

Building our industrial strategy

CaSE submission | 12th April 2017

The Government's commitment to creating an industrial strategy has been widely welcomed across our membership. This response draws on wide consultation with our members across the UK and from industry, academia, research charities, and further education.

A major factor influencing the context within which an industrial strategy is developed is of course the UK's vote to leave the EU. However, we were pleased that the Prime Minister voiced her government's commitment "to ensuring a positive outcome for UK science as we exit the European Union"¹. This will not only require a positive outcome in the negotiations but must be complemented by a positive domestic policy environment, in which the industrial strategy could be a shining light for science and engineering.

The industrial strategy must be a powerful tool for mitigating some of the anticipated challenges presented by Brexit and helping to ensure that the UK remains an attractive and world-leading place for science and innovation.

About CaSE

The Campaign for Science and Engineering (CaSE) is the leading independent advocate for science and engineering in the UK. CaSE believes the UK government should support a healthy and flourishing science base in which all parts of this integrated system are well funded and performing optimally. We welcome the opportunity to feed into this inquiry because a long-term, cross-government industrial strategy built on the cornerstone of research and innovation is an important contribution towards that aim. CaSE works to ensure that the UK has the policies, funding and skills to help science and engineering thrive. It is funded by individuals and around 100 organisations including businesses, universities, learned and professional organisations, and research charities. Collectively our members employ 360,000 people in the UK, and our industry and charity members invest around £34.9bn a year in R&D globally².

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¹ <http://www.bbc.co.uk/news/science-environment-36915846>

² Figure calculated in October 2016 from latest available data

Vision

A repeated comment from members and others in the sector has been that the Industrial Strategy, set out over ten pillars, appears to be more of a collection of policies rather than a strategy. In some ways, the pillars could be seen to represent distinct delivery plans, but lack a coherent collective strategy or vision.

The green paper is set in the context of Brexit. In the green paper the Prime Minister also points to some of the underlying tensions within the UK, seeing the industrial strategy as a means to increase, and more widely share, prosperity in the UK. Specifically, the green paper highlights raising productivity as a key means to achieving this. However, there could be greater clarity about the overarching goals of the strategy.

The Government should set out clear strategic goals that drive the strategy, and which the different pillars combine to deliver. This may seem a matter of semantics, but the success of an industrial strategy depends on sustained buy-in from across disparate sectors and geographies, and indeed from across government departments and agencies. Having a clear vision could help provide a sense of direction for the collective effort required for the success of an industrial strategy.

We propose the industrial strategy could be set out around three strategic goals of making the UK more connected, sustainable and competitive. Connected; physically, digitally, nationally and internationally. Sustainable; environmentally, regionally, institutionally, and supported by a healthy skills pipeline and research and innovation strength. Competitive; fostering world leading sectors, attracting inward investment and growing businesses.

Evaluation

The strategy must be long-term, with targets, measurements, monitoring of progress, and robust evaluation must be built in from the start of the industrial strategy. The targets and measures of success should be ambitious and long-term to provide an overall sense of direction. This will help build, support and drive coordinated effort towards defined aims.

These long-term, ambitious targets must be accompanied by clearly stated interim milestones, and progress monitored so that learning can be fed back to sharpen ongoing policies and programmes. This will help government to track progress and take early steps to change course, scale up support, and to demonstrate progress in light of rigorous evaluation, sharpening the industrial strategy and ensuring public funds are being responsibly and effectively used.

Any measures or targets should be made carefully to mitigate against driving unhelpful behaviour by measuring an imperfect proxy. On this basis, existing targets and performance measures, including those contained in other government strategies such as infrastructure, international development, defence, digital and energy, should be reviewed across government to ensure they support activity in line with industrial strategy aims. Some suggestions drawn from our consultation with members are set out below.

We propose:

- Public and private R&D spending to reach 3% of GDP by 2025, with separate targets for public investment and private investment and intermediate milestones for 2020
- A target for inward investment in R&D
- A target for productivity growth within each sector with a sector deal
- A target for the percentage of public procurement from SMEs and start-ups

- A target for the number of apprenticeships that will be at level 4 and above, perhaps with a focus on science, technology and engineering
- Clear timelines and sustainability targets on any physical infrastructure commitments
- A target for increasing international student numbers, for instance to maintain a certain percentage of market share

Stability and predictability

Stability and predictability from Government provide confidence to researchers, innovators, businesses and investors.

