



Department for
Business, Energy
& Industrial Strategy

Supporting UK R&D and collaborative research beyond European programmes

How the UK will transition to a new R&D programme if unable to associate to
Horizon Europe, Copernicus and Euratom

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Foreword

The UK Government has always been clear that our departure from the European Union (EU) does not mean leaving the flagship Horizon, Copernicus, Euratom Research & Training and Fusion for Energy programmes. The UK has always been a major financial and intellectual contributor to these programmes and seeks to continue that partnership.

Unfortunately, the EU has still not formalised our association to these programmes as agreed under the Trade and Cooperation Agreement (TCA), linking them to resolution of wider political discussions. I am concerned that the continued delays are causing intolerable uncertainty for our research and business community. To help minimise the uncertainty and signal our good faith commitment to association, the government set out our Horizon Europe guarantee in November 2021, and then extended it to the end of this year.

Over the last few months, we have made clear that the UK is more committed than ever to strong research collaboration with our European partners, and that close scientific collaboration is key to our wider shared security. Despite widespread support for UK association across member states and the EU's research community, association continues to look unlikely while the EU links it to wider political issues.

So that we are prepared for all scenarios, we are developing a long-term Horizon alternative which will seek to draw on the best features of Horizon and add some improvements which researchers and businesses have told us would be hugely welcome.

Should the UK not be able to associate to Horizon Europe, our immediate focus must be on the transitional measures to protect and stabilise the sector and this document sets out the steps we would take.

The Government's position remains to associate to all 4 EU programmes. Given the ongoing delays, however, whatever happens we need to ensure that we are making the most of the UK's science and innovation strengths, and so we need to prepare for an alternative future. In developing these programmes, we will need the support of the whole UK R&D community. This is a vital moment for UK research in which I and the Government are determined we will strengthen, deepen, and widen our commitment to international research.

Rt Hon Kwasi Kwarteng MP

Secretary of State for Business, Energy and Industrial Strategy

Executive summary

The UK and the European Union (EU) agreed the terms for the UK's participation in Horizon Europe, Copernicus, Euratom Research & Training and Fusion for Energy under the (TCA) in December 2020 in order to provide a platform through which UK and European scientists and innovators can tackle significant and shared challenges in society. Research and innovation are central to tackling the largest challenges the world faces, from achieving net zero to pandemic preparedness and security.

We are disappointed that the EU has linked association with wider issues and, 18 months later, still has not finalised the UK's association. This has left UK and European researchers and businesses in limbo, unsure if we will be able to associate to Horizon Europe yet unable to invest the funding set aside for it. We also recognise the issues faced by the UK's Fusion and Earth Observation researchers and industry, caused by delays to the UK's association to Euratom and Copernicus.

To support UK researchers and innovators and to provide some certainty, we launched the Horizon Europe guarantee in November 2021. This is in place to ensure that eligible UK applicants who have been successfully evaluated by the European Commission (EC) have access to funding regardless of whether the UK associates to Horizon Europe, if the EC final grant signature date is on or before 31 December 2022.

The Government's preference remains for the UK to associate to Horizon Europe. If, however, the EU does not formalise the UK's association soon, and in good time to make full use of the opportunities it offers, we will ensure that the UK's science superpower and innovation nation ambitions are supported. If needed, we will put in place an ambitious alternative, including a suite of transitional measures, funded from the budget we set aside for our association to these programmes.

These long-term programmes would focus on building on UK strengths and making the UK a destination of choice, investing in talent, research, innovation, infrastructure and international collaboration. They would be established as quickly as possible and aligned with key Government priorities, including those set by the National Science and Technology Council. An overview of our initial thinking for this long-term plan is set out in this document and we are keen to hear the sector's views. These are underpinned by more detailed draft proposals based on conversations with researchers and businesses about their top priorities for this programme. We will publish further information on our plans in due course, following further discussions with the sector and across government.

