



UK Research
and Innovation

UK Research & Innovation International

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UK Research and Innovation

- The largest public funder of research and innovation (R&I) in the UK, bringing together 9 councils covering all sectors and disciplines.
- Non-Departmental Public Body – funded through the Department for Science, Innovation and Technology (DSIT).
- We are part of a system, working with academia, business, public sector, third sector, and international partners – we are the ‘smart connector’.
- We invest in research and innovation to enrich lives, drive economic growth and create jobs and high-quality public services across the UK.

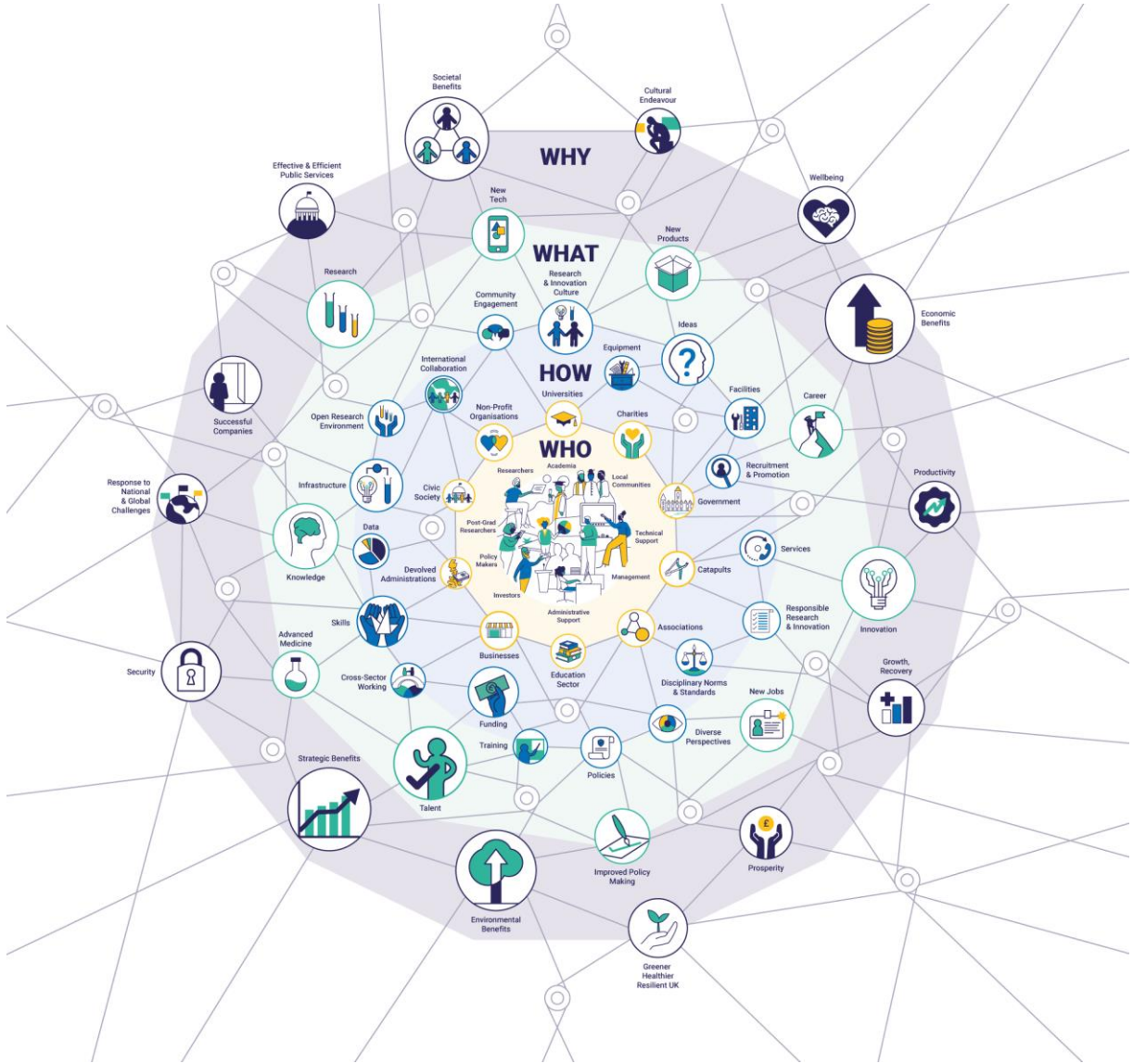


**UK Research
and Innovation**

Transforming tomorrow together



Our **vision** is for an outstanding research and innovation system in the UK that gives everyone the opportunity to contribute and to benefit, enriching lives locally, nationally and internationally.



