a mechanism of support for areas without a devolution deal to address the gaps in the geographic coverage of MSAs across the UK. Such a mechanism should incentivise universities to help local governments on the pathway to greater devolved power or, where greater devolution is not on offer, work with alternative structures (such as Regional Economic Partnerships in Scotland) through a sharing of expertise and capacity. Our Opportunity, Growth and Partnership: A Blueprint for Change proposes that where MSAs do not exist in England, government establish local growth partnerships to enable universities to support local authorities to develop their local growth plans by overcoming local coordination failures and learning from initiatives such as Local Enterprise Partnerships and Local Skills Improvement Plans. Universities are well positioned to put themselves forward as critical partners in local growth plans and should ensure they have a dedicated 'local growth' function to act as a single point of contact for local government partners.

Dedicated 'local growth' functions can also act as front door to industry partners and to other universities, encouraging increased collaboration between universities at the local level to enhance their impact and contribution. Our Blueprint highlights the role universities can play in supporting a responsive and engaged innovation ecosystem through strong partnerships and collaborations, for example through the development of Civic University Agreements, or through networks of universities such as in the North East, Yorkshire, London and Greater Manchester.

If devolution is to be harnessed for funding allocations, while we agree that innovation funding can go further to align with local strengths and expertise, our view is that **the distribution of RD&I funding should maintain excellence, following the Haldane principle**. The government approach should continue to be focused on **excellence wherever it is found**. Underpinning, enhancing and scaling up excellence is fundamental to maintaining the effectiveness and international competitiveness of UK RD&I and ensuring maximum return on investment.

One way of ensuring excellence is by continuing to allocate funding through bodies such as UKRI and Innovate UK. If the government is supportive of local growth plans being developed across England, funding bodies can engage and respond to the needs expressed in these, ensuring funding is appropriately aligned to local strategies. In the devolved nations, Innovate UK should be encouraged to engage with alternatives like Scotland's Regional Economic Partnerships. This model has been tested with the Innovation Accelerators pilot, where Innovate UK and UKRI provide an additional layer of accountability and structure to funded projects. They also have the expertise of programme management and delivery to measure the impact of funding.

In order for excellence to be maintained, the government also needs to invest in local capacity to harness and nurture clusters of strength. This includes the government investing in universities, as a sector with fundamental economic and international competitive strength. **Universities provide significant value for money and impact compared to the level of funding they receive.** For every £1 of public money invested in the higher education sector across the UK, £14 is put back into the economy. **The total economic impact of the UK higher education sector on the UK economy is more than £265 billion. This includes the impact of research and knowledge exchange, which is £63 billion.** However, the sustainability of university research activity is becoming more challenging, with decreasing levels of cost recovery over the past decade. This in turn risks the excellence of UK research and development (R&D). To ensure that R&D spend is distributed on the basis of excellence, the underlying question of research sustainability needs to be addressed, as universities in the toughest financial positions will have to make tougher choices when it comes to their R&D focus.

The funding of RD&I should include support for developing future areas of strength and excellence and the capacity building needed to support this. As recognised in the industrial strategy green paper, clusters can play a key role in attracting business and investment to create local growth and opportunity. Identifying and supporting emerging high potential clusters across the UK and harnessing the agglomeration effects of university research, innovation and high-level skills provision can play a key role in generating inclusive growth.

The innovation ecosystem, sector and cluster strengths and economic geographies extend beyond the current boundaries of the MSAs. Increased engagement, responsiveness and strategic planning should be extended to the devolved nations (and their own different regions) and to regions of England yet to become new SAs.

How do factors such as the tax system, regulatory frameworks and standards influence the success of start-ups, spinouts, and other innovation-driven businesses?

In 2022-23, more than 20,000 active spinouts, start-ups and social enterprises emerged from UK universities. These companies generated 122,000 jobs, many of which were in emerging sectors, with start-ups in industries such as net-zero technology, AI and genomics. In 2024, 1,317 active academic spinout companies accounted for 2.5% of the UK's high-growth company population.

