



Research Councils UK
engaging
in Europe



Engaging in Europe

The European Union contributes to the most prolific creation of knowledge; Europe produces 33.4% of the world's research outputs¹.

The UK's role in Europe represents one of the oldest, strongest, most complex and fruitful relationships in international research collaboration. Over the past few decades we have strengthened our links with other European Member and Associated States through a diverse range of funding streams. Cross-border collaboration within Europe supports increased researcher outputs and mobility, providing a strong and welcome foundation for Europe's competitiveness and growth agenda, and maintaining RCUK's commitment to excellence with impact.

EU research programmes provide an important source of funding for many UK institutions. The UK was a strong player in Framework Programme 7, receiving the second largest share of funding², €5,205 million, equivalent to 15.2% of the total FP7 funding, as well as being involved in more successful projects than any other country: 40.7 % of all grant agreements in FP7 to date. Across the RCUK family there are also many bi- and multilateral relationships and agreements with our partners in Europe, creating a flexible network of funding streams able to support the changing needs of an increasingly mobile research community.

At a time of real economic uncertainty in Europe, it is essential that investment in research and innovation is sustained so that scientific advances can contribute to delivering the employment and growth which our economies need. RCUK works with other European partners to help to make the case for this continued investment.

The emergence of new research powers on the international scene now creates exciting opportunities to open up the traditional geographies of collaboration, building on experience and expertise developed over decades of mutual achievement and trust. We recognise the value of developing multilateral relationships including countries beyond Europe, and the UK's experience at the heart of most European research programmes makes us well placed to help develop the most productive alliances.

¹Comparative Benchmarking of European and US Research Collaboration and Researcher Mobility', Science Europe and Elsevier, 2013

²As at July 2013

We have a clear vision for enhancing our engagement in Europe:

INFLUENCE

Increase RCUK influence in European research strategy and policy development.

A steadily growing European budget for research and innovation has brought the responsibility of increased engagement. This engagement must take place both with the core European institutions – the European Commission, Parliament and Council – to ensure that the UK's voice is heard during research policy and agenda setting, and with the UK research community to increase understanding and take up of the opportunities available both within and outside the Framework Programmes. We also work closely with relevant UK government departments and European research funding organisations to maintain effective communication and open up dialogue on key research policy issues.

In 1984 the Research Councils established the UK Research Office (UKRO), the UK's leading information and advice service on European Union funding for research and higher education, which for 30 years has been supporting UK input into European research policy development and implementation through informing and interfacing with the appropriate bodies.



The UKRO team in 2013

More recently RCUK played a pivotal role in driving the formation of Science Europe, a Brussels-based organisation which promotes the collective interests of European research funding and performing organisations. RCUK's international champion Professor Paul Boyle is the first President to lead Science Europe.

EXCELLENCE

Provide opportunities to enable excellent researchers to flourish through UK-European research collaborations.

Excellence is the backbone of RCUK funded research. Our aim is to ensure that best can work with best, supporting researcher mobility to access the best research environments wherever excellence is found. Schemes such as 'Money Follows Researcher', which make provision for Research Council grant holders to continue their funded research upon moving to another participating European country, encourage mobility and flexibility.

UKRO plays a key role in supporting the UK research community to access European research funding, providing information and advice to grant applicants, promoting funding opportunities, offering guidance on policy issues, all building on its particular expertise relating to implementation and participation aspects of European funding programmes. As host organisations for several National Contact Points (NCP) UKRO and the Research Councils work closely with partners such as the Technology Strategy Board (TSB) to provide support in FP7 and Horizon 2020 via the UK NCP network, which provides guidance to applicants on choosing thematic priorities and instruments, and advice on administrative procedures and contractual issues.

Excellence and strategic priority informs the UK's involvement in promoting access to research infrastructures, which is a key part of our European activity. In October 2013 Professor John Womersley, a member of RCUK Executive Group, was elected Chair of the European Strategy Forum on Research Infrastructures (ESFRI), which aims to co-ordinate national decision making and investment. Participation in ESFRI projects has positioned the UK in leadership roles in Europe as well as effectively leveraging investment made in other member states. ESFRI is important to enable facilitation of multilateral initiatives and for access and support to large research infrastructures that would not be possible on a single country scale.

