BEIS Consultation: UK R&D roadmap

Response from the Chartered Association of Business Schools

12 August 2020

The Chartered Association of Business Schools is pleased to submit a response to the BEIS consultation on the UK's *Research & Development Roadmap*. Many of our member business schools have a strong focus on producing high quality research and are keenly interested in approaches to enhancing research capability with the goals of delivering benefits widely across society and enhancing the competitiveness of the economy. They therefore welcome the opportunity to engage with BEIS on these plans.

Question 1. How can we best increase knowledge and understanding through research, including by achieving bigger breakthroughs?

We believe that bigger breakthroughs using research can be achieved through a number of approaches.

1.1. There should be more diversity in the types of people undertaking research and a wider range of stakeholders involved in setting research agendas, framing questions and at the early stages of research design. Achieving real-world impact requires that research is informed by and partnered with the fullest range of relevant stakeholders; academia, business, charities, etc.

1.2. We need a broader understanding of what research can deliver. As the question implies, it is about knowledge and understanding. Technological developments are often key to addressing complex challenges such as sustainability, but critically social and business issues underpin the adoption of new technology. Understanding the causal mechanisms driving climate change via STEM research sits alongside new business models and behaviour changes both at organisational levels and for individual citizens. Business schools are regularly engaged in translational research, "moving from what we know to what we do" in all spheres.

1.3. Consistent with this is a need to encourage genuine multidisciplinary research with input from a wide range of academic disciplines and perspectives. Innovations in knowledge and understanding occur when different views, perspectives and methods merge effectively. The early engagement of business school expertise in multidisciplinary research will enhance the commercialisation and adoption of new technology. There needs to be a concerted effort on the part of the Research Councils to make this happen.

1.4. Rebalancing the existing incentive structures will also entail affording researchers the freedom to experiment and be innovative without fear of being punished for failure. To get the right outputs the right incentives are needed. REF therefore needs to change to reflect this roadmap. The proposed changes to REF will not do this.

1.5. What we mean by 'impact' and how it is measured in terms of the significance and reach criteria used in the REF, needs revision. The current bias is towards 'good news' impact. Just as important is work that demonstrates that something is a bad idea.

1.6. Communicating success in research is critical in making the outcomes more productive. Academia needs to be incentivised to make this happen. The research community would benefit from explicit funding to focus on this. Again, this refers to the incentives offered via the REF.

1.7. A direct result of changing the incentives offered through the REF, incentive structures in universities which are geared towards rewarding research that is published in highly ranked journals with practical impact often a secondary focus, should also change.

1.8. There needs to be greater emphasis on research which addresses key societal challenges both in the UK and globally. There is an opportunity for applied research that benefits businesses of all sizes provided it is communicated in a digestible form.

1.9. However, we need to allow for blue sky research, research that is about exploring what is there and what happens if you look at it from a different angle. Not all research should be about trying to solve an existing problem.

Question 2. How can we maximise the economic, environmental and societal impact of research through effective application of new knowledge?

2.1. Pathways to impact need to be embedded into research projects at the outset with appropriate methodologies for evaluating if impact has been achieved. Research Councils have made a start here, but this should be a requisite part of postgraduate training to drive the message home to new researchers.

2.2. Consideration should also be given to the involvement of potential beneficiaries of the research being involved in the pathway design and the development of metrics to evidence impact.

2.3. For applied research, consideration should be given to introducing impact as a key award criterion.

2.4. Diversity in the types of individuals undertaking a research project is again key as the tendency for specialisation may reduce the scope for impact if the research team doesn't have a broad enough range of expertise to examine all aspects of the problem.

2.5. Dissemination and an improved ability to translate the findings of research for a broad range of non-academic audiences is also crucial if we are to maximise the impact of research through the application of knowledge. Consideration of this must take place as a matter of course and at an early stage.

2.6. The principal researcher or author of a research paper may not be the best person to write a more accessible piece for policy, and assistance may be required in the development and writing up of research findings for use by different audiences. UKRI could be commissioned to set up a "Translation Communications Hub" where findings of research they commission are quickly disseminated by a team of experts in policy communications.

2.7. There should also be a focus on improving the channels of communication between scholars, policymakers and research users. Business schools already work closely with businesses of all sizes in the areas in which they are located and well beyond and they could be very useful here in setting an example.