Our **mission** is to convene, catalyse and invest in close collaboration with others to build a thriving inclusive research and innovation system that connects discovery to prosperity and public good.

UKRI Strategy

- UKRI's first five-year strategy 'Transforming together tomorrow' will shape the role of research and innovation in responding to challenges of disease, climate change, and global insecurity.
- It covers the period 2022-2027, crossing two UK spending review cycles, and corresponding to the period to reach the research and development (R&D) spending target of 2.4% of GDP by 2027.
- It establishes UKRI as an essential connecting institution between researchers and innovators, governments and funding partners, investors, and others; working in more collaborative, effective and efficient ways.
- It is supported by Strategic Delivery Plans developed by each of our Councils, an International Framework and the shared Corporate Plan for UKRI.

UKRI Strategic Themes:

- Building a green future
- Securing better health, ageing and wellbeing
- Tackling infections
- Building a secure and resilient world
- Creating opportunities, improving outcomes

UKRI Strategic Objectives:

- People & Careers
- Places
- Ideas
- Innovation
- Impact
- Organisation

International collaboration underpins UK research and innovation (R&I)

It enables excellent research and innovation

UK R&I is global in nature:

- Nearly 60% of UK publications were co-authored with at least one non-UK author by 2020. [1]
- In 2021/22, 32% of the UK's academic staff were non-UK nationals (up from 28% in 2014/15). [2,3]
- In 2021/22, 64% of postgraduate full-time enrolments were from outside of the UK. [4]
- A 2017 National Academies survey reported that 95% of respondents had been involved in at least one international collaboration in the previous five years and 89% said that international collaboration was important to their careers. [5]



Major infrastructure projects would not be possible without collaboration:

Collaboration on major infrastructures enables facilities that would be beyond the reach of any country alone, allows UK researchers and innovators access to world-leading facilities at a fraction of the overall cost, and leverages investment into the UK. [6,7,8]

International collaboration has direct benefits for UK R&I:

- Internationally co-authored articles have a greater reach, as demonstrated by a higher field-weighted citation impact (FWCI) (see table). [1]
- A 2023 DSIT-commissioned report found across multiple evaluations that international R&I was a contributing factor in improvements in research quality. [9]
- A 2018 European report found that internationalisation of SMEs is associated with higher productivity, faster growth, greater innovation, and better chances of survival. [10]

Field-weighted citation impact (FWCI) of UK and world publications by collaboration type [1]

| |  |  |
|-----------------------------|---|---|
| Global collaboration | 1.91 | 1.51 |
| Only national collaboration | 1.36 | 1 |
| No collaboration | 0.88 | 0.61 |

This is recognised in key UK strategies

The **UK Science and Technology Framework** identifies international collaboration as one of ten pillars enabling a successful R&I system.

This work is being taken forward by a subcommittee of the National Science and Technology Council, NSTC (International), chaired by DSIT with FCDO having a very active role. UKRI is an active participant in this group.

International R&I collaboration features in key UK foreign strategies:

- [Global Britain in a competitive age: the Integrated Review of Security, Defence, Development and Foreign Policy](#)

“Our aim is to have secured our status as a Science and Tech Superpower by 2030, by redoubling our commitment to research and development, bolstering our global network of innovation partnerships, and improving our national skills”

- [Integrated Review Refresh 2023](#)

“We will continue to make S&T a priority element of our wider bilateral partnerships, in support of shared growth and development and our vision of a future digital and technology order that benefits all.”

