



## Future Partnership Project

### A response from the Royal Society of Chemistry to the Royal Society and the Wellcome Trust.

The UK government's recognition of science and innovation as a priority in the UK's negotiating objectives for EU exit is vital to realise the government's vision to make research and development (R&D) a key driver for growth in our post-Brexit economy. Maintaining a robust and productive relationship with the European Union will help to deliver this R&D-led growth and can act as an example of how the UK and the EU can continue to work successfully in a close partnership that is beneficial to both parties.

The Royal Society of Chemistry has outlined the following three key objectives for UK government in relation to the UK's exit from the EU:<sup>1</sup>

- Maintain access to international research and development funding programmes and research facilities, along with the collaboration opportunities these bring.
- Enable easy movement of the best scientists and innovators to and from the UK.
- Develop a regulatory system that achieves a balance between nurturing innovation, protecting the environment and human health and enables the UK to trade internationally.

Our responses to the questions below regarding the shape of a future partnership are based around these three areas.

### Elements that underpin successful partnerships

#### Q1. Thinking of existing models, agreements, or international partnerships, what features have made them a success?

A number of principles can underpin successful international partnerships across research and innovation – some of these are listed below with examples that demonstrate existing international partnerships. It should be noted that many of these principles are relevant to international cooperation in a much broader sense.

#### **Demonstrable benefits for each participating party**

The specific demonstrable benefits that each party desires may vary and will depend upon the strategic priorities of each participant, which in turn will be influenced by overarching organisational, regional or national priorities. Demonstrable benefits can include funding, reduction of investment risks due to shared costs, exchange of knowledge, access to infrastructure or specific expertise and/or relationship building, and access to new markets.

#### **Alignment of vision, goals and/or values**

Whilst the tangible benefits for each party do not need to be identical, there must be a shared clarity of the goals for each party. In the case of some existing partnerships, this alignment can be based around a set of values, goals or principles – for example the European Spallation Source, a pan-European partnership to create the world's most powerful neutron source works on core values of excellence, collaboration, openness and sustainability.<sup>2</sup>

In the case of regulatory alignment, shared goals and values are vital in delivering benefits for research and trade. For example, the Canada – EU comprehensive economic and trade agreement (CETA)<sup>3</sup> for trading of goods, agreed in February 2017, has ultimately been successful as both parties '*put people and the environment centre stage*' and follow the '*precautionary principle*', which is an especially important principle to the EU. Both parties agree to place great importance on safety and quality of products and processes in both geographies and aim for equivalent environmental standards. There is a high degree of understanding, trust and cooperation between these partners to make this agreement successful.

### **Greater impact from pooling resources and sharing risk**

The pooling of resources to achieve a greater impact can ensure that all partners achieve improved research outcomes, compared to the level of resource, expertise or finance that they contribute alone. One example of this is shared international infrastructure. The UK has strong capability in some universities and has centres of excellence such as the Diamond Light Source, but it is not possible for any nation to establish and maintain excellent infrastructure across all areas. So for many fields of research and innovation, long-term commitment to and participation in international shared facilities is essential to nurturing particular research and innovation disciplinary strengths.

Another example is research into 'grand challenges' that affect the global population. Pooling of resources not only provides improved outcomes in these cases but also avoids duplication, unnecessary repetition and opportunities to undertake larger-scale programmes. An example is the international partnership that determined the human genome. In some cases, the challenge itself can only be tackled through concerted international efforts due to the span of expertise required to address it and the potential trans-national impacts of the challenge (e.g. antimicrobial resistance).

### **Creating synergies and links between existing national and/or international programmes**

Individual nations or groups of nations will develop and set their own priorities and mechanisms to enable international collaboration. Linking existing mechanisms to create efficiencies across national and international programmes can bring benefits. For example, Eureka is an intergovernmental network of over 40 countries, consisting of both EU members and non-member countries. It '*concentrates the existing potential of experts, of knowledge, research facilities and financial resources in a more efficient way*', helping to create collaborations by leveraging the strengths in existing programmes and schemes.<sup>4</sup>

## **The shape of an ambitious new partnership**

**Q2. What elements must be included in a research and innovation partnership agreement between the UK and the EU to ensure it is close, valuable and effective? Please comment on how these would be prioritised.**

As outlined in the introduction, the Royal Society of Chemistry has identified three main objectives for the UK government in relation to our exit from and future relationship with the EU:

- Maintain access to international research and development funding programmes and research facilities, along with the collaboration opportunities these bring
- Enable easy movement of the best scientists and innovators to and from the UK.
- Develop a regulatory system that achieves a balance between nurturing innovation, protecting the environment and human health and enables the UK to trade internationally.