R&D tax credits, the Enterprise Investment Scheme (EIS) and the Seed Enterprise Investment Scheme (SEIS) have played a role in this success. There is a proven link between tax credits and increased R&D spending, particularly for smaller or younger firms.

Globally accepted and universal standards have also created the pre-conditions for UK start-ups and spinouts to scale globally. Spinouts able to manufacture to singular, rather than competing, standards, can lead to greater efficiency. As such, we are pleased to see that the government through DSIT are developing standards around Artificial Intelligence (AI) in a consultative way that takes into account a need to mitigate risk while also promoting innovation. AI is a cross-cutting enabler as well as a growth-driving sector for the industrial strategy, and reasonable standards will therefore drive the strategy.

DSIT's planned terminology tool for responsible AI will also positively influence the success of start-ups, spinouts, and other innovation-driven businesses. Changing frameworks and systems are burdensome for university TTOs and businesses to learn and apply. Agreed terminology will reduce some of the burden experienced by emerging and established companies.

What challenges do innovation-focused researchers and businesses face in spinning-out or scaling-up, such as accessing venture capital, infrastructure and intellectual property rights?

Innovation-focused university researchers face various challenges when spinning-out and scaling-up. Many of these relate to accessing private investment, including venture capital. The short-termism of many existing publicly funded interventions to encourage innovation discourages crowding-in and match investment. The churn of funding initiatives makes it difficult to measure impact, and therefore promote return on investment to prospective investors. Policy churn or a lack of certainty also affects investor confidence in high-risk innovative sectors and technologies.

An example of this lack of certainty is Research England's Connecting Capability Fund (CCF) which was allocated to projects supporting higher education provider collaboration in commercialisation until 2020-2021. An additional 2 years of follow-on funding have benefited the recipients of funding, but long-term **proposals for the programme are unknown, creating uncertainty** across the 128 individual businesses and investors partnering with universities.

One recipient of CCF is Northern Gritstone, an independent investment company established with the support of the universities of Manchester, Leeds and Sheffield. It supports the commercialisation of science and IP-rich businesses originating from these institutions, while also funding the development of similar businesses across the North of England. Northern Gritstone's activities have secured £312 million, supported by investments from local authority pension funds.

Midlands Mindforge have also used CCF funding to evaluate and build the business case for an investment vehicle, through the partnership of eight universities (Aston, Birmingham, Cranfield, Keele, Leicester, Loughborough, Nottingham, and Warwick), to overcome the historic underinvestment in university start-ups in the Midlands. Difficulties accessing venture capital force many Midlands spinouts and start-ups to relocate, and constrain their ability to scale, drive growth, and create jobs. British Business Bank analysis of Beauhurst, ONS and BEIS data shows that spinouts in the Midlands have historically raised only 15% of the capital (over 7 years) raised by spinouts in the Golden Triangle.

Our Blueprint proposes that to fully capitalise on the opportunities for growth, universities should build in strategies to mobilise their own and/or venture capital to support the commercialisation of research, IP and scaling up of university spinouts. Continuing and expanding CCF (including equivalent opportunities in the devolved administrations) **would incentivise this type of activity and could enable the establishment of ventures similar to Northern Gritstone and Midlands Mindforge across the** whole country.

While UK university spinouts have been successful in raising finance – with the value of funding rounds secured rising from £520 million in 2014 to £2.72 billion in 2021 – in 2022 and 2023, there was a decline in the value and number of deals involving spinouts. This **reflects more challenging macro-economic conditions and a general cooling of investor interest**, particularly for opportunities with a long-term exit horizon. Universities have also highlighted the **smaller scale of funding on offer for the UK's R&D-intensive companies relative to their US counterparts.** For initial funding rounds, the average US company deal size is 1.3 times larger than the UK's and widens in later rounds. Following a broader trend of UK companies seeking to list on the New York Stock Exchange, many technology-based university spinouts and start-ups seek to relocate to the US in search of larger capital markets. **Within the UK, university start-ups often relocate to London after reaching a certain point of growth**. Successful start-ups should not need to move from their local area.