- [The UK Government's Strategy for International Development](#)

“We will increase our investment in research on ‘what works’ and science and technological innovations to accelerate progress on our development priorities”

International collaboration underpins all six pillars of UKRI's Strategy, as outlined in UKRI's International Strategic Framework

How UKRI supports international collaboration

Type 1: Investigator-led international collaboration within core domestic funding

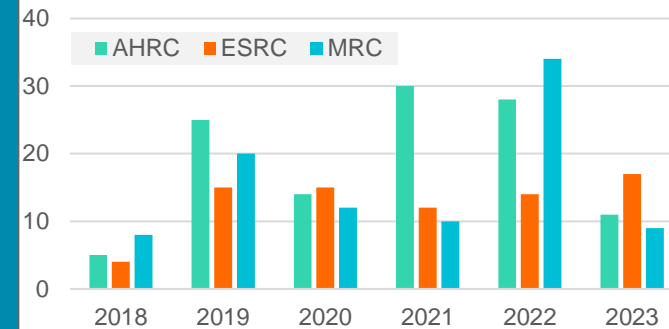
There are a range of mechanisms to support international collaboration within domestic funding calls.

- Lead Agency arrangements with overseas funders
- International Co-Investigator policy (AHRC, ESRC, MRC)
- Project partners and visiting researchers
- Grants (STFC) to support UK participation in international scientific experimental collaborations

UKRI Lead Agency Partners



Number of new international Co-leads awards in responsive mode calls by award start year



This is underpinned by a number of cross-cutting activities.

For example:

- In-country presence through the UKRI Overseas Offices to facilitate bilateral collaboration
- Partnership building, agreements and MoUs with overseas funders
- Participation in multilateral fora to share best practice and influence the direction of global R&I landscape, global policies and future research priorities
- Harmonised funding approaches and policies progressed across UKRI
- Ensuring frameworks are in place to support equitable and secure inter-national collaboration, for example on Trusted Research

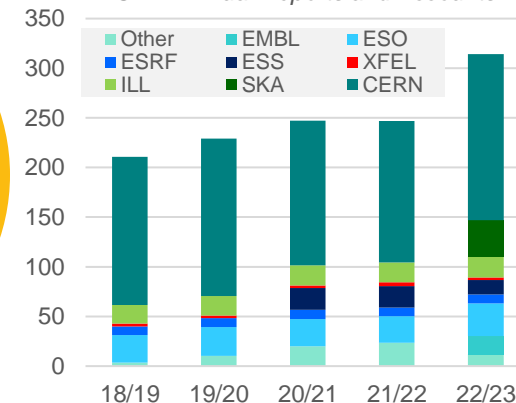
Type 2: Dedicated international funding to address gaps and opportunities

This is funding specifically intended to stimulate international collaboration:

- Directed international funds: managed by UKRI International, with individual programmes delivered by councils; often with specific country and/or thematic priorities set by government.
- Council funding for bi- or multi-lateral research and innovation funding calls
- Council funding for dedicated open, bottom-up international collaboration (for example, travel or networking awards)
- Thematic network building, for example through global missions
- International facilities, subscriptions and research units

UKRI International has been working with DSIT to ensure the design of the new International Science Partnerships Fund (ISPF) works for UKRI's communities. UKRI is a major delivery partner for £319m ISPF (led by DSIT).

Major International Subscriptions (£m), UKRI Annual Reports and Accounts




Type 3: Post-funding international collaboration


Researchers and innovators initiate their own collaborations within their UKRI-funded projects, without any direct support from UKRI. This may be reflected in ResearchFish collaboration data, outcomes data collected or in joint publications, patent applications etc.


The map on the next slide illustrates how UKRI's support through a selection of these mechanisms has provided us with a global reach.

Map of select indicators of UKRI's international reach


Awards
1  2,351
Number of Research Council awards (2015-2022) with collaborators in country (excluding UK)

 The location of **UKRI overseas offices**.


 The location of UKRI's renowned **research facilities** in Antarctica, Svalbard in the Arctic Circle, the Gambia and Uganda that attract collaborators worldwide.