While these new long-term programmes are established, we would invest in a suite of temporary transitional measures that can be put in place quickly to provide stability and continuity of funding for UK researchers and businesses. This explainer sets out the transitional measures we will be ready to put in place if we are not able to associate soon, including:

- **The Horizon Europe Guarantee** – If we are unable to associate, we will fund applications that are submitted to a Horizon Europe funding call with an EU final call deadline date before the point of non-association, are successful in the EU evaluation and meet the eligibility criteria of the guarantee. This includes those where grant signature dates fall beyond the end of 2022. This would pick up where the current guarantee has left off, so there is no gap, and no eligible successful applications would go unfunded
- **Funding for successful, in-flight applications** - We will support UK entities with eligible in-flight applications to Horizon Europe (to calls that have closed or are open at the point of non-association, where such applications are not being evaluated by the EC), by assessing such applications domestically, to ensure the best get funded should the EC no longer carry out the evaluation
- **Uplifts to existing talent programmes** - We will increase funding for our best existing talent schemes covering a broad range of disciplines via National Academies and UKRI. This will be followed by the creation of our bold new UK fellowship and award programme, designed to retain and attract top talent in the UK.
- **Uplifts to innovation support** – We will increase funding for a range of our best innovation schemes targeted at small and medium sized businesses (SMEs), delivered by Innovate UK, and go on to create exciting new mechanisms, ensuring they are bigger, bolder with less bureaucracy and more flexibility
- **The Talent and Research Stabilisation Fund** – We will use formula funding to support a range of eligible UK institutions who have been most affected by the loss of Horizon Europe talent funding. The fund will enable eligible research organisations and universities to support talent retention and target funding vulnerabilities at a local level
- **Third Country Participation** - Around two thirds of Horizon Europe calls are open to UK researchers and companies as Third Country applicants, as part of consortia with at least three other applicants from EU member states or associated countries, provided they bring their own funding. As this is a priority for businesses and researchers, the government will fund all eligible UK entities participating in any such consortia signing grant agreements before 31 March 2025. The government will consider our approach to funding for Third Country Participation beyond this date and make an announcement by October 2024

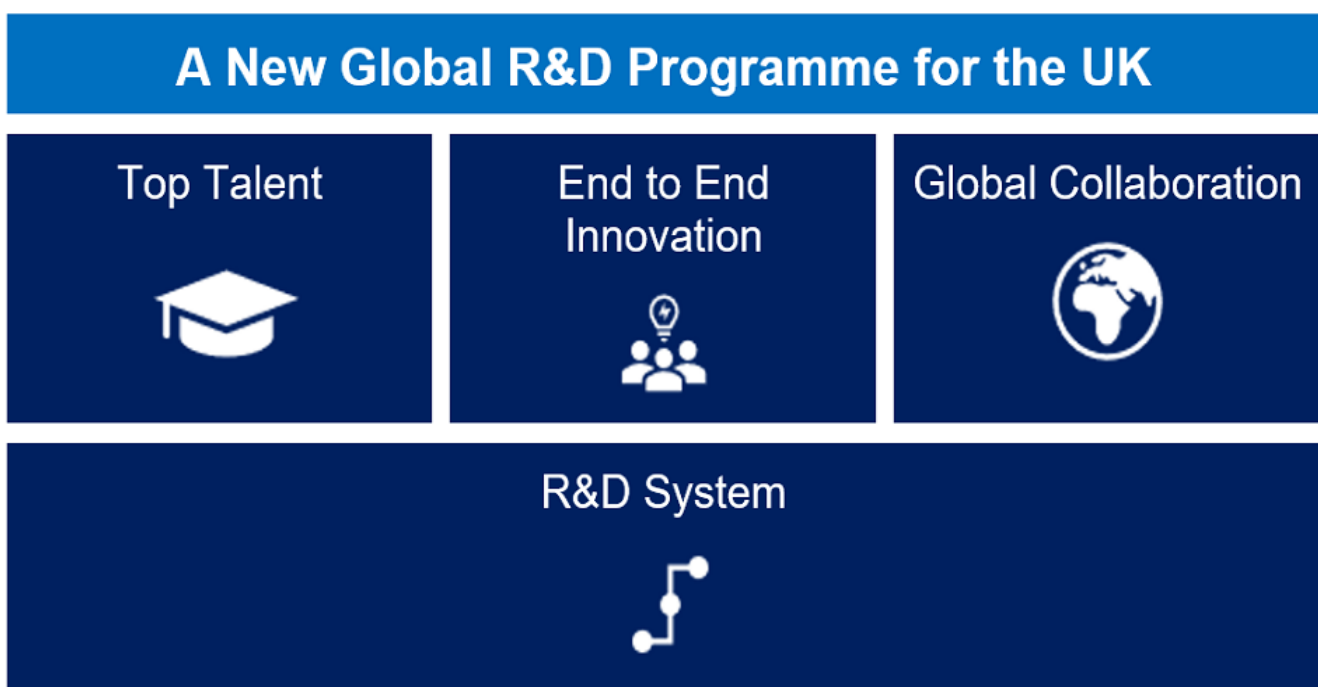
The Horizon Europe guarantee is already in place. Our plan for the other transitional measures is well developed and preparations to implement them have already begun with UKRI and the National Academies. They will be stood up quickly if we are unable to associate and will remain in place only as long as it takes to establish the long-term programme.