The UK hosts the European Social Survey, which opened in 2001 and provides rigorous cross national data on social attitudes and behaviour, an exemplar of a world class research infrastructure serving a large and growing international social science and policy community. In 2013 the ESS became one of the first European Research Infrastructure Consortia (ERIC) and is the first to be led from the UK who will act as the host Member State. ERIC status will help to secure the long-term future of ESS, which already has around 50,000 registered users of the data from across the world.

Working with funding organisations in other Member States we are also able to support the most excellent researchers by aligning national funds towards common research goals. The Research Councils are involved in over 20 ERA-NETs, which provide a framework to co-ordinate the activities of publicly funded national research programmes. The enhanced impact generated by these pan-European partnerships helps build the reputation of the UK as a world centre for excellent research and innovation, as well as adding value where relevant to national activities and leading on bringing in other countries such as the USA to European activities.

In environmental science a number of potential priorities for investment at a European level have been identified. They include the European Plate Observing System (EPOS), a distributed infrastructure for geophysical observing systems across Europe. The UK is one of the leaders of EPOS which will integrate existing geophysical infrastructures, laboratories and facilities funded by RCUK, and which will address key issues including potential exploitation of the subsurface, including for energy (e.g. shale gas extraction) and waste storage.

IMPACT

Enhance the value and impact of joint research through European collaboration.

RCUK's mission is to fund excellent research that generates impact, the demonstrable contribution made by research to academia, policy, society and the economy. Much of this impact will be created through innovative ways of thinking and practising. Innovation is a cornerstone of European policy as well as being a national priority for the UK, with its multi-faceted innovation system involving a wide variety of actors, both publicly and privately funded. RCUK plays a vital role in innovation through investment in knowledge creation and its translation to application and we consider that it is vital for activities at EU level to focus on areas of high 'European added value'. Building upon and enhancing actions taken by individual Member States will help maintain support and infrastructure necessary for cutting-edge innovation, especially where activity is at a scale or cost which could not be supported by any nation acting alone.

An example is the Graphene Flagship, which brings together academia and industry to create new disruptive technologies based on graphene and related materials, and currently has eight UK consortium partners. The Graphene Flagship is a ten year initiative funded under the EU's Future and Emerging Technologies Flagship programme and aims to take graphene from the realm of academic laboratories into products and applications, and thus generate new employment opportunities and higher economic growth. The aim is that through co-ordination between the EU and national funding organisations this programme will be supported at a level of €1000 million over the ten year period. RCUK is an active partner in efforts to deliver this co-ordination, which is sponsored by the EU through the ERA-NET FLAG-ERA.

RCUK takes a variety of approaches to supporting innovation and delivering impact from research. These include training of skilled people and supporting their mobility, development of collaborative research programmes, investment in major research capabilities, and support of impact-related capabilities. Our national activity is complemented in many areas by EU actions, such as the European Institute for Innovation and Technology (EIT), which combines EU, public and private sector funding at national and international levels to increase European growth, reinforce Member States' innovation capacity and create tomorrow's entrepreneurs by being the first EU initiative to fully integrate all three sides of the Knowledge Triangle (higher education, research and business) within Knowledge and Innovation Communities (KICs).

A call for a Food4Future KIC may be launched in 2016 by the EIT, focusing on innovation and entrepreneurship to bring about a more sustainable and resilient supply chain and address key Horizon 2020 priorities of food security, sustainable agriculture and the bio-economy. In preparation for this, RCUK is providing resource for the establishment of a consortium, 'Foodbest', which is driven by the needs of the food industry and the consumer. Innovative companies, universities and research centres from across Europe are now exploring ways in which they can enhance Europe's competitiveness and jointly address the global food challenges, increase competitiveness and stimulate economic growth.

RESPONSIBILITY

Show RCUK's commitment to key global responsibilities in a world where challenges cross national boundaries.

Major societal challenges require major investment, often beyond what one country can provide. Europe's status as a diverse but compact global player, with a highly developed research base, puts it in a unique but complex position to align resources and demonstrate leadership in tackling global challenges.



