

The EU-UK Scientific Collaboration: Funding, Mobility, and Shared Research Infrastructure

Review of key indicators by CONNECTS-UK

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1. Executive summary

This report examines EU-UK scientific collaboration across three interconnected dimensions: research funding, researcher and student mobility, and shared research infrastructure. Drawing on data from Horizon Europe, UK higher education statistics, and an analysis of major European research infrastructures, it assesses how Brexit has reshaped the conditions of the EU-UK research relationship and what the current evidence suggests about its trajectory of recovery and adjustment. Below we summarise the main findings of the report.

- 1. The UK's re-association to Horizon Europe in 2024 has restored formal access to EU research funding.** UK organisations account for approximately 6.5% of weighted proposals and 5% of weighted project participations. Net EU contributions stand at €1,321.2M, which is a fraction of the €7,776.7M received under H2020. However, these numbers are hardly comparable and should be interpreted carefully, since the UK was associated to H2020 (2014-2020) for the entirety of its duration and it has only been associated to Horizon Europe (2021-2027) for 2 years.
- 2. The UK's funding profile within Horizon Europe is structurally distinctive and reflects the effects of the years of non-association.** The UK is the only country among major participants that receives more funding from Pillar 1 (Excellent Science) than from Pillar 2 (Global Challenges), pointing to an erosion of the consortium relationships and collaborative networks.
- 3. EU student enrolments in UK higher education have fallen sharply since Brexit, with consequences for the bilateral research pipeline.** New EU student enrolments declined by approximately 59% between 2020/21 and 2024/25, and new EU postgraduate research enrolments fell by around 47% over the same period, while non-EU international enrolments grew substantially.
- 4. The withdrawal from Erasmus+ removed the reciprocal dimension of structured EU-UK student mobility, and no comparable mechanism has replaced it.** The Turing Scheme supports outgoing UK learners only, which has left incoming EU student mobility largely unaddressed by any structured framework until the recent announcement from the UK government regarding plans to rejoin Erasmus+ from 2027.
- 5. The UK has maintained a positive net inflow of overseas researchers, though this is increasingly driven by non-EU recruitment.** EU academic staff numbers have plateaued and edged into modest decline, while non-EU academic staff have grown by approximately 92% since 2014/15 and now surpass EU nationals in absolute terms for the first time.
- 6. Brexit has not interrupted the UK's participation in major European research infrastructures, but has reshaped its governance role and strategic influence.** Operational access has generally continued, but the UK's ability to shape priorities,

participate in decision-making, and benefit from EU-aligned funding has shifted depending on each infrastructure's legal and organisational model.

7. **Infrastructures operating under intergovernmental legal frameworks, such as CERN and EMBL, have proven most resilient to Brexit disruption.** Their independence from EU membership requirements has allowed the UK to maintain full participation, governance rights, and access to funding mechanisms. However, even in these cases, indirect pressures are emerging, particularly through national funding decisions, with potential UK reductions in contributions to major CERN upgrade programmes raising concerns about the country's long-term influence within key scientific collaborations.
8. **Infrastructures established under the ERIC legal framework have required structural adaptation, most visibly through the relocation of statutory seats away from the UK.** The case of Instruct-ERIC, which relocated its statutory seat from the UK to Germany while retaining its operational hub in Oxford, illustrates a broader pattern of hybrid adaptation aimed at maintaining EU legal compliance without fully dismantling UK-based expertise and capacity. These adjustments have preserved scientific continuity but have altered the formal basis of UK participation in governance.
9. **The transition from project-based collaboration to formal legal infrastructure has, in some cases, resulted in the effective exclusion of UK institutions from governance structures.** EBRAINS, the successor infrastructure to the Human Brain Project, represents the most pronounced example: despite deep UK involvement in the original project, no UK organisation currently holds formal membership of EBRAINS, leaving the UK without representation in its governance bodies or strategic planning processes at a critical moment in the infrastructure's development.
10. **Research infrastructures have deployed a range of adaptive strategies to sustain collaboration, including targeted bilateral science diplomacy initiatives.** The internship programme jointly developed by EMBL-EBI and the French Embassy in the UK illustrates how scientific institutions can use bilateral mobility schemes to maintain talent pipelines and reinforce institutional relationships during periods of systemic uncertainty, independently of multilateral programme frameworks.

2. Background and timeline

2.1. Narrative background

The United Kingdom (UK) and the European Union (EU) share a long and deeply embedded history of scientific collaboration, built over decades of joint research programmes, shared infrastructure, and the free movement of researchers, students, and ideas across borders¹. Prior to Brexit, the UK was among the most active participants in successive EU research framework programmes, and its universities and research institutions were an integral part of European science, both as recipients of funding and as innovative leaders of major multinational research consortia². Thus, relationships between the UK and other EU member states were, in many respects, among the most productive research partnerships in the world, rooted in geographic proximity, shared academic traditions, and decades of sustained institutional investment on both sides³.

The UK's withdrawal from the European Union in 2020 introduced a period of profound disruption to this relationship, the effects of which continue to be felt across research funding, mobility, and access to shared infrastructure⁴. The UK's departure from Horizon Europe left its researchers and institutions outside one of the largest collaborative science funding mechanisms. While the UK government introduced a Horizon Europe Guarantee Scheme to support researchers during the period of non-association, this domestic instrument could not fully replicate the collaborative and networking dimensions of programme membership^{5,6}. In 2024, the UK formally re-associated with Horizon Europe⁷, marking the end of a three-year period without direct access to the framework. The effects of this period of non-association on collaborative pipelines and institutional partnerships might still be felt in some areas of the research ecosystem^{8,9}.

¹ Royal Society, "UK Research and the European Union". 2015.

<https://royalsociety.org/news-resources/projects/uk-research-and-european-union/>.

² J. W. Sallmen II and C. Warkup, "Participation by the United Kingdom in Recent EU Framework Programmes: Insight on the Participations of Large UK Companies in FP7 and Horizon 2020". 2022.

<https://www.innogen.ac.uk/sites/default/files/2022-10/09102022%20UK%20Business%20in%20FP7%20report%20final.pdf>.

³ Yusuf Oldac and Francisco Olivos, "Global Research Collaborations of the United Kingdom in the Post-Brexit Era," *Higher Education*. 2025. <https://doi.org/10.1007/s10734-025-01596-9>.

⁴ Oldac and Olivos, "Global Research Collaborations."

⁵ Sarah Chaytor and Lucy Shackleton, "The UK Has Joined the EU's Horizon Science Funding Scheme – But If We Want the UK to Lead, the Hard Work Has Just Begun," *The Conversation*. 2023.

<https://theconversation.com/the-uk-has-joined-the-eus-horizon-science-funding-scheme-but-if-we-want-the-uk-to-lead-the-hard-work-has-just-begun-213088>.

⁶ Department for Science, Innovation and Technology, "Evaluation of UK Participation in H2020," [GOV.UK](https://www.gov.uk/government/publications/evaluation-of-uk-participation-in-horizon-2020/evaluation-of-uk-participation-in-h2020). 2025. <https://www.gov.uk/government/publications/evaluation-of-uk-participation-in-horizon-2020/evaluation-of-uk-participation-in-h2020>.

⁷ European Commission, "United Kingdom joins Horizon Europe programme," Press Release IP/23/6327. 2023. https://ec.europa.eu/commission/presscorner/detail/en/ip_23_6327.

⁸ Chaytor and Shackleton, "The UK Has Joined the EU's Horizon Science Funding Scheme."

⁹ Department for Science, Innovation and Technology, "Evaluation of UK Participation in H2020."

Beyond research funding, Brexit has restructured the conditions under which people move between the UK and the EU for scientific, educational, professional, and personal purposes. The end of free movement and the introduction of a points-based immigration system replaced what had previously been an open channel for academic and professional mobility¹⁰. EU citizens wishing to study, work, or conduct research in the UK now face visa requirements, increased administrative costs, and a more complex regulatory environment¹¹. These changes have contributed to a shift in EU-UK migration patterns, with net migration of EU citizens to the UK turning negative since the onset of Brexit and the subsequent COVID-19 pandemic, and falling sharply from its peak in 2016¹². Despite this, the EU-born population in the UK seems to remain substantial, with the most recent robust estimates placing it at approximately 4 million in 2021, which accounted for around 6% of the total population¹³.

The restructuring of mobility has also had significant implications for academic exchange. The UK's exit from the Erasmus+ programme, which had facilitated structured student and trainee mobility between UK and EU institutions on a reciprocal basis, removed a widely used pathway for educational exchange¹⁴. The Turing Scheme, introduced in 2021 as an alternative, supports only outgoing UK learners, and therefore lacks the reciprocal, incoming component that made Erasmus+ a bilateral instrument¹⁵. However, recent announcements from the UK government have confirmed plans to rejoin Erasmus+ from 2027, potentially restoring this form of exchange¹⁶. In parallel, EU students enrolling in UK universities after Brexit have faced the shift from EU student tuition fees to international student tuition fees, equivalent to those paid by other non-EU students, which are significantly higher than previous rates¹⁷.

