COLLABORATE TO INNOVATE

Developing UK access to Framework Programme 9 – March 2018

Introduction

The UK's business community has benefited greatly from working with their EU counterparts on science and innovation projects. EU businesses and universities see the UK as an integral part of their own innovation ecosystems and are keen this continues.

But the UK's vote to leave the EU has thrown into doubt the UK's future role and relationship with the EU's innovation base. CBI members tell us this uncertainty is affecting innovation investment decisions. The Government has taken good steps so far, but needs to go further, securing the strong links that will drive investment and collaboration. This will reassure businesses and show the UK maintaining a leading role in the global science and innovation community. The alternative to deep UK participation would be huge, unnecessary investment. The UK would need to duplicate EU assets while the EU duplicates UK assets.

Key messages

- **EU innovation matters to UK business as well as the science base**
  Engagement with the EU's framework programmes (FPs) benefits UK business. Long-term funding, collaborative opportunities and the ability to influence regulations are all valued by enterprises of all sizes. CBI members want these links to remain after the UK leaves the EU.
- **Uncertainty over access to future funding is affecting UK investment in innovation**
  Long term business R&D investment is the foundation for the UK's future economy. The uncertainty about future engagement in the FPs is now causing businesses to reconsider R&D investment, or move it to other countries. This will set back prosperity and regional growth.
- **To nip this uncertainty in the bud, government should state the intention to achieve an enhanced associate status for the UK in Framework Programme 9 (FP9)**
  Achieving enhanced associate status will in return, mean making a financial commitment to FP9. This will provide the reassurance that business needs to invest and highlight to the EU our commitment to FP9.
- **Outside of the EU, as an associate country, the UK can provide a more global outlook for FP9**
  The UK's reputation as a world leader in science and research can create a new dynamic for associated countries in the EU framework system. The UK can help the Commission meet its goal of making FP9 more open to the world.

EU innovation matters to UK business and the economy

UK participation in Horizon 2020 and previous FPs has been hugely beneficial for British businesses alongside the research community. The FPs are an important source of long-term funding, provide unique collaborative opportunities and offer an opportunity to influence regulations from the earliest stage. Under Horizon 2020, the UK is placed second only to Germany in the number of project participants and share of funding[i].

- **Long-term funding:** CBI members have told us that as well as being an additional source of funding for science and innovation, FP funding is committed over a longer timeframe than domestic funding. This provides certainty and stability to support businesses' own investments. In addition, many businesses rely on a range of EU innovation support programmes as UK innovation support covers a narrower range of areas. For example, UK participation in projects led by the European Institute of Innovation and Technology and frontier research work by the European Research Council are important to businesses.
- **Horizon 2020 funding has benefitted the UK through:**
    - €3.9bn worth of funding since 2014 – equivalent to almost €1bn per year
    - UK businesses have received over €780m – this works out at just over €260m a year[ii] – a substantial addition to Innovate UK's budget of £770m in 2017/18.

  UK industry is currently ranked fifth in the EU for the amount of Horizon 2020 funding it receives. This funding goes to a variety of UK companies – with smaller scale businesses and those working in research intensive industries benefitting the most:

    - SMEs have accounted for 65% of funding granted to UK companies in previous FPs[iii] – despite only accounting for 5% of UK BERD[iv] investment
    - Companies working in the manufacturing and science/research intensive activities have received the highest levels of industry-related funding from Horizon 2020 in the UK. Manufacturers have received around 36% of funding, with 39% of the total monies distributed to date going to research-intensive sectors[v].
- **Collaboration:** Innovation is challenging. To innovate successfully, companies require access to a range of resources, facilities, expertise and finance. These resources can be finite, limiting a company's ability to innovate. Collaboration can help businesses access facilities and specialist knowledge. This matters as the pace of technological change is increasing, with skills becoming more specialist.

  For industrial innovators, working with others is increasingly important. These collaborations also benefit the businesses that do not directly apply for EU support by raising the quality of research produced by UK universities, which can then be developed and exploited. UK SMEs have benefited from working with EU-based partners by forming relationships that have helped them to grow exports.