Building on what is already working well is another way to provide some much needed stability. Although the government is developing a new industrial strategy, they are not starting from scratch. There are some successful structures and programmes in place, including some that sprung from the Coalition Government's industrial strategy, with some still in their very early stages. For instance, initiatives such as the Aerospace Technology Institute and Advanced Propulsion Centre were launched less than three years ago but came with commitments of seven and ten years respectively. In the 2014 Industrial Strategy progress report, John Cridland, then CEO of CBI said "much has been accomplished in the last year but we have barely scratched the surface of what is achievable in the next 30 if the structures now in place are allowed to develop"³.

One of the comments we received from members was that this must be **the** industrial strategy; a long-term strategy, preferably with cross-party, and cross-UK buy-in to support commitments that stretch beyond the current political cycle. This would bring welcome stability and confidence in the midst of enormous uncertainty created by Brexit, and contribute to the industrial strategy aims of making the UK attractive for industry as a place to locate, invest and grow.

Previous industrial strategies have fallen short, in part because responsibility sat only with the government's business department of the day, and that department did not have appropriate authority or agency to ensure other departments' activities were pushing in the same direction, hampering effectiveness. Some of the targets or measurements of this industrial strategy may be at a Government level, but each of its different aspects will need to be owned by specific departments or teams to drive accountability. This must be overseen at Cabinet level to ensure this is truly a cross-government industrial strategy.

Stability and predictability should not be confused with being risk averse and not open to change. The Government should be prepared to take some evidence-informed risks with this strategy. Trying new things, perhaps at small scale, and stopping or scaling up based on robust evaluation should be a feature of the approach taken in this strategy. Arguably political risk is greatest when policymakers advocate a programme and then cannot amend it no matter what the results⁴. In this sense, evaluation, and planning for evaluation as part of policy announcements in this industrial strategy, can reduce political risk and help ensure the strategy has flexibility built into it to respond to new opportunities and emerging evidence.

³ Industrial strategy, Government and industry in partnership progress report, 2014

⁴ [A framework for mandatory impact evaluation to ensure well informed public policy decisions](#), Oxman et al, 2010

Developing skills

Ensuring the UK has the skilled people it needs will be essential to the success of any industrial strategy. Industry repeatedly articulates that access to skills is a defining factor in their growth and success. Education, skills and migration policy in the Department for Education and the Home Office must therefore work together to support industrial strategy aims. The proposal in the green paper for the government to work towards a joined up authoritative view of sector specific skills gaps is very welcome. This should be a core capacity within government to support planning in a range of policy areas. With the closure of the UK Commission for Employment and Skills (UKCES), there is a clear need to rebuild and strengthen this activity.

Apprenticeships

There is broad support for the government's ambitions to create more high quality apprenticeships, and to improve skills across the economy. The Department for Business, Energy and Industrial Strategy (BEIS) must work together with the Department for Education to ensure that apprenticeship targets, funding, scheme rules and programmes are consistently shaped to ensure this substantial funding and effort aligns with the aims of the industrial strategy. Robust evaluation against milestones set out in the industrial strategy should be undertaken each year to ensure the policy is supporting industry needs and industrial strategy aims.

The recent growth in apprenticeships has been mainly at the lower skill level with higher apprenticeships only making up 2% of total starts. Across all levels there were fewer than 500 apprenticeships in science and mathematics, not enough to be recorded. Those within engineering are largely at the lower level⁵. With all parties wanting to see more young people taking apprenticeships as a route into meaningful work, the opportunities available to young people must begin to reflect political discourse. As apprenticeships are developed in partnership with employers, the new standards should include skills which are relevant and valuable beyond just the current job, supporting progression within the sector. In science and engineering there are professional registration standards, such as Registered Science Technician, that are developed with the input of employers and the education sector and provide transferability and progression pathways.

T-levels

The industrial strategy approach to skills must help the UK move past the false divide between apprenticeships and degrees, practical or academic routes. The introduction of T-levels must be done with care to ensure that it doesn't reinforce a twin-track system with no crossover between the two. Degree apprenticeships offer the practical training of an apprenticeship and a degree qualification. It is unhelpful to perpetuate the idea therefore that apprenticeships are an alternative to university. Unfortunately, the scale of T-level courses does not leave room for individuals to mix and match taking some A-levels and some T-levels. Both T-levels and A-levels need to be viable, attractive routes through to an apprenticeship and to university.

To successfully deliver T-levels, keeping in mind that they are much larger qualifications than those currently taught, will require sufficient resource for equipment, teaching space and teachers. The additional funding that was announced should be carefully reviewed to ensure it covers costs. More broadly the government must properly consider how to grow the number of teachers.