¹⁰ Home Office, "The UK's Points-Based Immigration System: Policy Statement," [GOV.UK](https://www.gov.uk/government/publications/the-uks-points-based-immigration-system-policy-statement). 2020.

<https://www.gov.uk/government/publications/the-uks-points-based-immigration-system-policy-statement>.

¹¹ Madeleine Sumption, "Work Visas and Migrant Workers in the UK," Migration Observatory Briefing, University of Oxford. 2024.

<https://migrationobservatory.ox.ac.uk/resources/briefings/work-visas-and-migrant-workers-in-the-uk/>.

¹² Madeleine Sumption, Mihnea Cuibus, and Peter William Walsh, "EU Migration to and from the UK," Migration Observatory Briefing, University of Oxford. 2026.

<https://migrationobservatory.ox.ac.uk/resources/briefings/eu-migration-to-and-from-the-uk/>.

¹³ Sumption, Cuibus, and Walsh, "EU Migration to and from the UK."

¹⁴ European Commission, "The UK and Erasmus+." 2026.

<https://erasmus-plus.ec.europa.eu/the-uk-and-erasmus>.

¹⁵ Johanna L. Waters, "The Turing Scheme Was Supposed to Help More Disadvantaged UK Students Study Abroad – but They May Still Be Losing Out". 2024.

<https://theconversation.com/the-turing-scheme-was-supposed-to-help-more-disadvantaged-uk-students-study-abroad-but-they-may-still-be-losing-out-220956>.

¹⁶ Cabinet Office, Department for Education, and Department for Culture, Media and Sport, "Young People from All Backgrounds to Get Opportunity to Study Abroad as UK-EU Deal Unlocks Erasmus+," [GOV.UK](https://www.gov.uk/government/news/young-people-from-all-backgrounds-to-get-opportunity-to-study-abroad-as-uk-eu-deal-unlocks-erasmus). 2025.

<https://www.gov.uk/government/news/young-people-from-all-backgrounds-to-get-opportunity-to-study-abroad-as-uk-eu-deal-unlocks-erasmus>.

¹⁷ Universities UK, "Changes for EU Students in the UK: FAQs on Fees, Immigration, Erasmus+." 2022.

<https://www.universitiesuk.ac.uk/topics/international/changes-eu-students-uk-faqs-fees>.

Access to shared research infrastructure represents a further dimension of disruption. Many of Europe's flagship scientific facilities and distributed research networks operate under frameworks that link participation to EU membership, association status or to specific legal structures. In recent years, the United Kingdom's changing status in relation to Horizon Europe has introduced uncertainty and, in some cases, practical barriers to continued involvement¹⁸. While formal re-association with Horizon Europe has facilitated funding access, the landscape of collaboration in other areas such as infrastructure remains more complex than it was prior to Brexit. Individual arrangements now often require negotiation on a case-by-case basis, whereas previously they were governed by overarching programme agreements¹⁹.

¹⁸ Institute of Physics, "Brexit: Funding," accessed April 9, 2026.

<https://www.iop.org/physics-community/member-latest/brexit-information/funding>.

¹⁹ Science|Business, "Horizon Europe, Euratom, Erasmus: What EU Programmes Has the UK Signed Up For?" *Science|Business*. 2023.

<https://sciencebusiness.net/news-byte/brexit/horizon-europe-euratom-erasmus-what-eu-programmes-has-uk-signed>.

2.2. Timeline



3. Objectives

This report assesses the evolving shape of scientific collaboration between the United Kingdom and the European Union across three core domains: research funding, mobility, and shared research infrastructures during the period 2020 to April 2026. It focuses on how collaboration has developed in the aftermath of the UK's withdrawal from the EU, with particular attention to the trends since January 2020 when the UK formally left the EU.

The analysis is structured around four objectives:

- It evaluates changes in the **UK's participation in EU research funding programmes**, including the effects of the period of non-association to Horizon Europe (2021-2023) and the implications of re-association for restoring collaborative activity.
- It examines developments in the **mobility of students, researchers, and academic staff**, with particular attention to the shift from free movement to more regulated mobility frameworks and the resulting changes in participation patterns.
- It assesses the **UK's position within European research infrastructures**, focusing on access, governance arrangements, and long-term strategic influence.
- It brings these dimensions together to determine whether EU-UK scientific collaboration is stabilising, adapting, or evolving into a more conditional and uneven form, shaped by programme access, regulatory constraints, and varying levels of **integration across different areas**.

4. Methodology

This report employs a desktop research approach, providing an analysis of secondarity data, including a review of quantitative indicators and the development of qualitative assessments across three thematic areas of EU-UK scientific collaboration: research funding, mobility, and shared scientific infrastructure. This methodology was selected to provide an evidence-based account of how the relationship between the UK and the EU research landscape has evolved since Brexit, drawing on publicly available data from institutional sources on both sides.

The quantitative component covers the analysis of research funding and mobility, examining statistical indicators extracted from a range of EU and UK institutional sources. Where possible, indicators were tracked over time to identify trends both before and after key milestones, including the UK's formal withdrawal from the EU, the end of free movement, and its re-association with Horizon Europe in 2024. This enables a comparative assessment of how funding flows and mobility patterns have shifted over the period. The quantitative data sources consulted are:

European Commission: Horizon Europe Dashboard		
Participation, financials, net EU contribution, Pillar 1/2, collaboration links, ERC/MSCA/EIC.	Period: 2021-present; H2020 comparative.	Link 1: dashboard.tech.ec.europa.eu/qs_digit_dashboard_mt/public/sense/app/1213b8cd-3ebe-4730-b0f5-fa4e326df2e2 Link 2: dashboard.tech.ec.europa.eu/qs_digit_dashboard_mt/public/sense/app/d58f3864-d519-4f9f-855e-c34f9860acdd
UKRI: Horizon Europe Guarantee Scheme Statistics		
Application and grant offer statistics.		Link 1: ukri.org/publications/horizon-europe-guarantee-statistics/horizon-europe-guarantee-application-and-grant-offer-statistics/
HESA: Staff & Student Data		
Staff by nationality (inflow/outflow); student enrolments by permanent address (UG and PGR).	Period: staff 2014/15-2023/24; students 2020/21-2024/25.	Link 1: hesa.ac.uk/data-and-analysis/staff/location#inout Link 2: hesa.ac.uk/data-and-analysis/staff/location#inout#nationality Link 3: hesa.ac.uk/data-and-analysis/students/where-from
UK Government: Turing Scheme Funding Outcomes		
Outgoing learners by country group.	Period: 2021–22, 2022–23, 2023–24.	Link 1: gov.uk/government/publications/turing-scheme-funding-outcomes-2021-to-2022 Link 2: gov.uk/government/publications/turing-scheme-funding-outcomes-2022-to-2023 Link 3: gov.uk/government/publications/turing-scheme-funding-outcomes-2023-to-2024
European Commission: Erasmus+ UK Factsheets		
Outgoing/incoming students and trainees.	Period: 2019, 2020.	Link 1: ec.europa.eu/assets/eac/factsheets/factsheet-uk-2019_en.html Link 2: ec.europa.eu/assets/eac/factsheets/factsheet-uk-2020_en.html

The qualitative component covers the analysis of shared scientific infrastructure, drawing on a structured review of policy documentation, institutional reports, and academic and grey literature. A qualitative approach is adopted in this area due to the diversity of infrastructure types and the complexity of governance and access arrangements, which limit the availability and comparability of quantitative data and make qualitative assessment a more appropriate method. The analysis combines the interpretation of available evidence with a review of policy communications, institutional statements, and published reports to provide an evidence-based account of the UK's engagement with major European research infrastructures in recent years.

Several constraints affect the interpretation of findings. First, the analysis is descriptive rather than causal: observed trends following Brexit coincide with other major disruptions, most notably the COVID-19 pandemic, and no counterfactual analysis is attempted. As such, attributing changes in participation or mobility solely to Brexit should therefore be treated with caution. Second, comparisons between Horizon Europe and H2020 are complicated by the UK's three years of non-association, as well as by the programme's expansion to 48 participating countries. As a result, share-based metrics may understate UK performance relative to absolute or annualised measures. Third, aggregate data on researcher flows are not disaggregated by EU versus non-EU origin. This limits the ability to draw firm conclusions about Brexit's specific effect on EU academic mobility to the UK.