  The UK and EU's innovation capabilities complement each other in terms of assets and expertise. Cross-border working is now essential in bringing together capabilities on single projects and areas such as medicine, cyber-security, robotics and big data. These issues are both EU and UK priorities, reflecting the need for continued collaboration.

  The alternative to deep UK participation would be huge, unnecessary investment. The UK would need to duplicate EU assets while the EU duplicates UK assets.

  The unique multilateral nature of the FPs would be very difficult to replicate at a national level given their depth and spread. The UK is currently developing an international research and innovation strategy but this would in no way compare with the benefits of FP9 engagement.

- **Regulatory influence:** After Brexit, whether the UK choses to develop its own regulatory systems or not, a framework that helps with selling innovative goods and services into the EU will need to be developed. Participation in EU FPs enables our scientists and our businesses to influence the direction of regulation in the EU right from the start. This is hugely beneficial for building the best regulations and could help the UK continue to influence EU regulation even outside of the bloc by helping to reduce duplication of effort and resource for business and the regulatory authorities. This relationship works both ways: UK expertise is valued by our EU partners and has been highly influential in helping to generate good regulation across Europe.

CASE STUDIES

'Formal funding programmes, such as Horizon 2020, play a particularly critical role in facilitating pre-competitive and public health research by bringing parties from different sectors together, in both European Union member states and other participating countries.' **Pharmaceuticals & life sciences company, South East**

'Working with end users of the technology we produce solutions that will meet the real needs of our customers. As a result of this, our new tool received focussed testing and evaluation from a very early stage in its development. The funding we received allowed us to dedicate effort to earlier research activities… rather than focusing only on short-term outcomes.

We have found participation in EU research programmes to be extremely beneficial to our business strategy. We gained access to the latest research by working with academic partners and other leading-edge companies... it was especially useful to work with other tool companies to establish a common format that can be used by multiple tools. **Hi-tech tooling producer, Yorkshire.**

Uncertainty over access to future EU funding is affecting UK investment in innovation

Underinvestment in R&D is a chronic problem for the UK. CBI members tell us business investment levels – especially on R&D investment – are now suffering further due to concerns about our future participation in EU science and innovation programmes. If allowed to continue, there is concern this doubt will damage the UK's overall competitiveness. Businesses R&D investment plans are long-term. This uncertainty about future engagement in FP9 is now causing businesses to reconsider R&D investment, or move it to other countries.

This is reflected in the performance of UK companies and the funding they have received from Horizon 2020. Latest figures from BEIS show that when compared with October 2016, UK businesses have fallen from the second highest recipients of funding in the EU – to fifth overall[vi].

This is because uncertainty is impacting on UK businesses' relationships with EU partners. Evidence from EU business organisations suggests numerous collaborative projects involving British researchers and companies have been thrown into doubt since the referendum. EU businesses want to work with UK companies and universities but they are reluctant to do so when there are doubts about the nature of the future relationship.

The UK government has taken the right steps to date. Guaranteeing Horizon 2020 funding and shaping the direction of FP9 through engagement with the Commission are positive steps. Government needs to act now to signal to business they can continue to invest and collaborate.

To nip this uncertainty in the bud, government should state the intention to achieve an enhanced associate status for the UK in Framework Programme 9 (FP9)

The government should state its intention to engage in FP9, with an association deal that meets the following criteria:

- **Full access to all pillars of FP9**: CBI members want the UK to play a full role on FP9 in each of its core programmes. Some associated countries have chosen not to access all the pillars of Horizon 2020 but provided FP9 meets the UK's criteria, it is important for UK businesses that full access to the programme remains in place. Engagement in all three pillars of Horizon 2020 has benefitted the UK innovation eco-system, such as helping boost technology readiness levels and provide UK expertise in a variety of research areas. Choosing to commit to a limited number of pillars in FP9 would leave the UK's broader innovation eco-system under-tooled and could damage the long-term innovation capabilities and relationships with EU partners.
- **The ability for UK businesses and researchers to lead FP9 consortia:** Associated member countries already lead Horizon 2020 projects and with the UK's extensive experience of leading different FP consortia, UK companies are well placed to do so in the future. Leading consortia enables companies to direct the research. Where consortia are led by competitors, British companies may be left out, or have reduced influence.
- **The ability to influence the development of the FP9 programmes:** As a leading member of the EU's industrial science base, the UK has played a full role in developing previous science and innovation programmes and our EU partners have valued this input. The UK's influence and role needs to be maintained as discussions continue around the overall direction and shape of FP9.
- **As well as the ability to influence the overall shape of FP9**: UK businesses and researchers need to be able to lead initiatives such as Public Private Partnerships and Joint Undertakings. Both are important tools for UK businesses in shaping funding calls and research priorities.
- **Broadly meets the recommendations set out in the government's FP9 paper:** The government is right to press for FP9 to focus on areas such as excellence, collaborative working with non-EU countries and a mission oriented approach. The government should continue to contribute fully in the ongoing FP9 consultations.