⁵ Apprenticeships statistics, House of Commons Library, Feb 2014

Institutes of Technology

Aspects of an industrial strategy will aim to drive competition within the UK and also internationally. However, developing the skills base is an area of the industrial strategy where collaboration and strategic planning, particularly within sectors, could be beneficial; domestic collaboration to be globally competitive.

One such case is the Institutes of Technology. There are plans for around 15 of these institutes nationally and they should not be set up in competition with each other. They should be strategically placed within regions across the UK with a mandate to collaborate with each other and to facilitate collaboration with other parts of the education and skills ecosystem including schools, colleges, and universities within their region.

Careers

Careers education is an essential part of a good education and schools in England are now legally obliged to arrange independent, impartial careers advice. Yet Ofsted have reported that three quarters of the schools they visited were not implementing their duty effectively⁶. In one report only 2% of respondents agreed that schools were providing young people with sufficient careers advice to make effective decisions on their post-16 education⁷. Recent research outlines eight benchmarks that could be used to highlight and measure 'what good careers guidance looks like' and could be implemented in schools nationally, at a cost of less than 1% of a school's budget⁸. Government should consider investing to support schools to deliver this when delivering the comprehensive careers strategy. Further the strategy should recognise that there is currently an abundance of information available but severe shortages of informed advice and guidance.

Attracting international talent

The role of immigration must also be considered alongside developing the skills base in the UK. The announcement of specific funding to attract global talent to the UK was a welcome recognition of the essential contribution immigration makes to the UK's science and engineering strength. However, the green paper is largely silent on the key area of government policy that impacts widely on industry. Companies, universities, charities and research institutes alike see the ability to retain, access, move and attract skilled people as an essential pillar of securing a positive outcome for science as the UK leaves the EU. This is consistently a concern and priority for our members. It is in fact an essential part of growing the next generation of scientists and engineers in the UK, as foreign nationals make an enormous contribution to our education and training systems in the UK, in schools, universities and businesses.

Any future immigration system must support the retention, access and movement of those who lead, undertake and support research and innovation. The public support immigration of scientists, engineers and students, and pursuing a policy of reducing the number of highly-skilled migrants coming to the UK would be contrary to the views of 88% of the public.

To build more national consensus, the Government must lead the way on transparency, use of evidence, and nuance in relation to immigration in policy development and public announcements. Government statements, domestic immigration policy and international negotiating positions must reflect and support the Government's wider ambitions in the industrial strategy. Part of the

⁶ [Going in the right direction?](#), Ofsted, 2013

⁷ [Supply Chain for Employment and Skills survey](#), Local Government Association, 2014

⁸ [Good Career Guidance](#), The Gatsby Foundation, 2014

industrial strategy must be to actively promote the UK as a place to learn, earn and contribute, and work to combat the current hostile climate towards migrants in the UK.

Negotiations and domestic policy must work together to create a migration system and environment that actively supports science, research and innovation. If leaving the EU is about the UK being able to make its own decisions, this must be reflected in proactively creating an immigration system that works in the interests of the UK, commanding the confidence of the public and meeting the needs of the economy.

As a government-wide strategy, the industrial strategy must contain a confident, positive, evidence-informed approach to immigration that supports the wider industrial strategy aims.

Investing in science, research and innovation

It is encouraging to see science and innovation well represented in the industrial strategy because it is an area of UK competitive strength with the potential for contributing to the creation of quality jobs, economic growth and bringing wider societal benefits across the UK.

Investment and support for science and engineering is essential for the future of the UK as a high-tech and knowledge-based economy. A wide range of industries, from manufacturing and agriculture to digital technology, rely on science and engineering to innovate, grow, and create high-value jobs⁹. Innovation was responsible for half of all UK labour productivity growth between 2000 and 2008, with 32% of that attributable to changes in technology resulting from science and engineering¹⁰.

R&D and human capital are universal drivers of productivity¹¹. Looking at some of the R&D intensive sectors, they have considerably higher Gross Value Added (GVA) per worker compared with the average across the UK. For instance, the R&D-intensive pharmaceutical sector has one of the highest GVA's per employee, with £155k in 2014¹². Over the last five years, aerospace sectors have together increased their productivity by 30% – compared with just 4% across the rest of the UK economy¹³.

The UK cannot compete on cheap labour, capital reserves, or natural resources. As the UK seeks to re-establish its place in the world, more than ever we must instead play to our advantages in research and innovation. In an increasingly competitive global economy, these will be the drivers of future innovation, productivity gains, and high-value job creation across the UK.