5. Analysis and results

5.1. Research funding

Prior to Brexit, the UK was a major beneficiary of EU research programmes, particularly under H2020, securing substantial funding and playing a leading role in collaborative projects, as outlined in the European Commission report (2019)²⁰. Following the 2016 referendum, participation patterns began to shift. According to the UK Government (2025)²¹, while the UK remained a significant recipient of funding overall, there was a noticeable decline in proposal participation, coordination roles, and, in some cases, success rates, indicating a reduced level of engagement in collaborative networks.

This shift is consistent with uncertainty over the UK's future access to EU funding, though disentangling this effect from concurrent disruptions, including the COVID19 pandemic, is not straightforward without a more controlled comparison. As a result of the increased uncertainty, UK institutions took on fewer leadership roles within projects, indicating a more limited position within European research networks. Delays in formal re-association to Horizon Europe further disrupted funding flows and collaboration during the transition period²².

Following the political agreement on association in 2023, with full participation taking effect from 2024, the UK regained access to EU research funding and the ability to fully participate in programme calls²³. Early evidence points to a gradual stabilisation of participation, although the longer-term recovery of collaborative networks remains uncertain. Overall, the experience underscores the importance of stable and predictable funding arrangements in sustaining EU-UK research collaboration.

5.1.1. Participation in Horizon Europe: general

The UK's current engagement with Horizon Europe must be understood in light of its previous status as a fully associated member of H2020, and the years of non-association that followed Brexit before re-entry in 2024. That period of absence provides an important reference point. Under H2020 the UK was among the programme's most active participants, and its current performance therefore reflects an early-stage of re-integration into a programme that now spans 48 countries, comprising 27 EU member states and 21 associated countries. The figures presented here cover the full duration of Horizon Europe to date, from its launch in 2021 through to April 2026, with the programme still running and due to conclude in 2027.

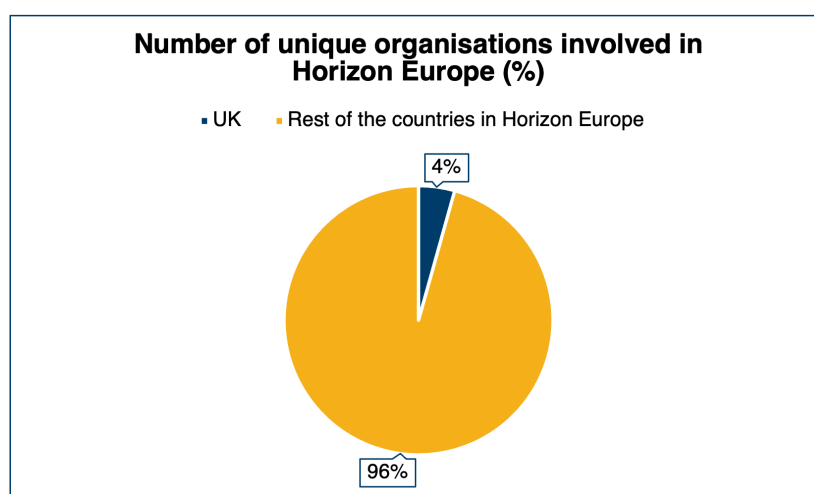
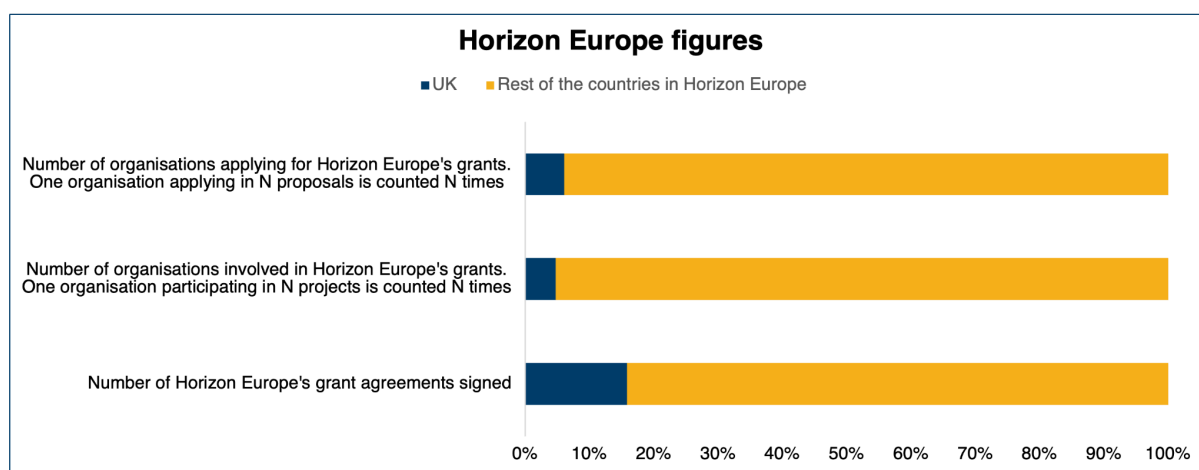
²⁰ European Commission, "Horizon Dashboard," EU Funding & Tenders Portal, accessed April 9, 2026, <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/horizon-dashboard>.

²¹ Department for Science, Innovation and Technology, "Evaluation of UK Participation in H2020."

²² Stefano Fella, Elizabeth Rough, and Matthew Keep, "The UK and EU Programmes: Participation Delayed," House of Commons Library Briefing Paper CBP-9664, 2022, <https://researchbriefings.files.parliament.uk/documents/CBP-9664/CBP-9664.pdf>.

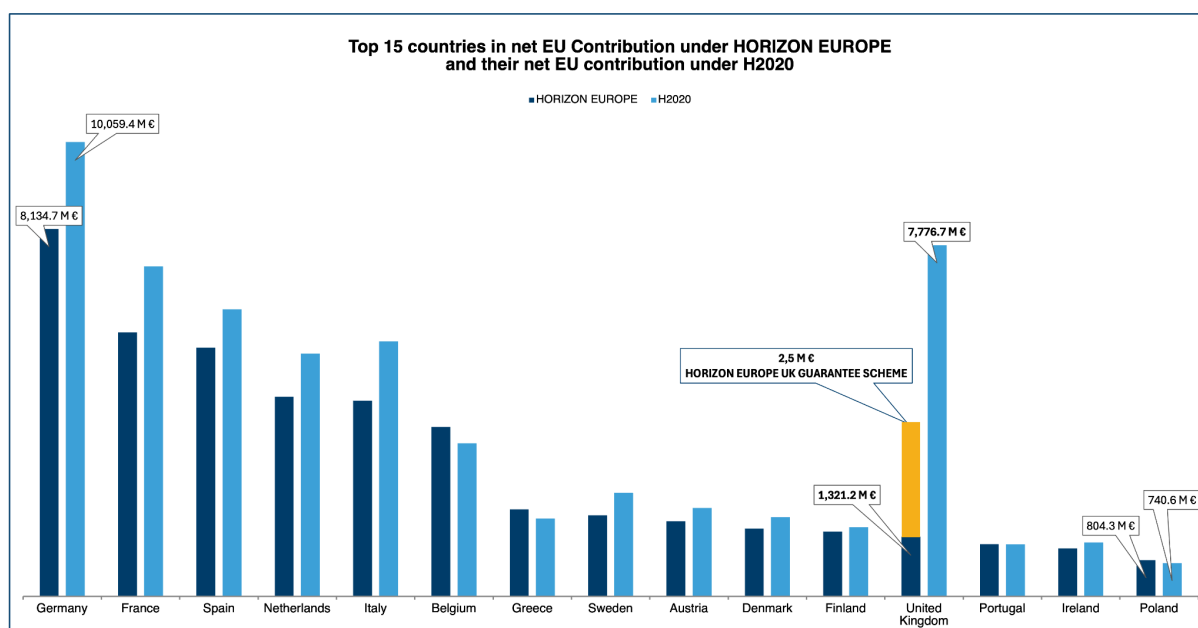
²³ European Commission, "EU-UK Relations: Commission and UK Reach Political Agreement on UK Participation in Horizon Europe and Copernicus," Press Release IP/23/4374, September 7, 2023, https://ec.europa.eu/commission/presscorner/detail/en/ip_23_4374.

Figure 1 presents three participation metrics, each showing the UK's share relative to all other Horizon Europe participants. The first captures the number of proposals submitted by organisations applying for Horizon Europe grants, with each appearance of an organisation in a proposal counted separately. The second captures the number of organisations participating in funded projects, again counted on a per project basis. The third metric reflects the number of signed grant agreements. This differs from the previous measures in that it does not count organisational appearances, but instead captures the total number of formal funding agreements concluded. Taken together, since re-association UK organisations account for approximately 6.5% of weighted proposals and 5% of weighted project participations, while the share of signed grant agreements stands at approximately 17.5%. This divergence broadly indicates that the UK is converting a high share of its engagement into successfully funded outcomes. As shown in **Figure 2**, UK organisations account for approximately 4% of all unique organisations participating in the programme.