The government's announced £40 million proof of concept fund in the Autumn budget is a welcome intervention to address cooling investor interest, however it is likely demand for this funding will be high. **The government should ensure proof of concept funding is rolled out and evaluated (especially against demand), ahead of a larger fund being established**.

There are other initiatives that the UK government can implement to help leverage private investment into university spinouts. For example, the Tibi Initiative in France is designed to support partnerships between institutional investors and venture capital in a similar way to the long-term investment for technology and science (LIFTS) initiative in the UK. Fully capitalising on LIFTS could be very impactful for the UK innovation system.

There are also opportunities to encourage the development of venture capital funds across the UK's regions, directed at university spinouts. The British Business Bank, which has been supporting the spinouts system, also has the potential to scale up funding and further mobilise capital for spinouts, particularly outside the South East, through a dedicated spinout venture capital fund. The inclusion of the British Business Bank in the spinout ecosystem is critical. There are various routes for start-ups to access financial support. However, the complexity of the funding landscape makes it difficult for young companies to navigate the system. The British Business Bank reduces this complexity through the information it provides to businesses.

2. How does research and innovation in our regions drive growth and prosperity in those regions?

How effective are regional innovation hubs and clusters in supporting regional growth and prosperity for local communities?

Clusters are integral to supporting regional growth and prosperity because they provide economies of scale that make private investment viable. Scale can only be realised by strong innovation ecosystems which depend upon a strong higher education sector. Universities play a crucial role in developing, supporting and growing clusters. In cities across the UK, the agglomeration of talented people, research and innovation produces a gravitational pull, attracting high-growth companies to co-locate with universities, producing an organic, symbiotic relationship in which academics draw on industry insights and challenges, and process and apply these in their research. Meanwhile, companies draw on talent and collaborate with research teams in deep partnerships. An example of this occurs in Lancaster where the university's research strength in Cyber and Defence subject areas has encouraged the UK's National Cyber Force to be permanently established nearby. Collaboration with the University of Manchester and GCHQ has advanced the development of the North West Cyber Corridor. This has in-turn encouraged SMEs to diversify their offering and provide services that contribute to the ecosystem.

Clusters do not grow in isolation, they need supportive ecosystems that can grow, sustain and enable them to thrive. Universities are one part of this continued support, but their ability to contribute is limited by their financial instability.

If clustering drives private investment, it is crucial that all functional economic areas of the UK are afforded the opportunity to develop clusters or strengthen existing clusters, to

experience economic growth and prosperity. **Where government policies relate to clusters, it is essential that these policies are inclusive of non-MSA areas**, so that clusters in non-MSA economic functional areas are supported. The development of local growth plans in England in MSA areas will help universities contribute to the development of local cluster strategy, ensuring effective alignment between clusters and sectors of strength. For non-MSA areas, and for the devolved nations, it is important that there are alternate mechanisms that allow universities and local authorities to engage, for universities to share expertise and capacity. Again, we suggest that the government establish local growth partnerships in England to enable universities to support local authorities to develop local growth plans.

Finally, while the industrial strategy makes reference to clusters, and considers the data needed to map clusters of strength across the UK, it is important to note that existing clustering isn't fixed. New clusters can and will develop, often around universities, and will be driven by start-up and spinout activity. These need to be supported also, with long-term policy that responds to clusters with agility as they develop and grow.

How regional Cluster growth can best be measured, mapped, and monitored to help inform local leadership and evidence-based policymaking in Whitehall.

It is crucial that all clusters that relate to the industrial strategy growth-driving sectors are mapped and monitored, to measure growth resulting from the strategy. Mapping these clusters will also evidence areas of strength outside of MSAs, demonstrating where expertise may be overlooked when developing policy.

The DSIT cluster map is a positive example of clusters being measured and mapped, and the fact that the underlying data set is publicly available is equally positive. We note however that this map does not capture all clusters or cover all the industrial strategy growth-driving sectors, with defence being a notable omission, and this should be explored in a future iteration. As mentioned above, clusters are not fixed, and if the map is to be used as a tool in evidence-based policymaking in Whitehall, it may need to be routinely updated to ensure policy-makers are as informed as possible.