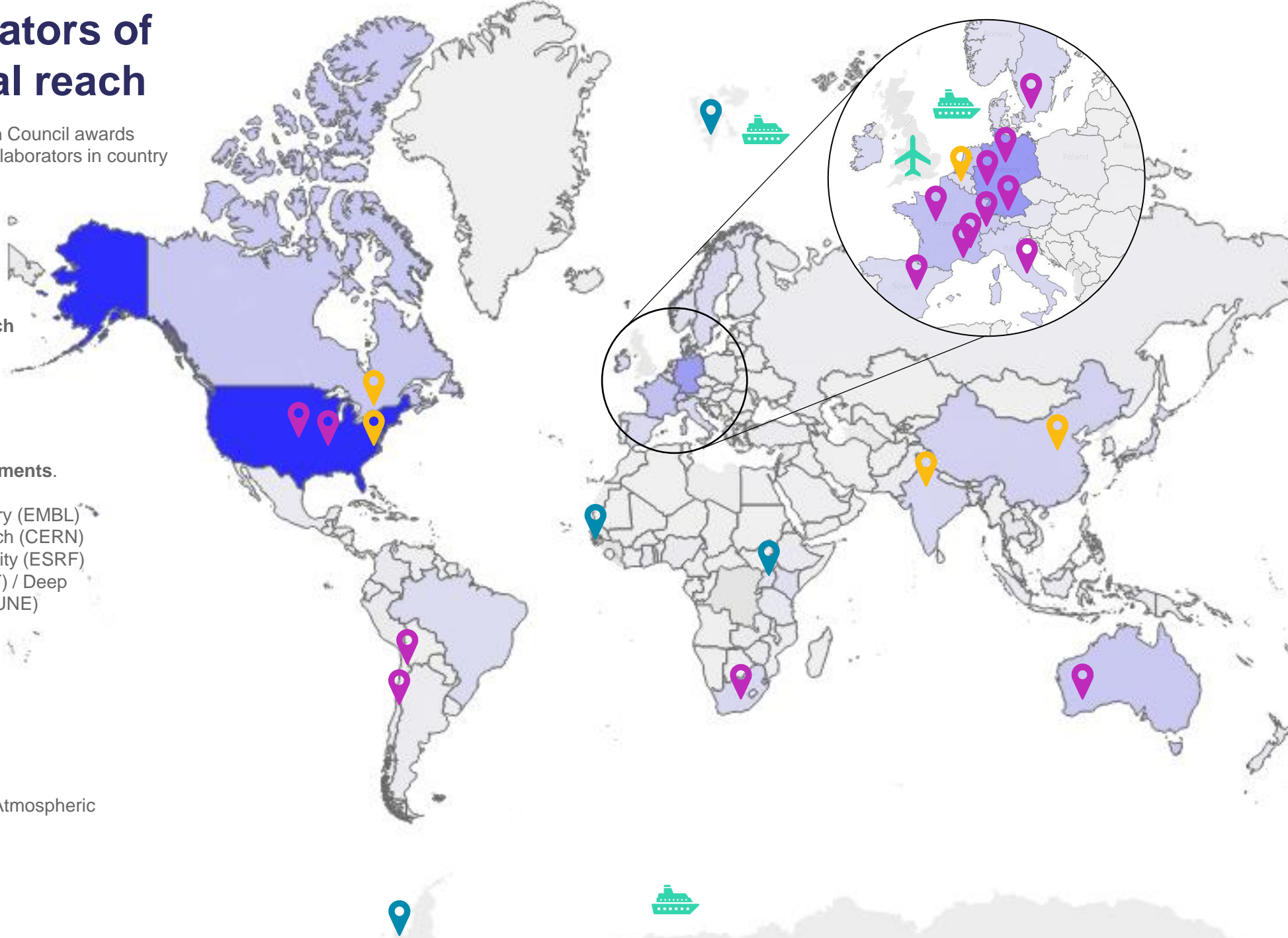
 Major international **infrastructure investments**. This includes:

- European Molecular Biology Laboratory (EMBL)
- European Council for Nuclear Research (CERN)
- European Synchrotron Radiation Facility (ESRF)
- Long-Baseline Neutrino Facility (LBNF) / Deep Underground Neutrino Experiment (DUNE)
- Square Kilometre Array (SKA)

 Research ships:

- RRS Sir David Attenborough
- RRS Discovery
- RRS James Cook

 Research planes: Facility for Airborne Atmospheric Measurements (FAAM)



International in UKRI – in numbers

~27%

Of all UKRI grants have at least one international collaborator (out of 21k awards, 2018-22)

181

Countries UKRI communities collaborate with (2018-22)

33%

Percentage of international funding of the overall funding (2018-22)

6310

Collaborating organisations overseas

£2.3bn

Total value of our portfolio with UKRI's portfolio with our largest collaborator (USA, 2018-22)

£900m

Total in investment in international partnerships (2023/24)

International Strategic Framework

- The International Strategic Framework describes how we will meet the UK's overall ambitions for international research and innovation by working towards UKRI's six strategic objectives
- Our international work will be guided by UKRI's four principles for change: diversity, connectivity, resilience and engagement.
- The purpose of the Framework is to build understanding among external and internal stakeholders about:
 - The importance of international collaboration to UKRI, and how it contributes to all our objectives.
 - The approach we are taking, including how we work in partnership with others internationally and in the UK to build long-term relationships for mutual benefit.