Question 3. How can we encourage innovation and ensure it is used to greatest effect, not just in our cutting-edge industries, but right across the economy and throughout our public services?

3.1. Inclusivity is a pre-requisite to ensuring that innovation is applied effectively across a variety of settings, both in the public and private sectors, and to the benefit of society as a whole. Business schools are actively attempting to do this and could help formulate a policy around this.

3.2. Small businesses and consumers will almost always be the last adopters of innovation. Government needs to make a concerted effort to train these audiences. An example of where this has proven effective is the Leading to Grow programme which was run under the Business Basics scheme, in improving tech adoption in micro-businesses. Government should fund this type of dissemination to encourage uptake across a wider audience. This requires a different skill set to research.

3.3. There needs to be greater support through incentives and infrastructure to foster closer relations between businesses and researchers. A national programme of innovation fellows could be considered as a means to drive the adoption of new innovations more widely.

3.4. BEIS could also revisit the tax system around R&D, where full economic costing acts as a deterrent. Using the US as an example, privately funded research centres are an effective vehicle for ensuring broader impact of research and the dissemination of knowledge. The success of these centres is reliant on the tax incentives offered to individuals and companies for their financial support.

3.5. Diversity of thought is key to innovation, because a narrow and specialised research outlook that has already decided what is valuable knowledge will stifle innovation.

3.6. Inclusivity should apply to the policymaking space too, by involving the less heard voices and smaller businesses which are not always given a place at the table when it comes to policymaking and research funding decisions.

3.7. At the moment certain sectors within the UK economy have greater representation than others. From an academic perspective, there needs to be more support for action research as an acceptable methodology.

Question 4. How can we attract, retain and develop talented and diverse people to R&D roles? How can we make R&D for everyone?

4.1. There are a number of approaches that would help in attracting and retaining people within R&D roles and make R&D more inclusive, as suggested below.

4.2. Practical impact is under-represented in HE reward systems when compared with publications and grant income and is seen as an 'addition' as opposed to a requirement that is embedded within academic practice. Altering the status quo requires that applied impact to real-world problems is given some recognition within academic systems related to pay, recruitment, progression and workload allocation. This recognition is starting to happen in Universities, but the roadmap going forward could think of ways of celebrating Universities where this is happening for example by highlighting them as case studies.

4.3. Support for Mid and Early Career Researchers is crucial and they should be given opportunities to be embedded into grant applications and provided pathways into lecturer positions.

4.4. University employment terms need to be encouraged to support high performing researchers by shifting cultural expectations within universities, to develop capability around translation of research, as well as impact.

4.5. The financial viability of undertaking a PhD also has an impact on attracting and retaining R&D staff as the current costs inevitably cause many academically-minded individuals to ultimately decide against academic research as a career.

4.6. Within business schools the DBA (Doctor of Business Administration) could be given greater emphasis.

4.7. Making R&D for everyone will entail addressing EDI concerns, perhaps though the active promotion of EDI in publicly funded research projects and the introduction of EDI as a formal evaluation criterion in grant applications.

4.8. There needs to be a clearer mechanism and enhanced incentives for allowing and encouraging researchers to move between academia and business.

4.9. There is concern that, if European funding is no longer an option for researchers in the UK that many will for mainland Europe, where access to such prestigious funding is still an option.

Question 5. How should we ensure that R&D plays its fullest role in levelling up all over the UK?

5.1. Levelling-up R&D across the UK to the fullest extent will require both institutional changes and the more equitable distribution of resources across the country. Research funding should not be disproportionately focused within the 'golden triangle' of universities and there should be funding opportunities for institutions in different parts of the country and from varying backgrounds. This will require long term Government commitment, and potentially quotas or targets.

5.2. There is a strong argument for scale in modern research, which makes significant clusters important.

5.3. Universities can play a stronger role in establishing their relevance to their region and beyond it, perhaps through some sort of civic university contract. Government support for schemes that reward such activity would be welcomed.

5.4. In order to level-up R&D across the UK there will need to be greater emphasis on multi-institutional research teams consisting of individuals from institutions located in different geographical areas with diverse socio-economic characteristics, rather than the current competitive landscape.

5.5. Funding place specific research where appropriate is another option to consider. Levelling-up will also require the development of R&D centres across the country and the frequent interchange of ideas among these regional centres.