The net EU contribution figures, that is, funding received by project participants after deduction allocations to linked third parties, illustrate the scale of the reduction during the UK's period of non-association from 2021 to 2023. Under H2020, as a fully associated member, the UK received €7,776.7M in net EU contributions over the period 2014- 2020, the second highest among all participating countries at the time. Under Horizon Europe, the

UK's direct net EU contribution stands at €1,321.2M, supplemented by approximately €2,5M²⁴ through the UK Guarantee Scheme that bridged the non-association period. Even when combined, these figures fall well short of the UK's H2020 results and remain below the Horizon Europe allocations received by Germany (€8,134.7M), France, Spain, and several other member states, as illustrated in **Figure 3**. The comparison between the two programmes is not straightforward, as differences in full association, partial coverage, and years of absence complicate direct comparison. Nonetheless, the gap is indicative of the structural adjustment the UK's research sector continues to navigate²⁵.



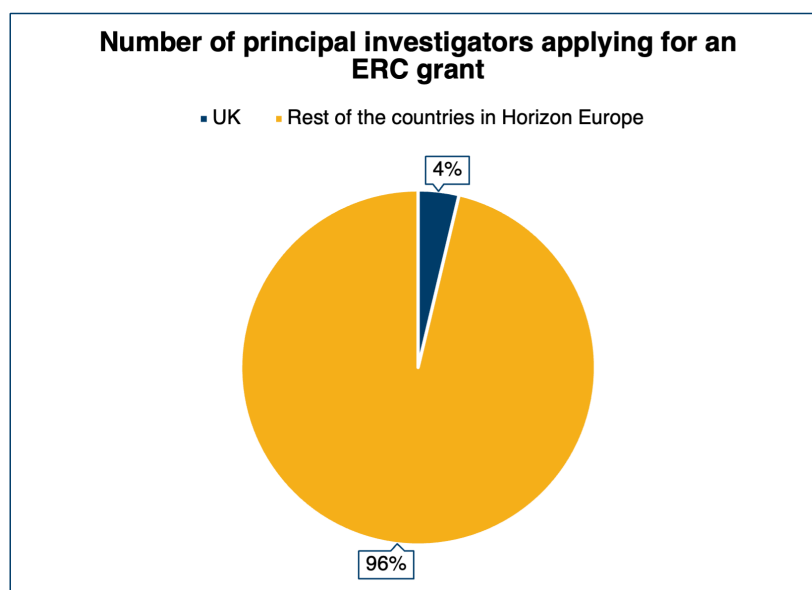
5.1.2. Participation in Horizon Europe: programme-specific

Disaggregating UK participation by funding instrument reveals a consistent pattern across Horizon Europe's key programmes. The three instruments examined here are the Marie Skłodowska-Curie Actions (MSCA), which fund researcher mobility, training, and career development of early career researchers across borders; the European Innovation Council (EIC), which supports high-risk, high-potential innovation and technology development; and the European Research Council (ERC), which awards competitive grants to individual principal investigators²⁶, on the basis of scientific excellence alone.

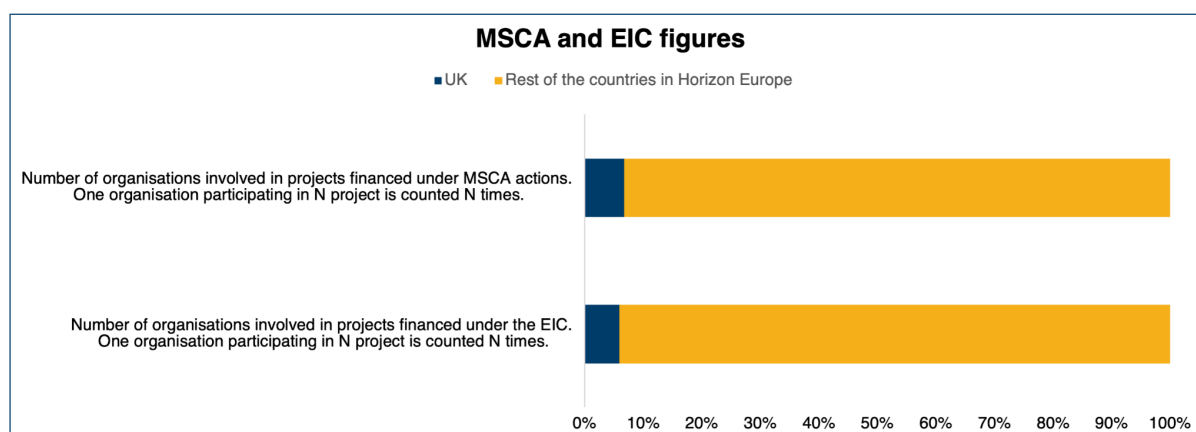
²⁴ This number is an approximate calculation by converting £2,197.2 million into euros, a calculation that can vary due to conversion rates. This number was calculated on 2 April 2026.

²⁵ Horizon Europe runs from 2021 to 2027 and is still ongoing at the time of writing (April 2026). Cumulative figures for Horizon Europe therefore reflect a programme still in progress and should not be read as directly comparable to the final, closed totals of H2020.

²⁶ Principal investigators are defined here as researchers applying for an ERC grant, hosted by organisations from the selected country.



In the MSCA, UK organisations account for approximately 7% of weighted participations (**Figure 5**), representing a notable decline from the roughly 15% share the UK held under H2020²⁷. This reduction reflects both the years of non-association and the changed terms of re-entry. A broadly similar picture emerges for the EIC, where the UK's current share of around 6% is comparable to its H2020 level of approximately 6%²⁸. This suggests a greater degree of continuity in innovation-oriented participation than in researcher mobility schemes. The most pronounced contrast appears in the ERC, where UK-based principal investigators now represent just 4% of all applicants (**Figure 4**), down from approximately 18% under H2020²⁹. This sharp decline points to a significant erosion in the UK's position within this instrument. Taken together, while the UK's re-association has restored a baseline level of engagement across all major instruments, the extent of recovery varies considerably by programme. The ERC stands out as the area where the gap with H2020 remains most substantial.



²⁷ European Commission, EU Research and Innovation Interactive Dashboard, accessed April 9, 2026, https://dashboard.tech.ec.europa.eu/qs_digit_dashboard_mt/public/sense/app/1213b8cd-3ebe-4730-b0f5-fa4e326df2e2/sheet/0c8af38b-b73c-4da2-ba41-73ea34ab7ac4/state/analysis.

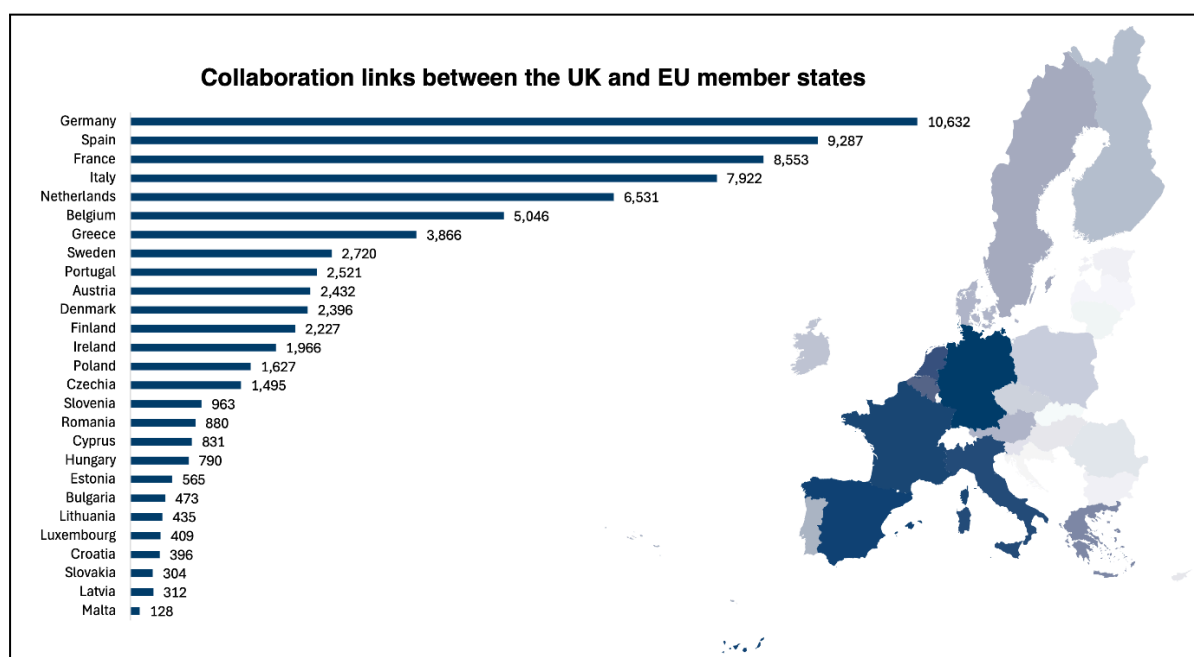
²⁸ European Commission, EU Research and Innovation Interactive Dashboard.