Participant of the MVA85A trial at the KayaVac field site in Khayelitsha, South Africa (project led by Prof. Helen McShane)

RCUK and the UK Department for International Development are key players in the European and Developing Countries Clinical Trials Partnership (EDCTP), which involves 14 EU countries, Switzerland, Norway, together with 29 countries in sub-Saharan Africa. Its aim is to help fight HIV/AIDS, malaria and tuberculosis in developing countries by accelerating the development of new vaccines and drugs.

The UK is involved in all ten Joint Programming Initiatives (JPI), a process which aims to pool national research efforts to tackle common European challenges – many of which have a wider global impact – more effectively in key areas such as neurodegenerative disease, cultural heritage and antimicrobial resistance. Showing the ability to leverage further collaborative investment at a global, as well as European, scale the Agriculture, Food Security and Climate Change JPI (FACCE-JPI) has launched a Collaborative Research Action on Food Security and Land Use with the Belmont Forum, an international partnership of funding agencies involved in strategic co-ordination of environmental science research.

Taking our vision forward

The launch of Horizon 2020 marks a significant step change towards an integrated approach to research and innovation across Europe. RCUK will continue to engage with European partners, both within and outside Horizon 2020 and other complementary EU programmes, by:

Providing support and guidance, as well as key policy input, through the UKRO presence in Brussels. UKRO works closely with Research Council stakeholders to provide an invaluable link between the UK research community, UK Government and the European institutions. Building on the work they have done to shape the development of Horizon 2020 they will closely monitor and feedback on progress and implementation, supporting the UK research community to engage fully with the new structures based on excellence, industrial technologies, and societal challenges.

Speaking with a collective voice to shape future policy developments. We will identify the most appropriate avenues to disseminate our messaging on key European policy issues both at a national and European level, including the debate over the UK's future in the EU. Science Europe will be a key channel of communication and we will continue to strengthen our relationship with the organisation as it matures.

Continuing to seek the best balance between alignment of programmes and national agility and ability to respond to unexpected challenges. The scale of the challenges that we face globally today are such that constructs that increase the complexity and reduce the agility of nations to respond should not be welcomed. We will monitor the implementation of the European Research Area and support a non-legislative approach to the development of the ERA to be creative, flexible, trust-based, dynamic and evolving.

Bringing together the UK's strategic research agendas with European partners to tackle global issues. RCUK will actively participate in the development and implementation of the ten Joint Programming Initiatives, aligning UK priorities with European grand challenges where added value is identified.

Breaking down barriers to cross-border collaboration. Working with European partners we have explored a wide range of activities which break down barriers to cross-border collaboration. This equips us to follow a creative approach, tailoring engagement to research discipline

or challenge. European Commission instruments have been invaluable in this respect in supporting the scoping and development of thematic and challenge led co-operation. In addition, Member State initiatives such as international co-investigator schemes and Lead Agency agreements will help contribute to the creation of a seamless pan-European funding environment. Working on a bilateral level with partners across Europe we will investigate further opportunities for alignment, while continuing to expand best practice through collaboration with organisations such as Science Europe.

Supporting excellent research and researchers. The UK will continue to provide a supportive and excellence-focused research environment characterised by sustained investment in research, a strong focus on business and policy innovation, an emphasis on professional development employability and impact and an open and transparent job market.

Ensuring UK researchers have access to high quality infrastructures within Europe. RCUK's membership of the European Strategy Forum on Research Infrastructures will enable us to drive forward its mission to support a coherent and strategy-led approach to policy-making on research infrastructures in Europe, while continuing to make vital contributions to initiatives such as Mapping the European Research Infrastructure Landscape.

Developing opportunities for and pathways to innovation at a European level. One of Horizon 2020's priority objectives is to bring business into the research and innovation chain throughout its various components. As well as through our own activities RCUK will continue to work with partners such as the TSB, who aim to accelerate economic growth by stimulating and supporting business-led innovation in particular through adoption and response to technology developments and opportunities. This contributes to the creation of an open environment for innovation to flourish at a UK and a European level. We will continue to look for opportunities to engage with the EIT and its KICs as they develop.

Working with partner organisations in the UK to explore synergies between Horizon 2020 and the EU Structural and Investment funds. RCUK will work with partners including the Higher Education Funding Councils, the Technology Strategy Board, the Department for Business Innovation and Skills, and Universities UK to ensure that UK higher education institutions are aware of the opportunities available for them to leverage funding under the new approach to structural funds.