5.6. Examples of research excellence on a regional basis should be learned from and potentially replicated in other locations. In the broader context consideration should be given as to how certain regions can be made more attractive to inward investors and what sort of investment can be attracted and then embedded in the local economy.

Question 6. How should we strengthen our research infrastructure and institutions in support of our vision?

6.1. A research infrastructure that is loosened from the constraints of traditional disciplinary boundaries would help to facilitate more multi-disciplinary research that could yield bigger breakthroughs in innovation.

6.2. To support the scaling-up of R&D in the UK, as well as between the UK and around the world, encouragement and funding could be assigned for leading researchers to interact with, rather than compete against, other institutions within significant domains such as climate change, or health. Naturally evolving virtual hubs will then materialise.

6.3. Investment in research infrastructure will need to be an on-going process rather than static as it will need to adapt as new ideas/niche areas emerge. There is also a need to strengthen cooperation with industry and other national and international organisations.

Question 7. How should we most effectively and safely collaborate with partners and networks around the globe?

7.1. International collaboration in R&D will depend on the UK being perceived as a trusted and reliable partner.

7.2. Researchers in the UK are highly respected, especially by those in countries where the domestic political situation interferes with research. The apolitical nature of university research should be cherished and respected.

7.3. International research collaborations should be funded and entered into on the basis of reciprocity, excellence and impact. The development of global networks of excellence with

a focus on grand challenges should be encouraged, and international projects that have a global and local impact should be rewarded.

7.4. It is important that efforts are made to retain valued research networks that have been developed through EU funding. This will be even more crucial if the UK does not participate in the next version of the Horizon programme which would be detrimental to existing UK-EU research links.

7.5. Analysis by the Chartered Association of Business Schools has shown that an increasing proportion of research funding for business and management funding has come from European sources and that UK Government funding has declined in real terms by 18% in the last five years. To maintain the research outputs the UK Government will need to reverse this trend.

7.6. We echo the observation from the British Academy of Management "Participation in the European Research Area (ERA) has helped attract global talent to our universities and fostered international collaboration at an unparalleled scale that increases impact and aids in finding global solutions to global problems" and "Any domestic schemes should thus aim to supplement fully associated participation in Horizon Europe and reinforce international collaborative research in a post-Brexit environment".

Question 8. How can we harness excitement about this vision, listen to a wider range of voices to ensure R&D is delivering for society, and inspire a whole new generation of scientists, researchers, technicians, engineers, and innovators?

8.1. To build interest and engagement more widely research must have societal relevance, showcasing how it can and will make a difference to multiple constituents.

8.2. It will need to be more daring and willing to loosen attachment to traditional disciplinary boundaries, engaging with and embracing other disciplines, showing how working together can create impact and offer exciting and innovative solutions.

8.3. Examples of best practise should be identified and showcased in a manner that is clear to the wider public and free of technical jargon. This could include the creation of highly engaging multi-media communications of successes, such as inspirational mini documentaries, which would generate a buzz around the ecosystem. The British Academy's Festival of the Humanities is a step in the right direction, but needs greater support.

8.4. A better understanding of societal challenges would be helped by multi-stakeholder forums that are more inclusive and thus representative of the diversity within society.

About the Chartered ABS

The Chartered ABS is the voice of the UK's business and management education sector and our members consist of 121 business schools and higher education providers across the UK, as well as affiliate stakeholders, corporate members and international partners.

The UK's business and management education sector produces vital research for example how best to disseminate new technologies to SMEs; the impact of the current crisis on front line workers; calculating the trade-off between short and long-term benefits in policy-making; informing policy to tackle corruption in professional sports; transforming palliative and end-of-life care for service users; cutting carbon footprints in the service sector.

Business and Management represents 1 in 5 university students and contributes £3.25bn to the UK economy. Its management students go on to lead global businesses and its entrepreneurs contribute

to our dynamic economy. Its research has an impact across society and helps to turn our capacity for invention into viable businesses.

While MBAs may enjoy the highest profile of all business school programmes, they make up a very small proportion of what business schools do. In terms of student numbers, MBAs make up less than 5% of the over 325,000 students studying in business schools in the UK, and this doesn't take in to account short programmes, often offered under the umbrella of Executive Education, which caters for an increasing number of open and bespoke programmes delivered to employees in both large and small firms.