²⁹ European Commission, EU Research and Innovation Interactive Dashboard.

5.1.3. Participation in Horizon Europe: collaborations between the UK and other countries

The number of collaborative projects involving the UK since re-entering Horizon Europe currently stands at 3,055, with an associated net EU contribution of €16,586.7M, roughly half the 6,700 projects and €32,455.6M recorded across the full duration of H2020. That comparison, however, needs to be taken with some care: the UK has only been re-associated since 2024, joining a programme that was already three years in, and the cumulative figures will naturally favour countries that have been participating since the outset.

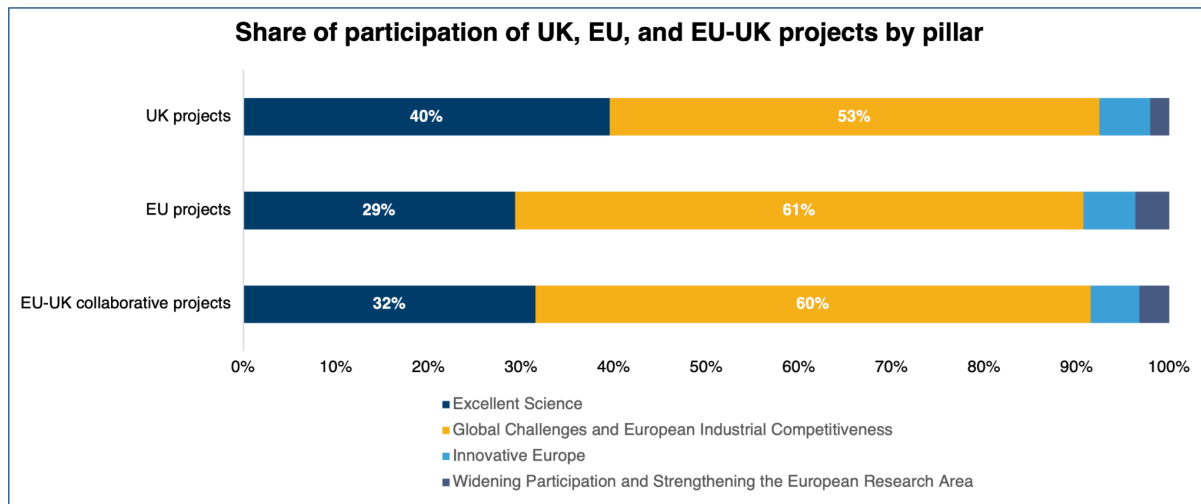
Beyond the project count, **Figure 6** illustrates the distribution of collaborative links between the UK and each EU member state. A collaborative link is defined as a connection between each pair of participants within a shared project contract. When organisations from two different countries participate in the same project, the number of links between them is calculated as the product of the number of participants from each country. This metric therefore captures the density of bilateral research connections within collaborative projects rather than merely counting the projects themselves. Collaborative links are highly concentrated among larger research-intensive Member States. Germany records the highest number of links (10,632), followed by Spain (9,287), France (8,553), Italy (7,922), and the Netherlands (6,531). In contrast, smaller Member States register considerably fewer connections, with several falling below 500.



5.1.4. Participation in Horizon Europe: thematic areas

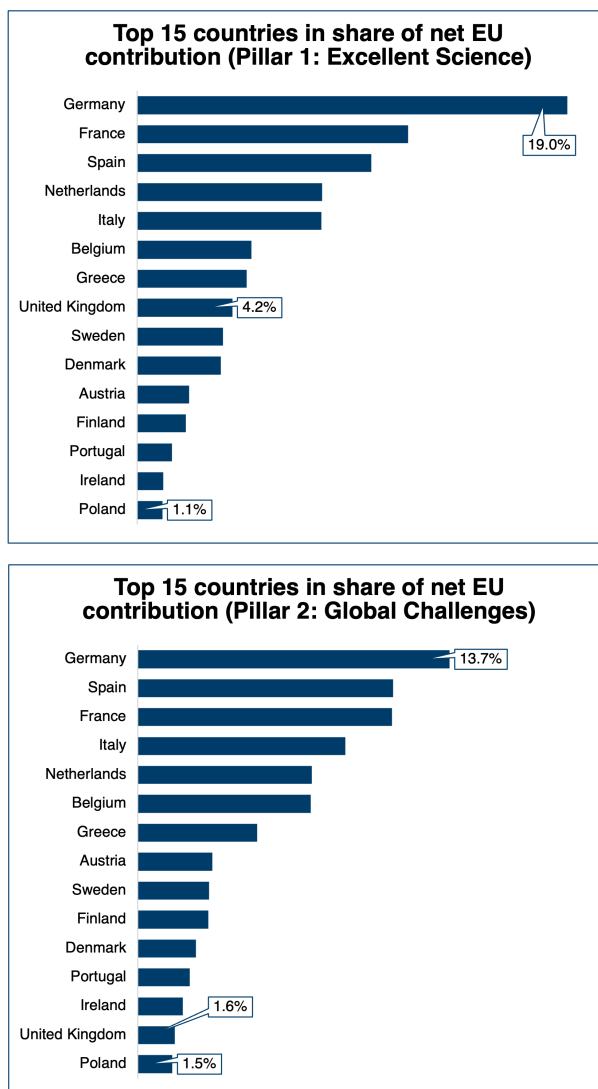
Horizon Europe is structured around four thematic areas: Pillar 1 (Excellent Science), which funds frontier research, researcher mobility, and research infrastructure; Pillar 2 (Global Challenges and European Industrial Competitiveness), which supports applied and mission-oriented research across societal and industrial themes; Pillar 3 (Innovative

Europe), which funds breakthrough innovation and deep-tech development; and a cross-cutting strand covering Widening Participation and Strengthening the European Research Area. Examining participation across these areas reveals meaningful differences in how the UK engages with the programme relative to the broader EU research community, and provides deeper insights into the UK's performance since re-association.



The three categories shown in **Figure 7**, namely UK projects (those involving only UK organisations), EU projects (those involving only EU member state organisations, effectively representing the programme's overall thematic baseline), and EU-UK collaborative projects (the 3,055 joint projects discussed in the previous section), each reveal a different pattern of participation. The most notable divergence concerns Pillar 1 (Excellent Science), where UK-only projects show a markedly higher concentration at 40%, compared to 29% for EU-only projects and 32% for EU-UK collaborative projects. This suggests that, when UK organisations participate independently, they do so disproportionately in the programme's most academically competitive and curiosity-driven funding streams, broadly consistent with the UK's established strengths in fundamental research. By contrast, UK-only projects are less in Pillar 2 (Global Challenges) at 53%, compared to 61% for EU-only projects, though EU-UK collaborative projects sit closer to the EU baseline at 60%. This gap is particularly significant. Pillar 2 is strongly oriented towards large, multi-partner consortia built on sustained collaborative relationships, precisely the kind of networks that the UK's three-year absence from the programme is likely to have disrupted or prevented from developing. The pillar distribution therefore points to a UK whose independent engagement is skewed towards scientific excellence, while its collaborative profile more closely aligns with the programme's mainstream thematic priorities. The extent to which this collaborative dimension fully recovers will likely depend on how quickly new cross-border consortia can be established following re-association.

