

Why the UK must associate to Horizon Europe

The UK's participation in EU Framework Programmes for research and innovation has been crucial to the growth and global influence of UK science and brought significant benefits to people living in the UK. Pursuing association to the next Framework Programme, Horizon Europe, is critical to maintaining our place at the heart of international science.

POLICY PRIORITIES

- On leaving the EU, the UK should seek an association agreement on Horizon Europe with the maximum possible engagement and influence.
- To avoid damage to UK science, the government should earmark funds that ensure that the benefits derived from the current Framework Programme Horizon 2020 are matched or exceeded.
- Any gap in funding would immediately erode the UK's existing international relationships while undermining government efforts to raise UK investment in R&D.

“Seeking full association with Horizon Europe is the surest way to maintain and build the UK's scientific collaborations and instil confidence in our international partners.”

Venki Ramakrishnan, President of the Royal Society and Nobel Prize winner.

Why associate to Horizon Europe?

Association to Horizon Europe is fundamental to maintaining the UK's access to European networks that foster new frontiers of knowledge and innovation. It will ensure that we continue to attract the best scientific talent through 'excellence-based' schemes which are closed to non-associated countries and provide stability at a time of significant change in the UK's international relationships. It will give us a strong platform for seeking further collaborations across the world.

Since the start of Horizon 2020, the UK has received¹:

£1.52 billion of ERC income,
more than any other country
and a fifth of the total

£776 million in MSCA grants
more than any other country
and a fifth of the total

£694 million in SME funding
involving 2,400 UK participants

'Excellence based' schemes and what they support

European Research Council

The first pan-European funding body for frontier discovery research. The ERC has established itself as a world-leading funder of excellent science, supporting individual researchers with few restrictions.

Marie Skłodowska Curie Actions

MSCA grants enable early career and more experienced researchers to work in different countries, sectors or disciplines and gain vital international experience and networks.

SME Instrument

A mechanism for small and medium sized firms with high growth potential to convert successful and innovative research into market-leading business. The scheme is being phased into the European Innovation Council.

Benefits to the UK public

Pooling our expertise with other European countries has led to advances in medicine and public health, cleaner energy, environment and transport innovations, and the creation of jobs in UK regions. In areas of high public benefit, collaboration between the UK and EU has significantly increased the impact and influence of research².

Cure rates for British children with leukaemia are being improved as a result of the IntReAll project involving researchers from Germany and the University of Manchester.
(www.intreall-fp7.eu)

International knowledge is helping UK patients with rare diseases through the RD-CONNECT network coordinated from Newcastle University.
(www.rd-connect.eu)

Clean buses with zero emissions operate in London and Aberdeen thanks to the UK's participation in hydrogen fuel cell projects funded by the EU.
(www.bit.ly/36BGtO7)

ERC research has brought jobs to Merseyside with Unilever relocating 80 staff as part of a multi-million pound investment in a materials chemistry hub with the University of Liverpool.
(www.rsc.li/2qhiQtk)

The world's largest nanoparticle manufacturing plant in Nottingham was opened by spin-out company Promethean Particles as a result of ERC funded research.
(www.prometheanparticles.co.uk)

Benefits to UK science

Association to Horizon Europe is critical to maintaining the UK's scientific influence, networks and visibility on an international platform and to attracting inward R&D investment. In shaping our future, we must guard against the erosion of existing strengths.

Europe is the UK's fastest growing scientific collaborator³

7 EU countries and Switzerland are among the UK's strongest 10 international collaborators⁴

The UK receives more 'excellence-based' funding from Horizon 2020 than any other country⁶

33.5% of UK research papers are co-authored with other EU and associated countries, compared with 17.6% with the USA⁵

The UK coordinates more Horizon 2020 projects than any other nation and is involved in more collaborations than all countries except Germany⁷

There are no comparable alternatives

Internationally excellent collaboration requires three essential ingredients – mobility of scientists in and out of country, money that can move across borders within projects, and common mechanisms that embrace multiple nations at once. The EU Framework Programmes contain all three in a way that is very difficult to replicate.

The EU Framework Programmes are unique in their ambition and scale. Other international research and innovation initiatives are orders of magnitude smaller and often more narrowly based geographically or thematically⁸.

The prestige of the ERC derives from the unparalleled scale of international involvement from its inception. Recruiting an equivalent pool of experts (30,000 researchers from 34 countries) to take part in peer review is unachievable in a single country context⁹.

EU funding unlocks international growth and export opportunities for UK businesses, with more than half of firms that participated in the previous Framework Programme reporting improved access to European markets¹⁰.

83% of Horizon 2020 projects would not have gone ahead without EU funding and survey data consistently show that Framework Programmes do not duplicate national R&D efforts¹¹.

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1. European Commission (2019), Horizon 2020 participations data from EC Webgate dashboard (approximate figures converted from EUR to GBP on 4 November 2019).
2. See for example, Technopolis (2017), *The impact of collaboration: the value of UK medical research to EU science and health*.
3. Royal Society (2019), *Submission to the Sir Adrian Smith call for evidence on future frameworks for international collaboration on research and innovation*.
4. Royal Society (2018), *No-deal is a bad deal for science*.
5. Royal Society (2019), *Submission to the Sir Adrian Smith call for evidence on future frameworks for international collaboration on research and innovation*.
6. European Commission (2019), Horizon 2020 participations data from EC Webgate dashboard (accessed on 4 November 2019).
7. *Ibid.*
8. Technopolis (2017), *The role of EU funding in UK research and innovation*.
9. Russell Group (2019), *Response to the Adrian Smith review*.
10. Technopolis (2017), *The role of EU funding in UK research and innovation*.
11. European Commission (2019), *Assessment of the Union added value and the economic impact of EU Framework Programmes*.