The UK Government's Industrial Strategy provides a timely opportunity to create a long-term framework to support a thriving business and innovation environment built on the UK's competitive strength of its research and innovation base.

Public investment in R&D

The government has a role to play in taking early-stage risks because the private sector will not, particularly where there is a long lag time from investment to benefit and where the benefit returns broadly across society more than to the investor. Over the long-term, taking these risks enables the

⁹ [The Science Council, The current and future UK science workforce, 2011](#)

¹⁰ Estimating the effect of UK direct public support for innovation, BIS, 2014

¹¹ "On the Robustness of R&D", Kul, Khan and Theodoridis, Journal of Productivity Analysis, vol. 42 (2014), 137-155

¹² CaSE analysis of [ONS Annual Business Survey, 2016](#)

¹³ [ADS evidence](#) submitted to the BIS Committee Productivity Plan Inquiry (2015)

creation of private sector jobs in entirely new markets, as well as delivering societal benefits. The science budget is such a risk and a bold commitment to our future prosperity. The additional £4.7bn funding announced by the Government at the Autumn Statement is a substantial and welcome commitment.

Research shows that Government investment in R&D ‘crowds-in’ further private sector investment as well as other productivity boosting effects such as contributing to raising the level of the skills base in the UK, boosting human capital. Research commissioned by CaSE has shown that every £1 of public investment in R&D raises private sector output by 20p each year in perpetuity¹⁴.

An economic analysis paper published in 2008 on the optimal level of national R&D investment concludes that between 2.3% and 2.6% of GDP “maximizes the long-run impact on productivity growth and is the key to sustained productivity and technology improvements that are becoming more and more necessary to modern economic growth”¹⁵. A more recent 2014 BIS analysis suggested the UK should aim for 2.9%, the average of our competitors, commenting that “they do not appear to get poor returns on their investment”¹⁶.

To put that level of investment in monetary terms, if the UK were to invest 3% of GDP in R&D, one would expect¹⁷ a third of that to be from the Government, equalling approximately £6.8 billion per year more than is currently invested, having taken the newly announced funding into account. This demonstrates that the level of investment in the UK science base could rise substantially without reducing return on investment. The impact of reaching this level of overall investment on the UK’s research capacity and output would be transformational. For perspective, the Francis Crick institute at St Pancras will be Europe’s largest research institute and has cost approximately £700 million in total.

Leaving the EU will undoubtedly have knock on effects to funding available for R&D in the UK as the UK is a net beneficiary from EU funds for research. The scale of the investment shortfall will become clearer as EU negotiations develop, but at present the UK receives around £1billion a year in competitively won R&D funding from the EU. Increased domestic public investment is therefore needed in order to stand still.

As part of its ambitious, long-term industrial strategy the Government should commit to a long-term target for public and private R&D spending to reach 3% of GDP by 2025. This has been recommended by many in the past, but Brexit and the industrial strategy provide both the impetus and the means through which to achieve it.

This increased investment should not primarily be used for discrete projects with short term wins. In his 2016 party conference speech the Chancellor made a principled statement on his approach to investment, “Making sure that it is long-term economics, not short-term politics, that drives Britain’s vital infrastructure investment”¹⁸. This same principle should be applied to investment in science, and the way the Industrial Challenge Strategy Fund has been delivered so far reflects this. As part of

¹⁴ ‘The Economic Significance of the UK Science Base: a report for the Campaign for Science and Engineering’, Haskel, Hughes and Bascavusoglu-Moreau, April 2014

¹⁵ <http://www.sciencedirect.com/science/article/pii/S0040162508000383?np=y>

¹⁶ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/277090/bis-14-544-insights-from-international-benchmarking-of-the-UK-science-and-innovation-system-bis-analysis-paper-03.pdf

¹⁷ Based on international comparisons of Gross Expenditure on R&D from business and public sources

¹⁸ <http://press.conservatives.com/post/151284663940/hammond-an-economy-that-works-for-everyone>

the set-up of UKRI, a trusted, transparent, peer-reviewed mechanism for deciding how future ISCF and other research funding is allocated must be established.