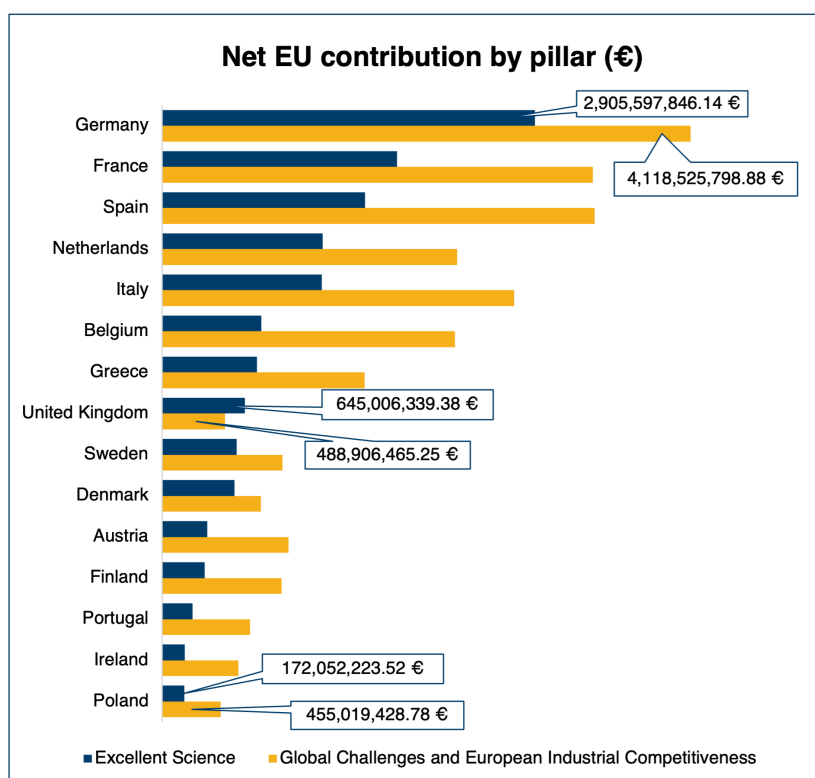
Examining the net EU contribution received by country across each pillar further sharpens this picture³⁰. The UK accounts for 4.2% of total Pillar 1 funding received, ranking eighth among EU member states and the UK (**Figure 8**), behind Germany at the top (19.0%) and above Poland at the bottom (1.1%). In Pillar 2, the UK's share is notably lower, placing it fourteenth in the same group at just above Poland's 1.5%, with Germany again leading at 13.7% (**Figure 9**). While this ranking difference between pillars is indicative, it should be interpreted with caution. The UK's share in both pillars is inevitably compressed by the years of non-association, and rankings alone do not fully capture how the UK is performing within each pillar on its own terms.

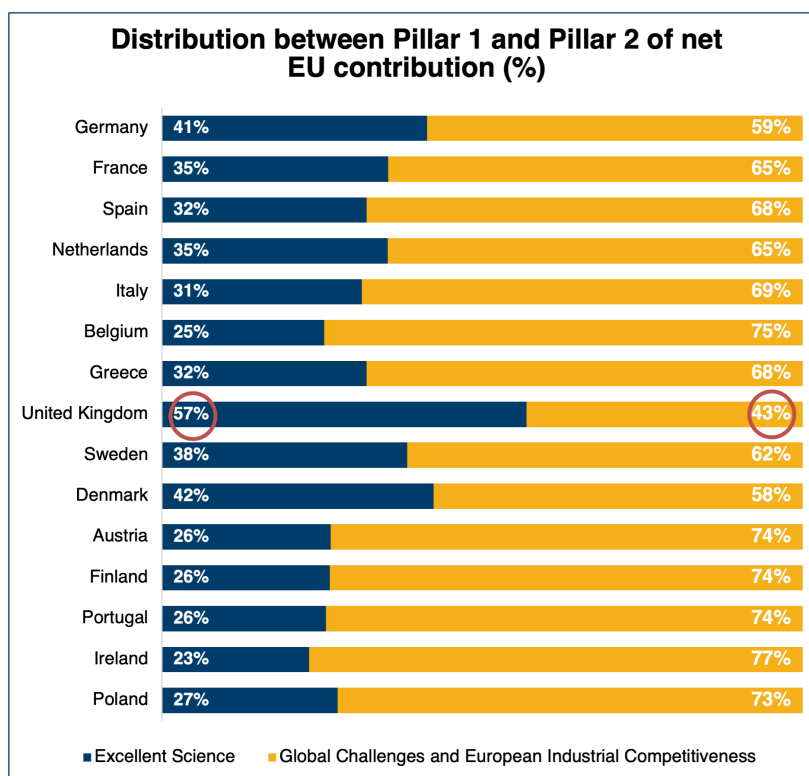


Absolute net EU contribution figures offer a clearer lens on these dynamics. As shown in **Figure 10**, the UK has secured €645.0M from Pillar 1 and €488.9M from Pillar 2, making it the only country in this group for which funding from Excellent Science grants exceeds that received through Global Challenges in absolute terms. By contrast, Germany receives

³⁰ The share and ranking figures presented here consider only EU member states and the United Kingdom. Other associated and third countries participating in Horizon Europe are excluded from this analysis. Additionally, only Pillars 1 and 2 are shown, as these account for the substantial majority of total programme funding, as illustrated in **Figure 7**.

€2,905.6M for Pillar 1 and €4,118.5M for Pillar 2, while Poland, at the lower end of the distribution, also secures more funding from Pillar 2 (€455.0M) than from Pillar 1, as does every other country in the comparison. When expressed as a proportional distribution of combined Pillar 1 and Pillar 2 funding (**Figure 11**), the contrast becomes even more pronounced. The UK derives 57% of its funding from Excellent Science and 43% from Global Challenges, a profile that stands apart from every other country shown, where Pillar 2 shares range from 58% (Germany) to 77% (Ireland). This structural distinctiveness is unlikely to be coincidental. Pillar 2 funding is, inherently, consortium-heavy and relationship-dependent: success typically requires integration into established European research networks, a track record of joint project delivery, and the institutional relationships necessary to participate in or lead large collaborative bids. These are precisely the conditions that the UK's prolonged period of non-association is likely to have eroded. While individual excellence, the currency of Pillar 1, can be demonstrated relatively quickly upon re-entry, rebuilding the collaborative infrastructure required to compete effectively in Pillar 2 is a slower and more contingent process. It depends not only on formal re-association, but also on the gradual restoration of trust, familiarity, and established patterns of joint working across European research communities.





5.2. Mobility

Mobility is a critical lens for analysing EU-UK scientific and research collaboration over the last five years, as the production of knowledge depends on the movement of researchers, students, and technical expertise across borders^{31,32}. For decades, EU frameworks enabled largely frictionless academic exchange between the UK and its European partners, embedding mobility within collaborative projects, funding schemes, and research networks. Assessing mobility trends therefore provides key insight into how EU-UK scientific cooperation has adapted since Brexit, including the emergence of new barriers and shifts in collaboration patterns³³.

This section focuses on three core dimensions of mobility: student flows, the research workforce, and structured mobility programmes. Analysing these areas makes it possible to identify where mobility has declined, where it has been sustained, and how its composition has changed since Brexit. This provides a clearer basis for assessing the extent to which EU-UK scientific collaboration has been disrupted or reconfigured in practice.

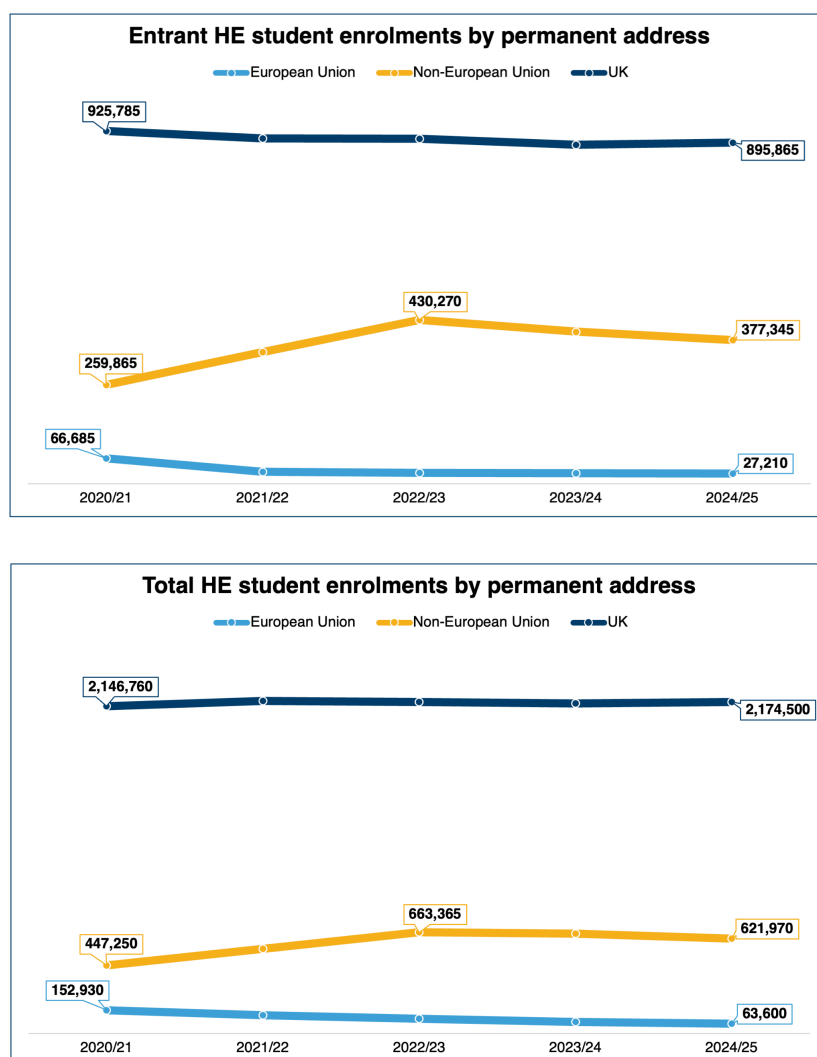
³¹ L. Ackers, "Moving People and Knowledge: Scientific Mobility in the European Union," *International Migration* 43 (2005): 99–131, <https://doi.org/10.1111/j.1468-2435.2005.00343.x>.

