"Science, Innovation and Brexit" Tuesday 10th October 2017

Six months after the publication of the report "Science priorities for Brexit" in March 2017, the Parliamentary and Scientific Committee, held a discussion meeting in the Boothroyd of Portcullis House to further examine how research and innovation issues are being considered in Brexit negotiations.

The event was opened with a warm welcome from the Chairman, Stephen Metcalfe MP, who introduced the four speakers; Sir Venki Ramakhrishnan, President of the Royal Society, Tom Thackray, Director for Innovation at the Confederation of British Industry, Dr Sarah Main, Executive Director of the Campaign for Science and Engineering, and Professor Julia Buckingham, Treasurer at Universities UK. He reflected that after several Parliamentary and Scientific Committee meetings over the past year, we are now in a critical decision-making period, and that this discussion is an opportunity for us to say what we think the government is doing right and wrong, and where it needs a nudge.

"Brexit is the most significant political event in this country in the last half century, but its ramifications may not be known for decades" Stephen Metcalfe MP

Sir Venki Ramakhrishnan was next to speak and commented that whilst there has been good progress on engagement with the scientific community, the Government's Brexit paper is a statement of intent only, so we still need to ensure recognition of five key points:

- Research and innovation is not done in the UK, or by UK citizens, alone. Sir Venki stressed the
 role that mobility and collaboration have in improving the quality of science, noting that in 2015
 over half of the UK's research output was the result of an international collaboration and these
 collaborations are increasing both in absolute terms and as a proportion of the UK's research
 output.
- People are attracted to work in the UK by the excellence of our research base, the open culture, and the quality of life for themselves and their families. We need the whole ecosystem of researchers, early career researchers and technicians as well as science leaders.
- We are right to build international partnerships, as well as strengthening European partnerships.
- Ongoing uncertainty over our future engagement with Horizon 2020 is unhelpful, particularly
 alongside discussion of an 'implementation period' that will take us to the end of this funding
 programme. The government could address this now by making a financial commitment to
 Horizon 2020 until its end and committing to being part of the next EU research programme.
- The world is listening and hears us; we need a consistent and positive message welcoming people to live and work in the UK.

"We are not faced with a binary choice between the EU and the rest of the world"

Sir Venki Ramakhrishnan, President of the Royal Society

Tom Thackray provided a perspective from the business sector, and was clear that continued engagement with the EU is vital to innovation and business, and that innovation is the answer to a prosperous society. Strong links with the EU are needed for better outcomes, not just for access to money, but also for access to facilities and expertise. Alluding to the UK's prowess in innovation, he also viewed the UK as having a good case for a bespoke arrangement to continue our involvement in EU research.

"Collaboration results in better innovation outcomes: a problem shared is a problem halved" Tom Thackray, Director for Innovation, Confederation of British Industry

Tom also highlighted the need for better and stronger export relationships, as the EU acts as a gateway to the rest of the world, particularly for SMEs. He was clear on the need for the avoidance of a legislative limbo and the need to influence regulation from the start.

Professor Julia Buckingham followed, placing an emphasis on a need for the positive rhetoric from the Prime Minister to become solid commitments to allay fears. She had two clear priorities, firstly, access to EU framework programmes are key to underpinning our reputation for world-leading excellence, as collaboration is incentivised by our success within the system. Whilst commitments to underwrite Horizon 2020 grants were welcomed, Professor Buckingham drew attention to the fact that applications can take up to 18 months, so those starting now may not be complete by March 2019. People are the second priority. Professor Buckingham viewed the UK to be at serious risk of losing talent that is essential for our ability to deliver impact in innovation and economic growth, with confirmation of residency and work rights needed to secure this talent. An additional point was the impact of migration on our ability to train our own workforce, as many specialist masters programmes are only viable due to international students.

Dr Sarah Main then looked back, commenting that one year on, the consensus on major themes is still present, but the key difference today is that things are considerably more time critical. Dr Main's focus was on domestic investment, as we have a high degree of scientific and cross-party political consensus on a commitment to increasing public and private investment in R&D, but that there is a need for ambition and practicality. Her recommendation was for the creation of a roadmap to a 3% investment target, with milestones for each sector over a 10 year timeframe.

After these opening addresses the event moved onto a Q&A discussion. Vicky Ford MP, had words of caution in that our ability to influence Horizon 2020 has been key in ensuring the suitability of funds for British science, and questioned whether the sector is doing enough across the continent to communicate the benefit of UK science to Europe. Both Sir Venki and Professor David Cole-Hamilton, President of the European Association for Chemical and Molecular Sciences, added that European learned societies and professional bodies were clear that they valued UK participation, but suggested they could do more to influence their own governments. Tom Thackray was also clear on the benefits seen by the business sector.

"Europe is served better by staying close to the powerhouse that is UK science and innovation" Tom Thackray, Director for Innovation, Confederation of British Industry

On a question from Lord Kakkar on how the science community would inform Government on maintaining the UK science base in the event of a no-deal, Dr Main answered that there are many aspects under domestic control, such as education, our migration system and investment, so the challenge is to Government to take the decisions to allow science and engineering to thrive. Sir Venki added that a no-deal does not prevent our involvement in Framework Programmes, as an associated country.

Both Professor David Cole-Hamilton and Daniel Zeichner MP brought up issues of the disconnect between the discussion at parliamentary level and the reality for researchers who often feel distinctly unwelcome. Stephen Metcalfe MP responded by highlighting the importance of changing our messaging even if we cannot provide practical reassurances. Both Professor Buckingham and Professor John Atherton, Pro Vice Chancellor of the University of Nottingham drew attention to the impact of messaging on UK and EU nationals who *have* right of residency, but are still increasingly considering leaving due to the perception of

opportunities closing. Dr Main also commented on the difficultly of obtaining black and white examples, as these effects are highly intangible.

"How can we quantify the number of times the phone didn't ring, the times a path is not taken"

Dr Sarah Main, Campaign for Science and Engineering

Both Mike Galsworthy of Scientists for EU, and Tom Nichols, commented on the need for connecting with the public about the needs of the scientific and business community; with Tom Thackray suggesting a need for businesses to have greater visibility in local communities, and think about the language used.

Other questions were from Andrew Mackenzie, of The Physiological Society, on the specific needs of the scientific community in Northern Ireland, and Jeffrey Llewellyn of the British Measurement and Testing Association on the skills base of scientists in analytical services who will be difficult to replace.

Stephen Metcalfe MP then brought the event to a close with a clear call on the need for a positive approach to make progress, as negativity will drive people away, and a reminder that "We will be leaving, but we need to work hard and bring everyone along with us".

Elizabeth Dellar
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