This document sets out an overview of our long-term vision and provides detail on each of the individual components of our transitional measures to get us there. It also sets out the vision for Copernicus and Euratom UK alternatives.

The UK's long-term Horizon Europe alternative

The Government has committed to providing the fastest ever sustained uplift in R&D funding, reaching £20 billion per annum by the end of the current spending review period. With an R&D budget of £39.8 billion over the spending review period, BEIS and its partner organisations will invest across a range of priority areas spanning fundamental research, talent, innovation and infrastructure.

Diagram 1: A new global R&D programme for the UK



In the event we are unable to associate, we will use the funding allocated to Horizon Europe at the 2021 Spending Review to build on our existing R&D programmes with flagship new domestic and international research and innovation investments to support top talent, drive end-to-end innovation and foster international collaboration with EU and global partners. These programmes will enable the UK to meet its global Science Superpower and Innovation Nation ambitions more quickly. We continue to develop these programmes and will formally share them with the research community in due course. The long-term package will likely include:

- complementing our existing talent offer, a new **flagship talent offer**, with high-value, long-term fellowships and a strong international mobility offer. Our bold UK fellowship and award programme will embrace the success of the ERC and MSCA, providing the same career benefits and prestige with enhanced funding and flexibilities to retain and attract top talent in the UK
- complementing our existing international investments, an ambitious programme for supporting **global collaboration**. This will include funds for bottom-up collaborations

with researchers in partner countries around the globe; multilateral and bilateral collaborations; and Third Country Participation in Horizon Europe.

- complementing the 66% increase in core Innovate UK funding at the last Spending Review and our range of programmes, we would increase our investment in **end-to-end innovation** by investing in industrial research and innovation. This will address UK Government strategic priorities, including those identified by the National Science and Technology Council and industry needs by supporting domestic and international collaborations, focused on developing the UK's strategic advantage, new and emerging technologies, and accelerating commercialisation and uptake of innovation
- complementing our investments in the **wider R&D system**, going faster on developing world class infrastructure, digital research capability and driving the development of emerging clusters throughout the UK. We would also provide Higher Education Institutions with additional funding to respond to the new programmes to ensure we do not place a further strain on research sustainability in the sector.

As we develop the long-term package, we will aim to take the best features of Horizon Europe programmes – like the ease of participation for researchers – but also do more on the UK's priorities and ensure we improve the schemes where we can, for example by making proposals less bureaucratic and much more flexible for all partners to increase investment. This portfolio will support our mission of levelling up the UK and build on our commitment to increase domestic R&D investment outside of the Greater Southeast by at least a third over the spending review period and at least 40% by 2030.

Supporting R&D Now: The Horizon Europe Guarantee

We have already put in place a guarantee to ensure that eligible UK applicants who have been successfully evaluated by the EC have access to funding, regardless of whether the UK associates, if the final grant signature date is on or before 31 December 2022.

We recognise that delays to association have placed pressure on UK researchers, businesses and innovators, and impacted their ability to begin new projects under Horizon Europe. To provide reassurance and make funding available through this period of uncertainty, in November 2021 we committed to supporting the first wave of successful eligible Horizon Europe applicants who are unable to sign grant agreements with the EU due to the continuing delay to association. In March 2022, we extended this guarantee to cover all eligible grants up to the end of December 2022, to ensure UK applicants remain protected.