1984
UK Research Office (UKRO) established.



1992
EUROHORCs (European Heads of Research Councils) established to enhance the role of national research councils and research funding organisations in Europe through creating a platform for discussion, initiating joint activities and strengthening their influence on European research policy. RCUK is a key player in this group.

1993
EU formally established when the Maastricht Treaty comes into force.

1997
The European Bioinformatics Institute, a basic research facility providing freely available data from life science experiments, is officially opened at Hinxton, UK, as part of EMBL.



2000
European Commission adopts the Lisbon Strategy (2000-2010) aiming to make the EU the "most competitive and dynamic knowledge-based economy in the world".

European Commission launches the European Research Area with the aim of strengthening Europe's scientific and technological bases through greater multi-national research co-operation.

2002
ERA-NET scheme is launched, aimed at developing and strengthening the co-operation and co-ordination of research activities carried out at national and regional level in Member and Associated States. Research Councils are currently involved in over 20 ERA-NETs.



2003
European and Developing Countries Clinical Trials Partnership (EDCTP) is created as a European response to the global health crisis caused by the three main poverty-related diseases of HIV/AIDS, tuberculosis and malaria. MRC and DfID lead for the UK.

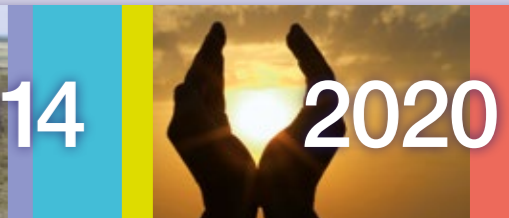
European Consortium for Ocean Research Drilling (ECORD) is launched, with NERC as the UK partner. With an annual budget of around \$20m ECORD provides European scientists with access to the three International Ocean Discovery Programme platforms that support international multidisciplinary, collaborative scientific drilling of the seafloor, which has revolutionised our view of Earth history and global processes through ocean basin exploration.

2008
On 10 September the Large Hadron Collider, the world's largest and most powerful particle accelerator at 27km of superconducting magnets, starts operation at CERN. STFC manages the UK's subscription allowing UK researchers to access the LHC.

European Commission launches the Joint Programming process to pool national research efforts in order to make better use of Europe's public R&D resources and tackle common European challenges more effectively in key areas. In 2014 the UK is involved in all ten Joint Programming Initiatives.

2009
Open Research Area in Europe for the Social Sciences is launched by agencies in France, Germany, the Netherlands and the UK, providing funding for integrated projects by researchers coming from at least two of the participating countries. Applications follow a single submission and decision making route removing double jeopardy. In 2012 the US National Science Foundation joins.

2011
Professor Paul Boyle, RCUK International Champion, becomes first President of Science Europe, a new research policy organisation representing research funders and performers across Europe.



1984-1988
1st Framework Programme (€3.75bn)

1987-1991
2nd Framework Programme (€5.396bn)

1990-1994
3rd Framework Programme (€6.6bn)

1994-1998
4th Framework Programme (€13.22bn)

1998-2002
5th Framework Programme (€14.96bn)

2002-2006
6th Framework Programme (€17.88bn)

2007-2013
7th Framework Programme (€50.52bn)

2014-2020
Horizon 2020 launches (€78.6bn)

1996
European Marine Facilities Exchange arrangements start. Led by NERC in the UK, these provide for the exchange of research ships and associated marine equipment for the benefit of the marine science communities in the UK, Germany, France, Spain, Norway and the Netherlands.

2002
European Strategy Forum on Research Infrastructures is formed to support a coherent and strategy-led approach to policy-making on research infrastructures in Europe and to facilitate multilateral initiatives leading to the better use and development of research infrastructures at EU and international level. In 2013 Professor John Womersley, CEO of STFC, is elected as Chair of ESFRI.

1999
Conducting European research policies and implementing European research programmes becomes an obligation under the Amsterdam Treaty.

2004
New Opportunities for Research Funding Co-operation in Europe (NORFACE) is launched, a strategic partnership of twelve European research councils, led by ESRC in the UK. Although located in the social sciences NORFACE aims to be a significant test of the capacity of national science systems to work together across borders and achieve European synergy and convergence.