While cluster mapping should inform evidence-based policymaking in Whitehall, this should not occur at the expense of acknowledging spillover effects from clustering and the benefits that these can bring. One example is innovation in the Golden Triangle. For instance, while Cambridge University brings economic benefit to its immediate region through innovation and knowledge exchange activities, contributing to the East of England's £6.3 billion impact in 2021-22, its research and commercialisation contribute to national research excellence also. Cambridge is home to the most innovative Science and Technology cluster, by intensity, in the world, which boosts the UK's position in the Global Innovation Index and attracts FDI to all regions of the UK. Attributing impact to the immediate area alone, without considering spillovers, would be reductive.

Would unlocking investment at scale for innovative science and technology companies support regional growth, and how could this be done?

Unlocking investment at scale for innovative science and technology companies to support regional growth could be effective, provided universities are embedded as partners in investment opportunities. Universities add value to innovation where companies alone do not. For instance, research from the Royal Academy of Engineering shows that university spin-outs have longer lifespans than other start-ups. Only half of all start-ups survive for longer than five years, but the average lifespan of an academic spin-out is 8.8 years.

There are various ways to ensure universities are embedded as partners. The first would be to secure the financial sustainability of the sector in expectation that universities then better promote their work through a "front door" function, allowing local companies to better access university research and form partnerships. The sector is open to reform here and there are already examples of good practice. Many of these examples have stemmed from previous incentives to promote university-business engagement, through funding opportunities such as ERDF and RIF. The non-continuation of these funding opportunities limits the extent to which universities can actively reach out to partners within their localities.

The second would be for government to invest capital funding for physical R&D infrastructure, such as incubator and grow on space, at universities. Not only would this provide space for university spinouts to sustain their growth trajectories and contribute to cluster growth, but innovative science and technology companies could use these facilities while gaining access to university expertise and talent. Previously, capital funding was accessible through ERDF. While current opportunities for capital investment such as UKRPIF have been successful, they are at risk as they require university match funding. Given financial constraints, many universities struggle to find this which acts as a barrier to growth-driving activity between universities and local partners. Capital investment would help towards addressing the issue of spinouts relocating to the Golden Triangle, or outside the UK, and removing the spillover benefits that are otherwise felt in local economies and on local productivity.

There is also potential for existing enterprise zones and investment zones to offer grow on space to spinouts, and this could be successful if there is alignment between strategies for enterprise zones, investment zones and local growth plans or their equivalents.

Should there be region-specific innovation and growth policies, and what should local government's role be in this?

There is potentially a tension between a need to maintain excellence across RD&I and a need for policies to be responsive to local needs. On balance the UK's reputation hinges upon excellence and that should be the priority. That being said, we need to make sure that we have the methodology to further develop and recognise excellence across the country and that the system is responsive to local needs.

In order for policies to be responsive to local needs, there must be investment in local capacity, particularly in areas of the country without advanced devolution. Our Blueprint proposes Local Growth Partnerships for areas of England outside of MSAs, to ensure all

English regions can extract value from government's investment in RD&I and universities some form of local infrastructure to engage with. Providing alternative mechanisms to the formalised local growth planning in MSA areas, with appropriate resource, will allow local political, university and industry leaders to better understand how they can con contribute to centrally directed goals – such as cluster formation and economic growth – while working to local strengths. local growth partnerships will be most effective if they link regional innovation and skills strategies to the government missions and industrial strategy. As we noted previously, further thought will be needed on how best to pursue alternative arrangements in the devolved nations.

Aside from a need to maintain excellence, another risk to hyper-localised, region-specific innovation and growth policies is the negative effect these could have on cross-regional partnerships. Universities are collaborative by default and often work across geographic boundaries because they have satellite campuses, or because they work within Pan Regional Partnerships (PRPs). While PRP funding may be coming to end, the functional relationships and cross-regional engagements are likely to continue as they are integral to economies of scale needed for private investment and economic growth. These partnerships enhance the economic impact and value of research, innovation and skills provision, enabling a more collective and effective response to functional economic areas and sectors that may not be confined to an individual mayoral or local authority boundary. Region-specific innovation and growth policies could create conflict and confusion for universities and businesses who work across boundaries.