This guarantee is designed to provide continuity: either to association, where the EC start issuing grants and funding; or to non-association, where it provides certainty for eligible successful applicants. Applicants will receive the full value of their grant so that they can continue their planned research in the UK. If we are unable to associate, we will continue to

fund any outstanding, evaluated, and successful UK applications in the same way. We will continue to listen to stakeholders in the R&D system and keep the scope of the guarantee under review as we continue to push for association. To date, over 500 applications have been submitted and we encourage successful, eligible applicants to continue applying to UKRI to receive their funding.

What is the scope of the Horizon Europe Guarantee now?

The Horizon Europe guarantee means that the UK government has committed to fund successful UK based researchers and companies to stay in (or move to) the UK to carry out their work as planned. The guarantee supports eligible Horizon Europe awardees for excellent science, research and innovation if the UK's association has not been formalised in time for them to sign a grant agreement with the EC. It already covers calls where applicants have a grant agreement with a last legal grant signature date before the end of December 2022. Both for mono-beneficiary (single person/organisation, as opposed to consortia) and multi-beneficiary grants, this funding will be provided for the lifetime of the grant. A full list of calls, covered by the guarantee, is provided on the UKRI website. We will continue to monitor the situation closely and keep the scope of the guarantee under review.

How will the Horizon Europe guarantee change if the UK does not associate?

Anyone in receipt of the guarantee will continue to benefit from it for the lifetime of their grant. If we do not associate, the scope of the guarantee will be expanded to cover any remaining UK applications that have been submitted to a call with an EU final call deadline date before the point of non-association, are successful in the EU evaluation and meet the eligibility criteria of the guarantee. This includes applications for grants where the grant signature dates fall after the end of December 2022. This is designed to pick up where the current guarantee has left off, so there is no gap, and no eligible successful applications would go unfunded. Applications to mono-beneficiary calls that have been submitted to a call with an EU final call deadline date before the point of non-association and are then successful in the EU evaluation will be covered by the guarantee. If the EU does not complete the evaluation of these calls, they will instead be covered by the in-flight process outlined later in this document.

What do I need to do to receive funding if eligible?

UKRI have opened calls to allow successful UK applicants to register for funding on either the UKRI Innovation Funding Service (IFS) or the Joint Electronic Submission (JeS) systems. Applicants will need to prove their application has been successful, and that they have changed status to an 'associated partner' for a multi-beneficiary award or ceased any grant preparation work/been timed out for mono-beneficiary awards. Full details are available on the UKRI website.

Since applications will have been evaluated through the EC's trusted peer review systems, no further application quality assessment will be undertaken by UKRI. Once registration of an eligible Horizon Europe grant with UKRI is complete, awardees will receive an offer of funding from UKRI. Payments will be made directly to each UK beneficiary organisation. For further information, refer to UKRI's guidance.

Should I still apply for Horizon funding opportunities?

Yes. Our transitional measures will ensure successful applications are funded, and we will evaluate in-flight applications domestically if needed, so we continue to encourage UK applications.

Transitional Measures

To support researchers and businesses we are setting out now our plans for an ambitious package of measures to help support the transition to the new schemes. These would be ramped up as soon as possible if we were unable to associate to Horizon Europe.

Support for in-flight Horizon Europe applications

We will support UK entities with eligible in-flight applications to Horizon Europe (to calls that have closed or are open at the point of non-association, where such applications are not being evaluated by the EC), by assessing such eligible applications domestically, to ensure the best get funded should the EC no longer carry out the evaluation.

If we are unable to associate, we will cover any eligible outstanding, evaluated applications via the Horizon Europe guarantee, and we will also support UK entities with in-flight applications to Horizon Europe. These are unevaluated applications for eligible mono-beneficiary (single person/organisation, as opposed to consortia) calls which are not covered by the guarantee and where Third Country Participation is not possible.

We are ready to assess such eligible unevaluated ERC, MSCA and European Innovation Council (EIC) applications domestically via UKRI, to ensure the best research and innovation gets funded. This applies to eligible calls that have closed or are open at the point of non-association, where UK applications are not being evaluated by the EC. Applicants will be asked to re-submit their existing applications to UKRI, with some additional details, who will take forward evaluations and provide funding for successful applications, at the same value as applicants would have received under Horizon Europe.