UKRI's International Strategic Framework

UKRI's six strategic objectives will guide our international activities:

| People and careers | Places | Ideas | Innovation | Impacts | World class organisation |
|---|---|--|---|--|--|
| <p>Enabling people and teams to collaborate, exchange and thrive through international collaboration.</p> <ul style="list-style-type: none"> We will develop and promote opportunities for international researchers and innovators to engage with the UK and help UK-based researchers and innovators to build and benefit from international connections. We will help shape the open international order of the future through exemplary research and innovation leadership, working together to set standards on open access, ethics, research assessment, regulation, and trusted research. | <p>Strengthening our global relationships and working together on the infrastructures that often underpin collaboration.</p> <ul style="list-style-type: none"> We will strengthen our key international partnerships, prioritising based on demand from our communities, our and our partners' research and innovation capabilities, and the compatibility of our approaches. We will ensure the UK remains an active partner in priority international research infrastructures, to benefit from sharing of knowledge, expertise, data, and capability across borders. | <p>Advancing the frontiers of human knowledge and innovation by supporting the best ideas wherever they are found.</p> <ul style="list-style-type: none"> We will continue to fund in ways that enable researcher and innovator-led international partnerships, and links between universities, research centres and institutes. We will develop bilateral and multilateral funding programmes with international partners to support great ideas in areas of strategic priority. | <p>Enabling innovation by connecting UK and international businesses, researchers, institutions, and investors, in the UK and globally.</p> <ul style="list-style-type: none"> We will do more to enable UK businesses, researchers, and institutions to innovate globally, whilst ensuring value to the UK. We will increase the involvement of international businesses and investors in the UK's research and innovation system, contributing to the 2.4% target. | <p>Embedding international considerations in our work on strategic themes and transformative technologies.</p> <ul style="list-style-type: none"> We will enable international collaboration to address the global challenges set out in UKRI's five strategic themes and contribute to the Sustainable Development Goals through inclusive international partnerships. We will provide evidence and intelligence and enable international partnerships to advance the seven technology families. | <p>Catalysing change through equitable partnership and championing diversity and increasing the efficiency and effectiveness of our activities.</p> <ul style="list-style-type: none"> We will catalyse change through equitable partnerships, guided by our principles and championing diversity. We will increase our efficiency and effectiveness, particularly by significantly improving the way we use data and evidence to inform our international activities and priorities. |