Parliament is in the process of putting the dual support system, or the balanced funding principle, into law for the first time¹⁹. The industrial strategy must not fall at the first hurdle by failing to invest in one of the two sides of this balanced funding, namely Quality-Related research funding. As part of the additional £2bn a year funding, the baseline level of Quality-Related research funding must be raised as part of the long-term increase alongside increases in Innovate UK and Research Council budgets. There is good evidence of the return on investment each of these provide²⁰. This commitment would back up the Chancellor's statement that he recognises that the much bigger prize of incremental productivity improvements requires early stage investment in research in universities and research institutes as well as company R&D facilities. As the Business Secretary and the Science Minister have both previously stated, the UK research base leads the world in getting the greatest 'bang for the buck'. Announcing an increase in baseline investment would therefore be an uncommon win-win for the Government, a shrewd long-term investment in the UK's future, and an investment that attracts wide popular support.

Supporting business investment in R&D

Firms that consistently invest in R&D are 13% more productive than firms that don't invest in R&D²¹ so driving up business investment in R&D should support the government's aim to boost productivity nationally. Business is already the largest investor in UK R&D. In 1997 business funded 50% of UK R&D. This dropped to a low of 42% before rising to 47% in 2007. Since then, public funding has stagnated (until the recent injection announced in the Autumn Statement²²) and business now represents 65% of total expenditure on R&D performed in the UK, accounting for £19.9 billion of expenditure in 2014. The pharmaceutical industry was the largest business investor at £3.9 billion, computer programming and information service activities was second at £2.4 billion and the automotive industry was third at £2.3 billion²³. These are global industries choosing to invest in the UK.

Our industry members tell us that the strength of the UK's research base is a defining attractor. The most direct evidence of this effect in the UK is that multinational pharmaceutical firms locate their laboratories near to universities with excellent chemistry research²⁴. Across sectors, access to expertise and world class facilities are repeatedly cited as key attractors along with the international reputation of the UK's research and innovation institutions. So, a key aspect of increasing business investment is to ensure public research and innovation funding helps to support an internationally competitive research base. Other factors include a countries' growth potential and the quality of the

¹⁹ The dual support system refers to the principle that public research funding is allocated by two different streams of funding, which have complementary methods of allocation and evaluation. Research Council funding, used responsively to fund research grants, is allocated by prospective assessment of potential, and is confined to the purposes set out in the grant. Quality-Related research funding is used to fund institutions (universities) on a formula basis. It is allocated by retrospective assessment of the quality of past research output and the funds are unhypothecated.

²⁰ 'The Economic Significance of the UK Science Base: a report for the Campaign for Science and Engineering', Haskel, Hughes and Bascavusoglu-Moreau, April 2014

²¹ Cable, V (2014) Innovation and the UK knowledge economy

²² [Reflections on the Autumn Statement](#), CaSE, 2017

²³ [GERD](#), ONS, 2016 (2014 data)

²⁴ [The Economic Significance of the UK Science Base](#), Haskel et al for CaSE, 2014

workforce²⁵. So, measures discussed to strengthen the skills base will also work towards achieving this aim.

The businesses we speak to have voiced strong support for the value Catapults can bring to the UK science and innovation offering. In particular, as they develop, the Catapult Centres are meeting the well-established demand for access to world class facilities for research, development and testing. They also provide start-ups and SMEs in different sectors with access to the expertise, networks and facilities usually only available to multi-national research companies.

By design the centres do not follow a uniform model, but they could benefit from more coherence across the network about their purpose and their funding model. Catapults should not be competing with each other and should be given a mandate to collaborate across the network so that the whole is greater than the sum of its parts. Further, Catapults should not be competing with the businesses they are designed to support, but we hear of this being the case. The public investment element of their funding must be sufficient and each centre should be properly embedded in and joined up with other structures within the research and innovation ecosystem so as to complement rather than duplicate or compete. As we leave the EU and one source of funding is likely removed, this provides an opportune time to properly evaluate the Catapult funding model to ensure it is fit for purpose.

Academic and industry CaSE members have highlighted the UK's VAT system as a current and significant barrier to research collaboration, particularly co-location within research institutes. The key issues and solutions to explore are set out in detail in a CaSE briefing²⁶. The primary issue is that publicly-funded research institutes are restricted to 5% commercial activity if they opt not to pay VAT or face costly tax bills to co-locate their researchers with industry colleagues. CaSE welcomes the activity to date in considering this issue. The R&D tax credit review is also very welcome. There could be opportunities for creating preferential rules or reliefs for 'Knowledge Intensive Businesses'. The government could consider extensions to successful schemes such as EIS, SEIS and VCT, targeted at knowledge intensive businesses.

Some other ways of supporting business investment are considered in the following sections.