Third Country Participation in Horizon Europe

Around two thirds of Horizon Europe calls are open to researchers and business from non-associated countries as part of consortia with associated countries and EU member states, provided they bring their own funding. To enable continued collaborations through Horizon Europe and hearing the message that this is a priority for businesses and researchers, we will make funding available for UK applicants to participate in Horizon Europe calls as third country applicants. Such calls are currently covered by the guarantee where eligible, and Third Country Participation would come into effect at the point the UK was unable to associate.

Horizon Europe will continue to offer valuable opportunities for research and innovation collaboration between the EU and the UK, via Third Country Participation, particularly where we have shared interests, such as on global health and research infrastructures. The UK will make funding available to enable UK applicants to participate in collaborative Horizon Europe calls, as part of consortia with partners from EU member states or associated countries.

Third Country applicants, classified as 'associated partners' by the EC, can apply as part of consortia which have at least three other consortia members from member states or associated countries. The consortium will apply for Horizon Europe funding and be evaluated in the usual way by the EC. Successful consortia members from a member state or associated country will be funded by the European Commission, whilst third countries must bring their own funding. The UK government will provide funding for all UK members of successful consortia, signing grant agreements on or before 31 March 2025. This funding will cover the lifetime of the grant. The government will consider our approach to funding for Third Country Participation beyond this date and make an announcement by October 2024.

Third Country Participation funding will be delivered through UKRI, utilising the same IFS system that is currently being used to deliver the Horizon Europe guarantee, with UKRI terms and conditions, and paid in pounds sterling. Funding will be provided for the lifetime of the grant.

The terms of Third Country Participation are set by the EC and do not allow entities from non-associated countries to lead consortia. Further information on the calls available and the eligibility criteria can be found on the EC website.

Uplifts to talent schemes

We will make additional funding available for our most prestigious existing schemes for attracting, retaining and supporting talent via the National Academies, and UKRI supporting researchers to carry out their work in the UK.

Uplifted schemes will be managed as usual by UKRI and the National Academies and will make additional awards for high quality applications. This will increase funding availability in the short-term, and provide additional opportunities for researchers, using well established and prestigious schemes.

The portfolio of schemes we select will be determined by the timing of the UK not associating to Horizon Europe, as the needs of the research community at that time will depend on which Horizon Europe calls have and have not made recent awards. The schemes will be across multiple funding bodies and will ensure funding at all career stages and across all disciplines. Examples of the schemes being considered for uplifts are shown in Table 1. The timing of the UK being unable to associate to Horizon Europe will determine which final schemes will be selected, and more information will be available closer to the time. We plan to use the additional funding both to fund high quality reserve list proposals and increase the number of awards future rounds can make.

Table 1 Example talent scheme(s) considered for uplifts

Delivery Partner	Scheme
Some National Academies	Newton International Fellowship (NIF)
Academy of Medical Sciences	AMS Professorships, Springboard Awards, Clinician Scientist Fellowship
The British Academy	Post-Doctoral Fellowships (PDFs), Mid-Career Fellowships (MCFs)
The Royal Academy of Engineering	Chair in Emerging Technology, Research Fellowship
The Royal Society	Research Professorship, Dorothy Hodgkin Fellowships, University Research Fellowships
UKRI	Future Leaders Fellowships
UKRI – AHRC	Research Development and Engagement (RDE) Fellowships, Research Grants Scheme
UKRI – BBSRC	David Phillips Fellowships, Strategic Longer, Larger (sLoLa) Grants Scheme, Responsive Mode Grants
UKRI – EPSRC	Fellowships, New Investigator Awards, Programme Grants, Large Grants
UKRI – EPSRC/STFC	Stephen Hawking Fellowships
UKRI – ESRC	New Investigator Grants, Postdoctoral fellowships, Policy Fellowships, Research Grants (Standard grants, Large grants)

Delivery Partner	Scheme
UKRI – MRC	New Investigator Research Grant, Programme Grant, Senior Fellowship (Clinical & Non-Clinical), Transition to Independence Fellowship (Career Development Award and clinician Scientist Fellowship)
UKRI – NERC	Independent Research Fellowships, Large Grants, Exploring the Frontiers, Pushing the Frontiers
UKRI – STFC	Consolidated Grants, Ernest Rutherford Fellowship (ERF)

Uplifts to Innovation support

We will increase funding for existing Innovate UK schemes to provide support for innovative businesses, which can currently apply to the EIC Accelerator.