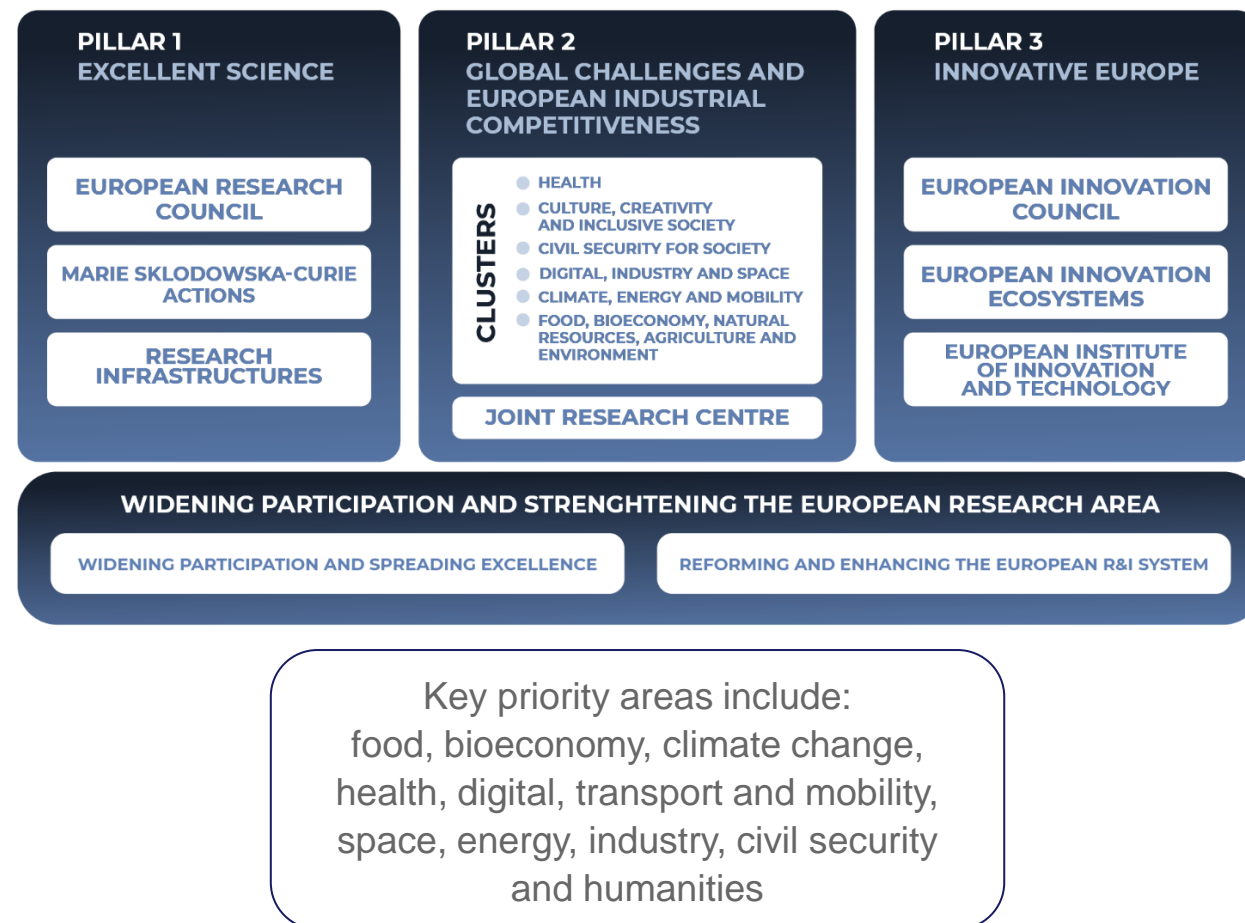
Association to Horizon Europe

- On 7 September the UK Prime Minister and President von der Leyen announced an agreement on Horizon Europe and Copernicus association.
- On 15 November, the EU Council gave its green light to this deal. It now will move to ratification at the UK-EU Specialised Committee for Participation in Union Programmes.
- The UK will not associate to Euratom.
- The Guarantee will continue to cover calls up to the end of Work Programme 2023.
- Overall, it is estimated that the UK will contribute almost €2.6 billion per year on average for its participation to both HEu and the Copernicus component of the Space programme.
- The UK's financial contribution for the Multiannual Financial Framework 2021-2027 reflects the fact that UK researchers did not participate in Horizon Europe or Copernicus from their beginning in 2021.
- The terms reflect a balanced agreement with safeguards for UK taxpayers.



Horizon Europe

- All calls in Work Programme 2024 will be covered by the association.
- Horizon Europe is the European Commission's key funding programme for research and innovation with a budget of **€95.5 billion for the period 2021-2027**.
- The programme is divided into **three main pillars**:
 - Pillar I supports excellence in science
 - Pillar II focuses on solving global challenges through collaborative research & innovation
 - Pillar III supports business growth and competitiveness
- The programme is open to all types of organisations of all sizes.



Maximising the UK's engagement in Horizon Europe

- The team of **UK National Contact Points (NCPs)** for Horizon Europe in Innovate UK, research councils and UKRO play a key role in supporting UK organisations to engage with their European counterparts, join and lead collaborations, and enjoy access to European expertise and supply chains to help develop and commercialise their research.
- As part of UKRI's network of overseas teams, the **UK Research Office (UKRO)** based in Brussels aims to maximize UK engagement in EU funding programme and policy dialogue. A unique partnership between UKRI and over 140 subscribing organisations, UKRO's role is to **provide advisory services** help enable UKRI and subscribers to confidently navigate and make informed decisions about participating in EU programmes.
- All researchers and support staff working in UKRO subscribing organisations can sign up for daily updates from the [UKRO Portal](#).
- Following Association, UKRO has launched the '**Horizon Emerging Leaders Programme**' to support new staff in subscribing organisations working on supporting applications to the 2024 Work Programme.