³² Chiara Franzoni, Giuseppe Scellato, and Paula Stephan, "Foreign-Born Scientists: Mobility Patterns for 16 Countries," *Nature Biotechnology* 30 (December 2012): 1250–1253, <https://doi.org/10.1038/nbt.2449>.

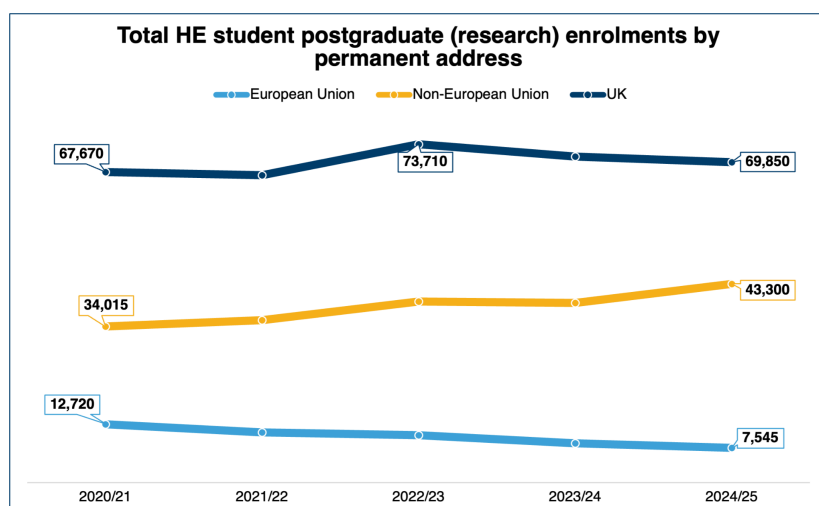
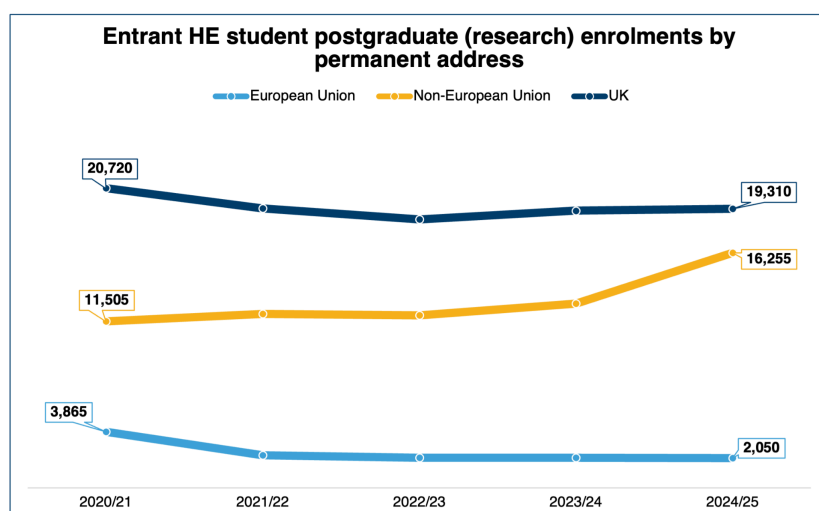
³³ Sumption, Cuibus, and Walsh, "EU Migration to and from the UK."

5.2.1. Students

The number of EU students in UK higher education has declined sharply since the introduction of post-Brexit immigration rules, a trend evident across both new entrants and the broader student population. **Figure 12** and **Figure 13** show that new EU enrolments fell in absolute numbers: from 66,685 in the 2020/21 academic year to 27,210 in 2024/25, a reduction of approximately 59%. Total EU enrolments dropped from 152,930 to 63,600 over the same period, a decline of around 58%. This sustained contraction has fundamentally altered the composition of UK universities' student bodies: while EU enrolment numbers decline, the number of non-EU international students has moved in the opposite direction: new enrolments rose from 259,865 in 2020/21 to 377,345 in 2024/25 and total enrolments grew from 447,250 to 621,970 within the same period, while UK national enrolments remained broadly stable. The decline in EU students' share of total population (2.2% in 2024/25 down from 5.6% in 2020/21) reflects both the reduced EU student demand and the independent non-EU international student demand for UK study.

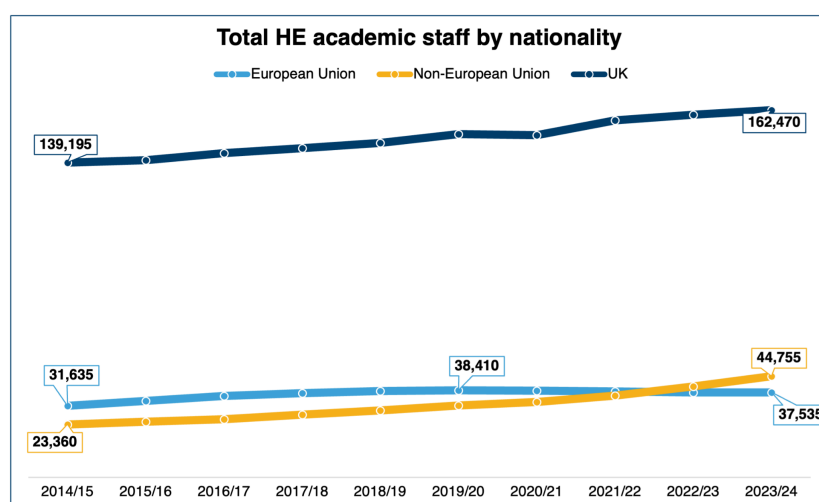


A comparable pattern is evident within the postgraduate research cohort, where the decline in EU participation carries particular significance given the centrality of PGR students to research productivity and bilateral scientific exchange. As shown in **Figure 14** and **Figure 15**, new EU PGR entrants fell from 3,865 in 2020/21 to 2,050 by 2024/25, a reduction of approximately 47%, while the total stock of EU PGR students dropped from 12,720 to 7,545, a fall of around 41%. Over the same period, non-EU PGR entrants grew from 11,505 to 16,255 and total non-EU PGR enrolments rose from 34,015 to 43,300, widening the gap between the two groups considerably. The EU share of new international PGR enrolments has contracted from roughly 25% to 11%, and its share of total PGR enrolments from approximately 11% to just over 6%, a shift with potential longer-term consequences for the EU-UK research pipeline, joint doctoral networks, and co-authored scientific outputs.

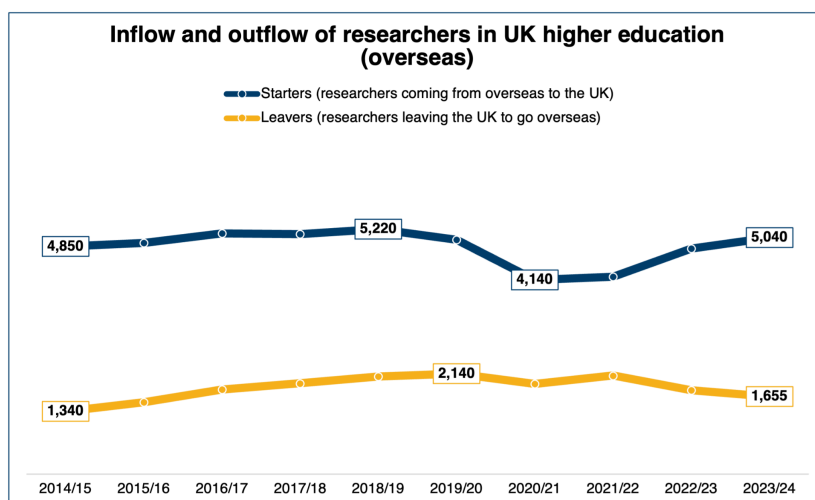


5.2.2. Academic staff

The number of EU nationals employed as academic staff in UK higher education grew substantially in the years preceding Brexit but has since plateaued and edged into a modest decline. Between 2014/15 and 2019/20, EU academic staff rose from 31,635 to 38,410, before falling back to 37,535 by 2023/24, representing a net increase of approximately 19% over the full decade, but a slight contraction of around 2% since the pre-Brexit peak (**Figure 16**). This trajectory contrasts markedly with that of non-EU academic staff, who grew from 23,360 in 2014/15 to 44,755 by 2023/24, an increase of approximately 92%, and have now surpassed EU nationals in absolute numbers for the first time. UK national academic staff also grew, from 139,195 to 162,470 (+17%). Taken together, these shifts indicate that, while the EU academic workforce in the UK has not experienced the sharp post-Brexit collapse observed among students, its relative contribution to the sector is diminishing as other groups, particularly non-EU staff, expand at a significantly faster rate.