We will select and adapt the specific schemes best suited to the needs of UK businesses – including the Smart programme, Investor Partnerships and Scale up/growth support by Innovate UK EDGE - and offer research commercialisation support based on the ICURe model. We will focus our funding on late-stage companies, offering higher value Smart grants to single businesses (comparable to the level of single company support under EIC Accelerator) and increase our blended investor equity and grant mechanism for close to market activities.

We will also increase funding for the global Eureka network and Innovate UK's international bilateral research and innovation fund – supporting UK businesses and researchers to continue bi- and multi-lateral collaboration with leading partners across the world. Boosting UK participation in the Eureka network – which comprises over 45 countries including all EU member states – will help UK SMEs and innovative businesses maintain existing links with European partners while forging stronger partnerships with countries further afield, such as South Korea, Canada, and Singapore.

Funding for these schemes will be increased and access to the schemes will be publicised to ensure businesses and researchers are aware of the mechanisms and the application process.

The Talent and Research Stabilisation Fund

The new fund will provide interim formula funding for research institutions to help them to retain talent and target funding vulnerabilities at a local level.

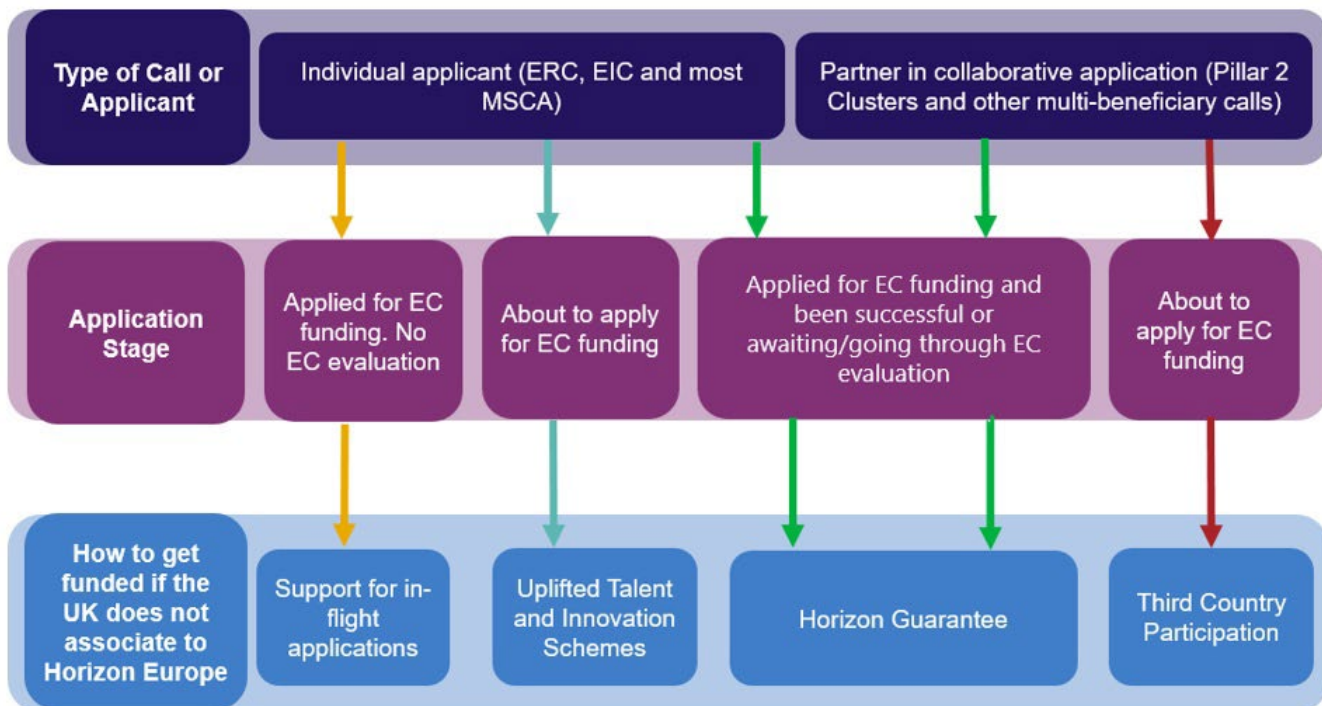
Government will launch the Talent and Research Stabilisation Fund that will allow institutions across the UK to strengthen their local talent retention plans and invest in their local research strategies as the UK pivots towards its new global offering.