Joining FP9 means the UK will have to pay its fair share into the budget.

- **The UK should make a commitment to paying into FP9's budget:** The sixteen Horizon 2020 associated countries contribute to its budget based on a proportion of their GDP[vii]. Offering to pay based on similar terms would demonstrate the UK's commitment to EU science and innovation for UK business and the EU alike.

To realise the full advantages of participation, it is important that the UK and EU negotiate a comprehensive agreement on migration and mobility.

Innovation is a contact sport. For businesses, building face-to-face relationships with partners and customers matters. Countries that get the most out of FPs have good cross border mobility because all consortia-led projects in Horizon 2020 must include at least three participants from different member states or associate countries. Many of the projects are long-term in nature, and participants are often expected to attend and host meetings with their partners, as well as attend key project events such as conferences.

- **Achieving this means developing an immigration system that works for UK business and innovation**: Business accepts that free movement will not continue as we have known it. The new migration system must support UK business and innovation, and restore public confidence that migration is controlled. To do so, the UK and EU must conclude a comprehensive agreement on migration and mobility that:

- **Ensures frictionless access to the skilled workers that businesses need, not only to the 'brightest and best':** Innovative businesses require people with a range of skills and abilities. Any new immigration deal must reflect this reality.
- **Addresses the skills shortages in different sectors and meets the needs of the UK's regions and nations:** Innovative businesses are located across the UK. These businesses must be able to attract and retain the labour needed to innovate, grow their businesses and sell their products or services. A new deal must be flexible enough to meet the diverse needs of all the UK's regions and nations.
- **Protects mobility, allowing businesses to easily move staff to and from Europe on secondments and to visit customers and partners:** To innovate and export successfully, businesses must be able to engage face to face with customers and partners. Maintaining this access is fundamental to the success of the UK's innovation eco-system after Brexit.

Outside of the EU, as an associate country, the UK can provide a more global outlook for FP9

The UK's presence will alter the balance in the status and makeup of associated countries. The UK should use its strength as a science and innovation powerhouse to push for a stronger model of association for all non-EU associate countries. Working with other associated countries and the EU, the UK can help deliver the EU's mission to make FP9 more open to the world.

Building on cutting edge research and developing new technologies and markets increasingly happens between a host of multinational partners. International collaborations will be even more important in meeting the growing societal challenges of the 21st Century.

The UK can now play a leading role in making science and innovation open to the world. Working together with the EU and the UK's global partners should be a constituent part of the government's wider international research and innovation strategy.

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[i] BEIS *'UK participation in Horizon 2020 – September 2017'* – published November 2017

[ii] BEIS *'UK participation in Horizon 2020 – September 2017'* – published November 2017 – based on 'Private for-profit entities' classification

[iii] *Technopolis Group 'The role of EU funding in UK research and innovation' – May 2017*

[iv] Business Expenditure Research & Development

[v] *Technopolis Group 'The role of EU funding in UK research and innovation' – May 2017*

[vi] BEIS *'UK participation in Horizon 2020 – September 2017'* – published November 2017

[vii] Note – Under Horizon 2020, It is normal practice to negotiate the final amount based on a simple ratio of GDP of the country to the GDP of the EU, however in some cases the amount set can be based on a formula set out in legislation

For further information or a copy in large text format, contact:
Felicity Burch, head of group, digital and innovation, CBI
T: 020 7395 8064
E: felicity.burch@cbi.org.uk