3. How is research and innovation diffused or supported to drive productivity and growth in the regions, wherever it may come from?

What more can be done to ensure that innovation investments deliver tangible outcomes for both local and national economies, in terms of productivity and growth, and how should this be assessed?

They key to ensuring that innovation investments deliver tangible outcomes is supporting universities to be integrated within the innovation ecosystem. To this end, there needs to be certainty around investments and continued public investment into universities, to ensure benefits to local and national economies. This includes through HEIF and regionally-responsive replacement funds for ERDF.

Certainty can occur alongside policy stability. Unfortunately, policy designed to remove barriers to diffusion has been subject to instability over the last 15 years. The introduction of new policy has created complexity and duplication of the structures intended to foster universities' interaction and collaboration with businesses in the pursuit of local growth. In addition, innovation funding has often been short termist and stop–start, causing

redundancies and impacting the extent to which universities can work with businesses over long periods. The ability to work well with local business fundamentally comes down to personal networks and relationships, which take time to build and ongoing commitment to maintain.

Tangible outcomes will likely need targeted interventions on top of consistent public funding, and these **targeted interventions should address specific market failures, such as the low absorptive capacity of SMEs**. In many parts of the country, the business landscape is dominated by SMEs – including in Scotland, where they account for 99% of the business base – for whom access to expensive equipment and facilities are a real barrier to improving processes, reducing waste and increasing productivity. These SMEs are low-productivity because they struggle to capture the spillovers from investing in skills and innovation and struggle to adopt new technologies or processes.

Many universities have dedicated support for SMEs to explore what new technologies could do for them or to provide extensive skills development opportunities, for example through schemes such as Help to Grow. In addition, there are over 100 university incubation spaces, innovation centres and science parks across the UK, benefitting local SMEs. However, it is a reality that university-SME engagements are declining. Consultancy, contract research and the sharing of facilities and equipment with SMEs peaked in 2018-19 when there were 337,857 interactions. In 2022-23 there were over 21,000 fewer interactions. Data suggests that SMEs who benefit from schemes such as Help to Grow are already aware of university support. A more significant measure of success for adoption and diffusion driving productivity, and therefore growth, would be the increase of new-to-innovation SMEs engaging in innovation activities through partnerships with universities.

Despite huge growth in the capacity of the university system to support business, business organisations still report that companies sometimes find it hard to know who to talk to in their local universities. Although universities do often have dedicated teams focused on business engagement, this may not be obvious from the outside, or accessible to time-poor entrepreneurs. There may be ideas, technologies, techniques and facilities available to companies that would enable them to be more productive, but companies may be unaware of or unable to adopt these because of obstacles to accessing the right expertise. A commitment to HEIF, and similar investments in the devolved nations, is needed to allow universities to make progress and maintain capacity for building out their front door functions.

Funding for interventions that help academia-industry porosity such as Knowledge Transfer Partnerships (KTPs) will also aid diffusion. The movement of people and expertise between universities and industry aids the translation of relevant research into tangible outcomes. In addition, every £1 of public and private money invested into KTPs generates a return of between £4.20 and £5.50 in net economic benefits.

To what extent do Catapults support technology diffusion, and drive both national and regional growth?

Catapults encourage universities to work collaboratively rather than competitively, which helps to build relationships across the sector and therefore strengthen the innovation ecosystem to the benefit of national and regional growth. This collaboration extends to greater partnership working between universities and industry, improving the supply of academics into businesses and business leaders into academia. This porosity deepens relationships and supports technology diffusion in an organic way.

In addition, Catapults align with the university ambition of connecting skills to innovation. Catapults focus on the translation of research to innovation and early adoption of new technologies, taking into account the skills that will be needed to facilitate this. An example is the Cell and Gene Therapy Catapult which runs programmes to provide a skilled workforce and to facilitate clinical adoption of these therapies into the NHS.