### **Funding**

The principles outlined in our response to question one can help to frame a future partnership on research funding. Working together where greater value can be achieved through joint programmes, pooled resources and sharing of knowledge can form the foundation of the UK's future relationship with the EU.

Particular attention should be paid to areas or schemes where EU and UK principles regarding research and innovation align. Some examples of this include the principle of funding excellent research, undertaking collaborative research to tackle grand challenges and supporting the role of small and medium enterprises (SMEs) in the translation of research into products and services.

### **Mobility**

People are vital to science – the ability of people to be able to move with ease between countries is essential in creating an effective future research and innovation partnership between the UK and the EU.

In order to do the best science, researchers travel to and from the UK to collaborate with leaders in their field, to access cutting-edge research facilities and to present their work to audiences globally. To remain globally competitive, universities and businesses must be able to hire the best people to deliver world-class research, innovation and teaching.

## Regulation

A new partnership between the UK and the EU will be most successful where we have common problems to solve or a shared ambition to achieve. In terms of regulations to be included in any partnership agreement, there are different considerations relating to

- a) the performance of research and the generation of research outputs, and;
- b) the commercialisation of processes and products from research outputs.

In some cases, it may be necessary to agree on regulatory alignment, in other cases there may be opportunities for the UK in divergence. The UK and EU need to discuss regulations on a case-by-case basis. Partners need to prioritise the regulatory elements of a new UK-EU partnership by identifying where there are common goals and where there are different goals.

Developing a future UK immigration system that allows easy movement of scientists to and from the UK is of strong importance to the research community. The results of a recent survey of researchers working across the world, published by Elsevier, and Ipsos MORI found that those surveyed strongly supported the UK government taking action to simplify visa and citizenship applications for EU research staff and to maintain current free movement for EU researchers who wish to work in the UK.<sup>5</sup> These actions came ahead of other options for action by UK government around funding and collaboration.

Whilst people are central to carrying out research and innovation, a failure to address the other elements could jeopardise a successful future relationship that benefits both parties due to the deeply interconnected nature of these different areas. For example, changes to the availability of diverse international funding routes may make the UK a less desirable location to carry out research, impacting the UK's ability to attract talent. Similarly, changes to the regulatory regime may make cooperative international research between the UK and other countries challenging and/or affect companies that trade the products of innovation and carry out research of their own in the UK.

## Practical steps to achieve such a partnership

**Q3a. What practical steps are needed to realise the overall model you describe in Question 2?**

**Q3b. Thinking about the wider negotiating environment, what factors are likely to affect the ability to implement a shared vision on research and innovation?**

A key practical consideration will be determining the shape of the UK's future immigration regime. Within research and innovation, mobility for different lengths of time during a researcher's career is important to acquire skills, build networks, develop collaborations and deliver specific projects. The nature of this mobility depends on many factors, both professional and personal, but can range from mobility for a few weeks and months, through to a post that is fixed for a number of years or even longer-term. The UK's future immigration system must recognise the need for different kinds of mobility to support effective international science and innovation partnerships.

Continued participation in EU funding framework programmes will require the UK to contribute financially, as is acknowledged in the UK government's discussion paper on a future partnership for science and innovation.<sup>6</sup> However, other areas of wider negotiation, including the UK's future immigration system and parity of regulations could affect negotiations on the level of UK participation in future EU funding framework programmes.

To underpin regulatory decision making there is a need for a common platform for data sharing and for harmonised discussions on data interpretation by UK and EU experts. Regulatory alignment between partners relies on the sharing of the same data and coming to an agreed conclusion on what the data means. However, regulatory divergence is also most effective when based on the same data and evidence. The UK may take different decisions based on local needs for different outcomes. All parties can then understand in a transparent way the basis of the divergence and may reach mutual acceptance of any divergences.

## About us

With over 50,000 members and a knowledge business that spans the globe, the Royal Society of Chemistry is the UK's professional body for chemical scientists, supporting and representing our members and bringing together chemical scientists from all over the world.

Our members include those working in large multinational companies and small to medium enterprises, researchers and students in universities, teachers and regulators.

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<sup>1</sup> - [UK Science and Innovation after the UK Exits the EU](#), Royal Society of Chemistry, March 2017

<sup>2</sup> - [European Spallation Source – Vision, Mission & Values](#)

<sup>3</sup> - [Standards and values in CETA](#), A progressive agreement for sustainable development, CETA factsheet 5, European Commission, September 2017.

<sup>4</sup> - <http://www.eurekanetwork.org/about-eureka>

<sup>5</sup> - [BREXIT: Global researchers' views on opportunities and challenges](#), Elsevier/ Ipsos MORI, November 2017

<sup>6</sup> - [Collaboration on science and innovation. A Future Partnership Paper](#), HM Government, September 2017