The fund will target institutions most affected by the loss of Horizon Europe’s talent funding, which fund the work and support the development of research talent across a range of career stages. Grants will be for universities and research organisations that have a track record of success in these talent schemes, and eligibility will be limited to universities that have made a submission to REF2021 or are an independent research organisation (IRO), research institute (RI) or public sector research establishment (PSRE) that is eligible for UKRI funding.

The fund will be paid directly to research institutions through formula funding by UKRI in quarterly instalments. In developing the allocation formula, we will seek to provide any funded institutions with at least a minimal viable amount to enable recipients to deliver impact.

Conditions of funding attached to these funds will require research organisations and universities to use the funding in ways that align with the fund’s high-level objectives. These conditions will offer institutions an appropriate level of discretion so that they can target vulnerabilities in their local research talent strategies effectively. Institutions will be required to demonstrate to UKRI how their planned expenditure supports the retention of research talent and addresses weaknesses in their local research strategy. Further details on this fund will be provided in due course.

Diagram 2: How to apply for funding in the transition period



This diagram is illustrative and not exhaustive of all Horizon Europe calls.

Other EU Programmes

We are very aware of the challenges facing UK Earth Observation researchers and industry because of delays to participation in Copernicus, and of those faced by UK fusion researchers and industry because of ongoing delays to association to Euratom R&T. We are developing comprehensive plans of alternative measures for these programmes and preparing for a pivot towards these if delays from the EU continue, and we are unable to associate to these programmes.

Copernicus

Our plan for a UK alternative to Copernicus reflects the Government ambitions to strive to remain at the forefront of Earth Observation (EO) technology and know-how, in line with the National Space Strategy. This will build on our existing programmes to support our thriving EO sector, particularly focusing on how EO technology and data can help solve global challenges such as climate change; creating attractive opportunities to encourage talented individuals to develop their skills and build their careers here; and exploring exciting new international collaborations.

We will work with industry and the research community as we develop this vision and improve our understanding of the sector's needs and capabilities. However, we are aware that the sector needs support now. Therefore, we are also developing a package of transitional measures to mitigate the impact of ongoing delays to participating in Copernicus, and to preserve the UK's leading reputation within the global Earth Observation market. We will release details of these measures in due course.

Euratom Research and Training Programme

We are working closely with our partner organisations, to develop a robust and ambitious programme of alternatives for our fusion and fission stakeholders, should it be needed. This in addition to support already given for holders of Euratom fission grants.

As set out in the three pillars of the UK Fusion Strategy, supporting, and growing our world-leading international, scientific, and commercial fusion energy leadership is our priority. Our alternatives programme plan reflects the aims of these three pillars:

- supporting the fusion sector and delivering outcomes such as strengthening and building a resilient UK supply chain, accelerating the necessary processes needed for our domestic Spherical Tokamak for Energy Production (STEP) programme
- new technological facilities that will retain and attract a diverse skills base, growing the UK's fusion capability

- pursuing new international collaborations with partners where ambitions towards commercialising fusion energy align

We will engage with key stakeholders as we look to enhance our alternatives offer, seeking to ensure that this aligns with the sector's aims and outcomes. We recognise that the sector and industry will need support straight away if we are unable to associate. We are therefore developing a short-term package of transitional measures, including support for the UK fusion supply chain to deploy quickly to reduce funding risks and to protect the UK's global fusion reputation while longer term alternatives are put in place. This will include continuing to utilise our domestic facilities for cutting-edge fusion research and operations, galvanising support for the fusion sector and exploring the prospect of international fusion research partnerships, including ITER. We will release further details of these measures in due course.

With an expanded domestic programme and world-leading approach to fusion regulation we will drive innovation in fusion research and deliver cutting edge fusion technologies. Solving the challenges presented by fusion energy production is as global task. The UK stands ready to work with international partners to overcome these challenges and deliver the benefits of fusion energy for all.

Next steps

The Government is continuing to seek to complete UK association to these programmes. However, should the UK not be able to associate, we are now preparing actively to be ready to deliver the transitional measures set out above, followed by long-term alternatives to all three programmes. We will continue to engage with affected sectors as we refine and finalise these delivery plans and will publish further details on longer term plans in due course.

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