How well are universities and businesses coordinating efforts to develop and commercialise research, including the role of spin-outs and collaborative R&D projects?

Universities collaborate across the sector and with businesses to develop and commercialise research. The government's independent review of spinouts and subsequent adoption of recommendations by 49 universities shows an appetite for reform to encourage commercialisation at an even greater scale. However, the extent to which universities can collaborate and reform is limited by their financial sustainability, and by cliff-edges to funding which have depleted capacity and expertise. Greater resource is needed within the innovation ecosystem to incentivise collaboration, to protect examples of good practice, and to scale-up partnership working.

The recently-awarded TTO shared service pilot in England is a positive incentive to encourage collaboration, as is the previously mentioned CCF, which was used to set-up collaborative university investment vehicles such as Northern Gritstone and Midlands Mindforge. The success of Northern Gritstone has encouraged other regions to design similar investment companies – an example is SETsquared's new vehicle with QuantX – however, with uncertainty around CCF, regions looking to learn from and build on Northern Gritstone's example are limited in what they can achieve.

Greater incentivisation also needs to be considered to specifically target academia-industry porosity. While often overlooked, typically it's the more organic relationships between individual academics, including PhD students, and business owners that lead to formal partnerships and opportunities for contract research at scale. Industry-sponsored research is more frequently conducted through a closed tender process.

In addition, the Committee welcomes submissions on the following points:

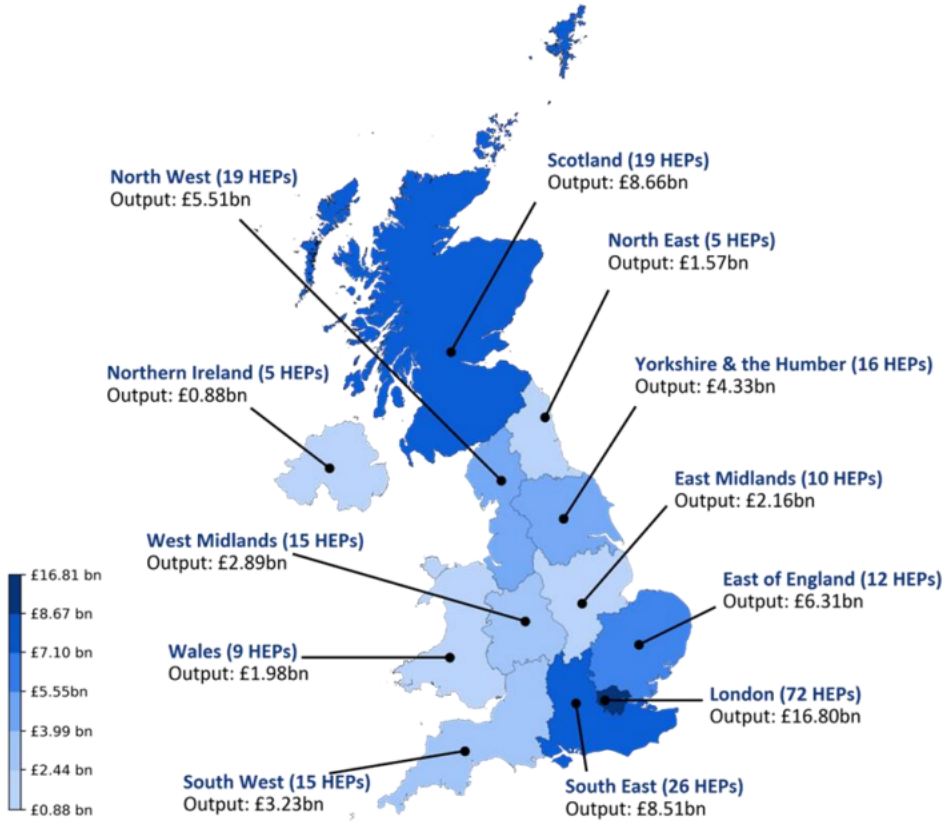
What is the relationship between investment in innovation and economic growth, both regionally and nationally?