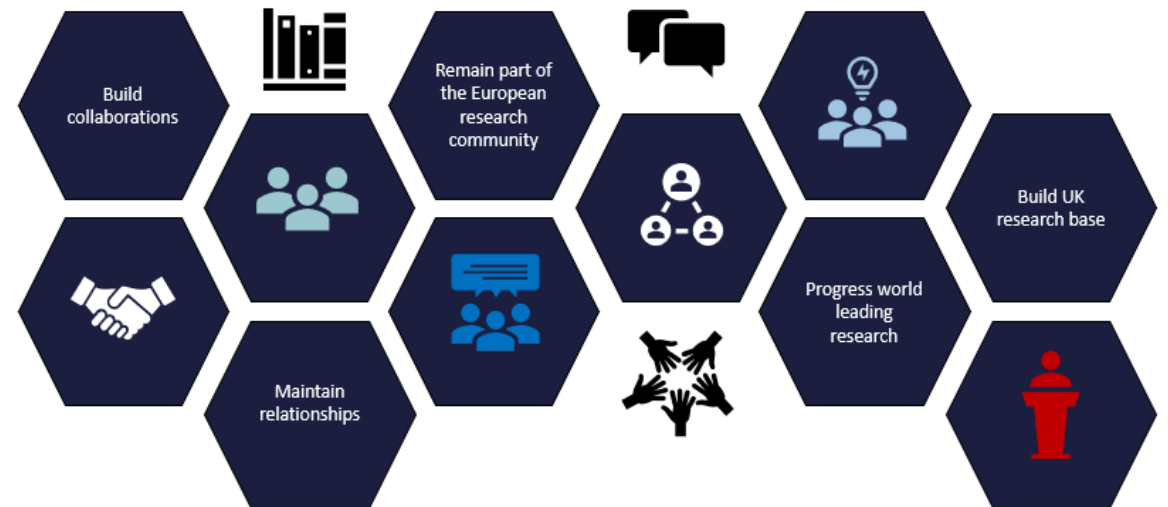


Horizon Europe Guarantee Scheme

- The UK left the EU in January 2020. During the transition period, the UK and the EU negotiated the UK-EU Trade and Cooperation Agreement under which the UK would be become an associated country in Horizon Europe.

The Horizon Europe Guarantee Scheme

- The Horizon Europe Guarantee Scheme is owned by DSIT and delivered by UKRI.
- The Guarantee Scheme remains active and will be awarding new grants until 2025. All Horizon Europe Guarantee Scheme grants will remain with UKRI for their lifetime.
- The successful delivery of the Guarantee Scheme has enabled continued European collaboration with UK researchers, ensuring they remain a key part of this community and at the forefront of world leading research.



Horizon Europe Guarantee Scheme

- This applies to all Horizon Europe grants in the Work Programmes 2021, 2022 and 2023.
- The Horizon Europe Guarantee Scheme has been, and continues to be, a huge success – as of 31 October 2023, we have awarded over 2,700 grants, worth over £1.4bn to UK-based researchers and innovators.
- Up to 31 October 2023 ([Horizon Europe guarantee: application and grant offer statistics](#)):

| Guarantee Grant Type | Applications submitted and verified | Value of grants requested in verified applications | Grant offer letters issued | Value of grant offers issued |
|----------------------|-------------------------------------|--|----------------------------|------------------------------|
| Collaborative HE | 1,853 | £804.8m | 1,763 | £768.4m |
| ERC | 360 | £528.4m | 358 | £525.7m |
| MSCA | 616 | £140.3m | 615 | £139.8m |
| Total | 2,829 | £1,473.5m | 2,736 | £1433.9m |

Mechanisms for International Collaboration

- **International Co-Leads and Visiting Researchers**
e.g. Project co-lead (International) policy in operation at AHRC, ESRC and MRC
- **Reciprocal Agreements**, e.g. with Norway and Switzerland
- **Lead Agency Agreements**, e.g. with the USA, Brazil and Luxembourg
- **Joint Thematic Calls**, e.g. UK-Japan joint call on Engineering Biology
- **Partnership Building Mechanisms**, specific funding mechanisms aiming to reduce some of the barriers to international collaboration and partnership building (e.g. BBSRC global partnering award, EPSRC Overseas Travel Grant)
- **Fellowships**, e.g. Studentships and Fellowships to support excellent researchers, including international researchers
- **Engagement in Multilateral Fora**, e.g. Belmont Forum, Eureka
- **Directed Funds** e.g. International Science Partnerships Fund (ISPF)

Multilateral Policy Engagement

Global Research Council (GRC)

- Virtual organisation, comprised of the heads of funding agencies from over 100 countries.
- Pursues to improve communication and cooperation among funding agencies, to promote the sharing of data and best practices for high-quality research cooperation and to address issues of common concern.