2007
European Research Council is launched, providing substantial grants to outstanding Europe-based researchers from around the world. To date the UK has hosted 981 successful recipients: 27% of all grants awarded to Member State applicants and 23% across all eligible countries.

The European Research Area becomes a formal EU policy objective following the signing of the Lisbon Treaty in December.

NET-HERITAGE is launched, the first significant initiative to co-ordinate national and European research programmes on the protection of tangible cultural heritage. AHRC leads on the creation of the Heritage Portal, launched in 2011, which provides a centralised online information site for accessing and disseminating European heritage research for researchers and end users.

European Strategic Energy Technology (SET) Plan is published, encouraging joint working across Europe and input into policy on future framework priorities. The RCUK Energy Programme, led by EPSRC, is an active partner through UK participation in the European Energy Research Alliance, the UK contribution to the European Fusion programme and the International Fusion programme.

2013
RCUK signs Lead Agency agreement with Fonds National de la Recherche, Luxembourg, enabling UK and Luxembourg researchers to submit joint proposals via the UK system.

ELIXIR Hub opens, funded through the UK's Large Facilities Capital Fund via RCUK. ELIXIR, the European Life Science Infrastructure for Biological Information, provides sustainable infrastructure for biological information in Europe, ensuring that important data are kept safe and made easily accessible.

2012
Research Strategy for European Joint Programming in Neurodegenerative Disease (JPND) launches, led by MRC. The JPND is an initiative between 26 European countries and one Third Country to address the growing societal challenge presented by age-related neurodegeneration.

AnaEE (Infrastructure for Analysis and Experimentation on Ecosystems) enters its preparatory phase, funded by the UK, Belgium, France, Italy and the European Commission. AnaEE will predict the response of the main continental ecosystems to environmental and land use changes. BBSRC funds the North Wyke Farm Platform, which provides access to a range of *in situ* state-of-the-art instrumentation in hydrologically isolated fields and farmlets to better address key issues in sustainable agriculture.

Our vision in action

The UK has an impressive and comprehensive range of collaborations with partners across Europe, from lead agency policies which remove the risk of double jeopardy for joint research teams from two countries, to multilateral initiatives such as the European Strategy Forum on Research Infrastructures, and large facilities such as the ELIXIR Hub, part of the European Life Science Infrastructure for Biological Information.

Over the past 30 years we have engaged at all levels to strengthen our links with European partners and beyond, ensuring that UK researchers have access to flexible funding opportunities, the best facilities and infrastructure, comprehensive training and career support. Some further examples of RCUK activity, set against the backdrop of European research policy, are depicted in this timeline.



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Research Councils UK

Research Councils UK (RCUK) is the strategic partnership of the UK's seven Research Councils. We invest annually around £3 billion in research. Our focus is on excellence with impact. We nurture the highest quality research, as judged by international peer review providing the UK with a competitive advantage. Global research requires we sustain a diversity of funding approaches, fostering international collaborations, and providing access to the best facilities and infrastructure, and locating skilled researchers in stimulating environments. Our research achieves impact – the demonstrable contribution to society and the economy made by knowledge and skilled people. To deliver impact, researchers and businesses need to engage and collaborate with the public, business, government and charitable organisations. www.rcuk.ac.uk

The seven UK Research Councils are:

- Arts & Humanities Research Council (AHRC)
- Biotechnology & Biological Sciences Research Council (BBSRC)
- Economic & Social Research Council (ESRC)
- Engineering & Physical Sciences Research Council (EPSRC)
- Medical Research Council (MRC)
- Natural Environment Research Council (NERC)
- Science & Technology Facilities Council (STFC)

The UK Research Office

The UK Research Office (UKRO) is the UK's leading information and advice service on European Union funding for research and higher education. Established in Brussels in 1984, UKRO is jointly funded by the seven UK Research Councils and through subscriptions from over 130 research organisations, principally in the UK.

UKRO's mission is to promote effective UK engagement in EU research, innovation and higher education activities by:

- Enabling sponsors and subscribers to make informed decisions about participation in EU programmes and to realise the opportunities available to them;
- Supporting UK input into European research policy development and implementation through informing and interfacing with the appropriate bodies; and
- Developing and maintaining a suite of quality services that meet the evolving needs of sponsors and subscribers.