At the national level there is a dearth of research showing the relationship between investment in innovation and economic growth. UUK's latest economic impact report, conducted by London Economics, shows that for every £1 of public money invested in the higher education sector across the UK, £14 is put back into the economy. The total economic impact of the UK higher education sector on the UK economy is more than £265 billion. This includes the impact of research and knowledge exchange which is nearly £63 billion. For every £1 invested in the higher education sector, £9.90 is returned from research and knowledge exchange.

What must be emphasized is the continued growth of return from investment in innovation. Empirical evidence produced in 2014 using data from 1992 to 2007 suggested a 20% rate of return to public R&D, in terms of increased annual private sector productivity. A recent 2024 report now estimates the rate of return to be 40%. While it is true that the quality of data available with which to estimate returns have improved, which could be skewing the increase seen, we see a similar pattern with the returns from individual innovation funds, possibly suggesting that the innovation ecosystem is getting better at extracting value from public funding. For instance, the return on investment for HEIF was calculated at £8.30 per £1 of funding in 2020. Research England will shortly publish updates to this return, showing an increase.

Regionally, our London Economics report also highlights the contributions that universities make to their local economies from research and innovation activity:

Figure 12 Impact of the UK HE sector's research and knowledge exchange activities in 2021-22, by HEP location



Note: All estimates are presented in 2021-22 prices, rounded to the nearest £0.01 billion, and may not add up precisely to the totals indicated. Out of the total of **312** active UK HEPs in 2021-22, the analysis here is based on **223** HEPs for which both the required HESA research income data and HE-BCI data were available.

Source: London Economics

Is the £20.4 billion research and development budget delivering value for money and economic growth, and what metrics should be used to evaluate its effectiveness?

Our response above, signposting to data that suggests returns from research and innovation are increasing over time, indicates that the R&D budget delivers value for money.

At the same time, we acknowledge that there are challenges to assessing return and value for money (VFM) and that we need models to best measure these. This is particularly important because returns from public funding are typically 3 times greater 10-15 years after public investment than when measured 1 year after investment. Therefore, consistent methodologies need to be applied to show longitudinal returns.

How does the UK's innovation ecosystem compare to those of other countries, and what lessons can the UK learn from international models in terms of commercialising research and innovation to benefit both regional and national economies?

The competitiveness of the UK innovation ecosystem differs according to activity performed and metric assessed. For example, the UK produces significantly more direct commercial value from its universities compared with others in Europe. UK universities are effective at attracting investment and bringing ideas to market, with strong performance in terms of patents, spinouts and income from intellectual property (IP).

Compared to universities worldwide, the UK's commercialisation outputs are less competitive, which can partially be explained by differences in investment into RD&I. At an estimated 2.9% of GDP in 2021, the UK's overall investment in R&D lags behind that of knowledge-intensive economies such as the USA, Germany, Japan and South Korea. Notably, the UK held 4th position in the Global Innovation Index from 2020 up until 2024 when it dropped to 5th. In part, this is due to the UK's innovation inputs ranking falling (from 6th to 10th) and its output ranking also falling (from 2nd to 3rd). There are time lags to these rankings, but the index suggests that as the UK falls behind in investment, it will fall behind in observable outcomes.

Compared to the UK, commercialisation in the US benefits from greater funding at the POC and seed stage, to support early-stage spinouts. For initial funding rounds, the average US company deal size is 1.3 times larger than the UK's and widens in later rounds. Following a broader trend of UK companies seeking to list on the New York Stock Exchange, many technology-based university spinouts and start-ups seek to relocate to the US in search of larger capital markets.

In the long-term, commercialisation relies on a pipeline of research. To secure this and invest in the discoveries that will drive economic growth, the government must be ambitious about the level of investment in R&D in the UK's universities and also balance investment in fundamental research, which seeds the discoveries of the future, with investment in today's competitive advantage. If we fail to do this, we risk losing ground against competitor nations.