Responsible Research Assessment (RRA) Working Group

Working Paper on 'The changing role of funders in responsible research assessment: progress, obstacles and the way ahead'

GRC Responsible Research Assessment (RRA) Action Plan

The work of the group aligns with UKRI's work on research culture and reward and recognition.

OECD Global Science Forum

- Working Group within the OECD's Committee for Scientific and Technological Policy (CSTP), including 33 countries and the European Union.
- Supports countries to improve their science policies and share in the benefits of international collaboration.

Science Europe

- Association of 41 European Research Funding Organisations (RFO) and Research Performing Organisations (RPO).
- Promotes the collective interests of European RFOs and RPOs and works towards the development of the European Research Area. Aims to develop long-term perspectives for European research and champion best practice approaches.

Focus policy areas of engagement for UKRI

Equity, diversity and inclusion (EDI) in the research workforce
Research infrastructure ecosystems

Focus policy areas of engagement for UKRI

Research Culture, Open Science,
Horizon Europe



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Multilateral Funding Frameworks

UKRI Councils and Innovate UK also collaborate with international partners through a range of multilateral funding frameworks including, but not limited to:



International
**Human Frontier
Science Program**
Organization



International Science Partnerships Fund

- A blended **ODA and non-ODA** international partnership fund managed by **DSIT** and delivered by several delivery partners, including **UKRI**.
- Soft-launched in Japan in December 2022 with a launch announcement, including the first 11 UKRI Programmes, in March 2023. Further ODA funding launched on 2 November 2023.
- An initial **£119m** was announced for phase one. A **further £218 million** was announced in November 2023 for R&I partnerships with low and middle-income countries to support sustainable development.

The fund will help to:

- deliver important science that can only be fully realised by working internationally.
- tackle global challenges and develop future technologies, positioning UK researchers and innovators at the heart of global solutions.
- enable international partners to collaborate in an agile way.
- strengthen the influence and connections of the UK and the UK R&D community domestically and around the world.

ISPF Themes:

- Resilient Planet
- Transformative Technologies
- Healthy People, Animals and Plants
- Tomorrow's Talent

International Science Partnerships Fund

Examples of programmes funded:

- The **Co-Centre Programme** is a unique **£60m** collaborative partnership between **Ireland, Great Britain and Northern Ireland**, co-funded by **industry** focused on high-quality R&I in the cross-cutting thematic areas of **Climate** and **Food Sustainability**.
- The **£5m India-UK** partnership to address **Farmed Animal Diseases and Health** funded by UKRI (BBSRC) with matched resources from India's Department of Biotechnology (DBT) to advance our mechanistic understanding of **host-pathogen interactions in farmed animals** and to tackle **veterinary antimicrobial resistance**, engaging with users, in particular farmers, to improve farmed animal health and welfare.
- The **UK-Japan Civil Nuclear Research Programme** is a **£1m** partnership between UKRI (EPSRC) and the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) to **decommission Sellafield Nuclear Plant in the UK** and **remove radio-active debris from the Fukushima nuclear accident in Japan**.

"By bringing together the genius that exists across our islands, we will unlock the new ideas and inventions that will help us secure our food chains and tackle climate change, delivering innovative solutions for global good."

Michelle Donelan, UK Secretary of State for Science, Innovation and Technology

"... our partnership with India brings positive impact to the lives of people in both our countries and across the globe.."

Sukanya Kumar, Director, UKRI India

"We have worked closely with colleagues from Japan for many years, and through these collaborations have achieved significantly more in terms of advancing research and innovation than could have been done apart. This research funding will further strengthen the collaboration between the UK and Japan in civil nuclear research and allow us to continue our cutting-edge research to benefit society and the environment."

Dr Brant Walkley, Senior Lecturer, University of Sheffield



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Thank you



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