Driving growth across the whole country

Structural funds

In recent decades, there has not been the appetite, or arguably the need, for a stream of UK R&D funding to be allocated with a focus on supporting capacity building with a regional focus in mind. We continue to support research funding being allocated on the basis of excellence. However, leaving the EU presents an opportunity and a need to review and put in place a UK-wide programme to replace structural funding currently accessed through ERDF and ESIF. This could be a match-funded regional innovation fund that supports R&D capacity building and encourages collaboration between organisations within a region. It could be focused around ambitious scalable projects and a need to address that in the region. There could be a role for LEPs in supporting companies and research organisations to develop bids and create the necessary links within their locality and with neighbouring LEPs.

For the industrial strategy to be successful across the whole of the UK, devolved activity must be complementary not competing with other regions or nationally. We repeatedly hear that physical

²⁵ Research and Development: Going Global, OECD, 2008

²⁶ <http://sciencecampaign.org.uk/CaSEVATbriefing2015.pdf>

and digital infrastructure are key enabling factors to transforming regions. This activity could be front-loaded as part of the industrial strategy, under the pillar of ‘upgrading infrastructure’.

Encouraging trade and inward investment

The UK is an outlier in the proportion of its funding for R&D that comes from overseas sources²⁷. In just over 2 decades, there has been a change in the profile of how UK R&D expenditure has been funded. In 1990, £1.4 billion (12%) in current prices of R&D funding came from overseas. Since then, there has been a steady increase in the value of funding for UK R&D expenditure from overseas, from £2.3 billion (16%) in 1996 to £5.4 billion (18%) in 2014. The bulk of this overseas funding is for R&D performed in business, but around £1.5 billion is for R&D performed in universities or public research institutes.

As part of the industrial strategy, the Department for International Trade could have a particularly important role in driving inward investment in R&D. Appropriate structures, processes and appointments should be put in place in the Department to ensure scientific and technical expertise and advice is appropriately accessed throughout the process of leaving the EU, including setting up new trade arrangements and building relationships with other countries. Significant technical and scientific expertise will be required for instance in their work around regulation and standards. This should include the appointment of a departmental Chief Scientific Advisor, building in links with vital technical expertise such as the National Physical Laboratory, and ensuring teams negotiating new trade deals have sufficient understanding of science and engineering sectors. This will strengthen the work of the department and ensure its activities are harnessed to support the aims of the industrial strategy. It could be that the Department for International Trade own the government target for inward investment in R&D.

Businesses rely on cross-border agreement on product standards and regulation. Regulation, planning and licensing need to be as enabling, easy and quick as possible. One area that has been raised to us by members across sectors is around data protection and data sharing. Members tell us that cross border flows of data must be facilitated following Brexit. As we exit the EU and determine our own path on regulation, there is the opportunity for the UK to be a leader on data protection and standards to support innovation.

Improving procurement

In all discussions with businesses, from digital to life sciences to aerospace, procurement was raised consistently as something to be addressed in the industrial strategy.

The Small Business Research Initiative (SBRI) is one example of an initiative that would provide a way to harness the government machine as a whole to support the growth of science and technology based employment in the UK. The SBRI is a much-needed mechanism to improve the success of small R&D-based businesses in obtaining contracts from government bodies. It is one way for Government to play an active role in industry policy by harnessing the competitive process, rather than trying to pick individual winners²⁸. However, it has patchy uptake across government departments. Therefore, as part of David Connell’s review, the government should consider making participation in SBRI compulsory in all government departments and agencies and, where possible, the program should focus on firms that can prove they will spend on innovation. There is a lot of

²⁷ [GERD](#), ONS, 2016 (2014 data)

²⁸ <http://insight.jbs.cam.ac.uk/assets/Main-report-Creating-markets-for-things-that-dont-exist.pdf>

support for the Government's aim of ensuring a third of its procurement spend is with small businesses by 2020. Evaluation of whether this target is met must be built in and be used to inform future policy decisions.

To achieve this target the government will likely have to review its procurement frameworks and guidelines. While there is the ambition for procurement to support smaller companies and innovation, in reality, practical barriers in contracts intended to reduce the government's exposure to risk prevent participation. For instance, there can be a requirement to have a minimum turnover (such as £10m) and to present five years' accounts. It is within the power of the UK Government to address this immediately. More broadly, while still a member of the EU the UK is required to adhere to EU directives on public procurement, however in the medium term leaving the EU provides the opportunity to review procurement guidelines. The Cabinet Office should develop UK procurement guidelines to ensure they support innovation and participation of SMEs and start-ups.

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