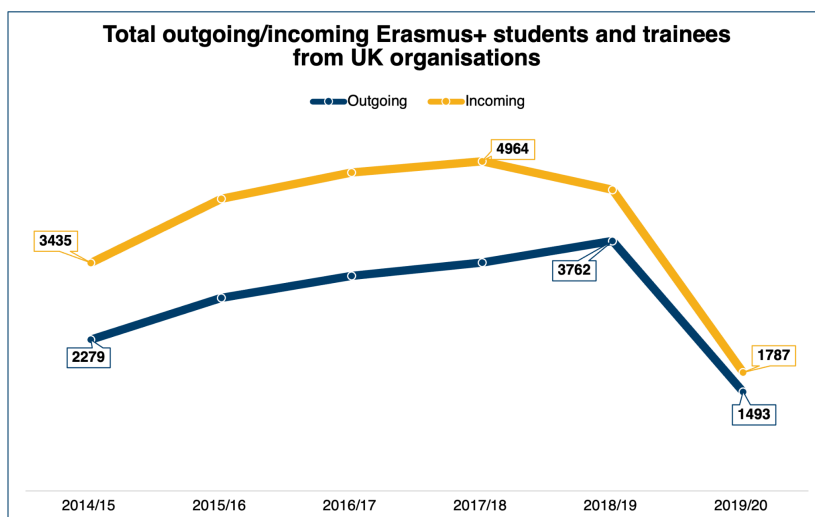


Despite the post-Brexit regulatory changes, the UK has continued to attract more overseas researchers than it loses, maintaining a consistently positive net flow throughout the period shown in **Figure 17**. Starters, defined here as researchers arriving from overseas institutions, stood at 4,850 in 2014/15, peaked at 5,220 in 2018/19, and dipped to 4,140 in 2020/21, a decline likely attributable in part to pandemic-related disruptions, before recovering to 5,040 by 2023/24. Leavers, i.e. researchers departing to overseas institutions, followed a broadly similar arc, rising from 1,340 in 2014/15 to a peak of 2,140 in 2018/19, before declining to 1,655 by 2023/24. The gap between inflows and outflows has remained substantial throughout, suggesting that UK higher education retains its attractiveness as a destination for internationally mobile researchers. It is worth noting, however, that this indicator is not disaggregated by EU versus non-EU origin or destination, and the recovery in inflows post-2020/21 is likely driven predominantly by non-EU recruitment, consistent with the broader compositional shifts observed in the academic workforce.



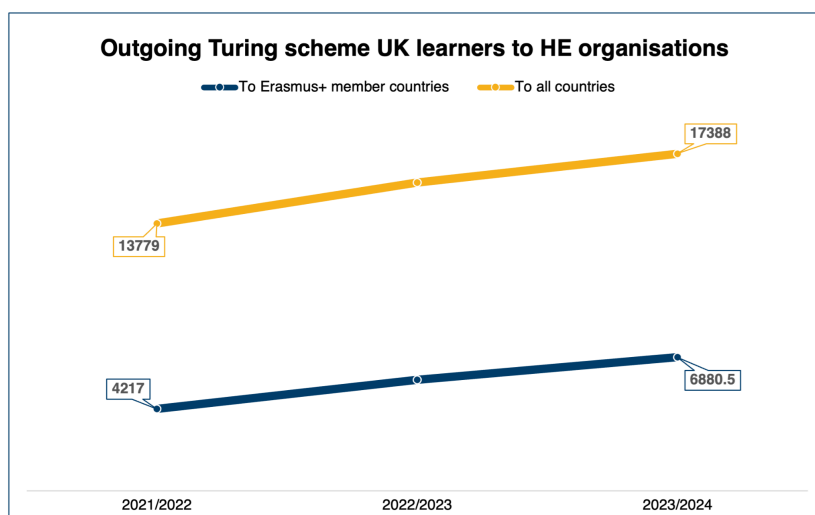
5.2.3. Mobility schemes

The UK's withdrawal from the Erasmus+ programme marked a significant rupture in structured EU-UK student mobility. As shown in **Figure 18**, prior to Brexit, participation had grown steadily on both sides: outgoing UK students and trainees rose from 2,279 in 2014/15 to a peak of 3,762 in 2018/19, while incoming participants from EU partner organisations grew from 3,435 to 4,964 over the same period. Both flows then collapsed sharply, falling to 1,493 outgoing and 1,787 incoming by 2019/20, the final year of UK participation, a decline of approximately 60% and 64% respectively from their peaks. This decline cannot be solely attributed to Brexit: the decline coincides with the onset of the COVID-19 pandemic and predates the Turing Scheme's launch.



The Turing Scheme, introduced in 2021/22 as the UK's domestic replacement for Erasmus+, has grown steadily since its launch, though it operates on a fundamentally different basis, supporting only outgoing UK learners and carrying no reciprocal incoming component. **Figure 19** shows that total outgoing placements to higher education organisations rose from 13,779 in 2021/22 to 17,388 by 2023/24, an increase of around 26%. Of these, placements directed to Erasmus+ member countries, which serve as the

closest proxy for EU-facing mobility, grew from 4,217 to 6,881 over the same period, representing approximately 40% of total Turing outflows in 2023/24. While this growth is encouraging, the scheme's unilateral design means that the reciprocal dimension of EU-UK student exchange, which was central to Erasmus+, remains absent, leaving incoming mobility from EU institutions largely unaddressed by any comparable structured mechanism.



5.3. Infrastructures

European research and scientific infrastructures are among the most tangible evidence of EU–UK scientific collaboration. They are fundamental to Europe’s research and innovation ecosystem, enabling cutting-edge discovery through shared governance structures, sustained cross-country investment, and integrated scientific communities. These also play a strategic role in Europe’s global scientific positioning and science diplomacy. Scientific infrastructures, ranging from large, centralised facilities to distributed, networked platforms, depend not only on mainly public funding and membership arrangements, but also on effective participation in strategic decision-making, regulatory alignment, and the mobility of people, data, and resources.

The withdrawal of the UK from the European Union has introduced a new context for EU–UK engagement with these infrastructures, with potential implications that extend beyond formal access or participation status. Brexit may have affected **governance and management** arrangements, particularly where EU membership, or association status, confers coordination rights, influence over strategic direction, agenda-setting, and long-term infrastructure roadmaps. Changes in the UK’s relationship with European Commission funding mechanisms may also affect the sustainability of **infrastructure operations** and upgrades especially for facilities and infrastructures that rely on EC programmes alongside national contributions. In parallel, new administrative and regulatory conditions shape the **mobility** of staff, visiting researchers, and early-career scientists, as well as the recruitment and retention of highly specialised technical expertise essential to infrastructure performance.

Beyond these core dimensions, Brexit may have also influenced **access conditions** and user rights, including allocation mechanisms, cost-recovery models and prioritisation for facility use; the integration and **visibility of UK-based nodes** within distributed European infrastructures; and the alignment of UK participation with evolving **EU regulatory frameworks** governing data, ethics, security, and digital research.

Over time, these factors may affect the UK's ability to contribute to and benefit from strategic infrastructure initiatives, to coordinate or lead EU-funded activities, and to shape future investments.

This section examines the implications of Brexit for a selected group of major European research and scientific infrastructures that are central to Europe's research capability and to long-standing EU-UK collaboration. The facilities analysed include a wide range of scientific organisational models, including large intergovernmental organisations (such as [CERN](#)), pan-European research infrastructures with legal status under the European Research Infrastructure Consortium (ERIC) framework (including [ELIXIR](#) and [Instruct](#)), advanced physical and distributed data and neuroscience platforms (including [EMBL-EBI](#) and [EBRAINS](#)).

5.3.1. ELIXIR

[ELIXIR](#) is a pan-European research infrastructure that coordinates life sciences data services, standards, and training across multiple countries. ELIXIR operates as a distributed European research infrastructure, composed of a central coordinating hub (ELIXIR Hub) and a network of national nodes. [ELIXIR-UK](#) is the UK national node of ELIXIR, comprising a consortium of UK universities and research institutes. ELIXIR-UK contributes services, training programmes, and data resources to the wider European infrastructure, while participating in European research programmes as UK institutions.

The co-location of EMBL-EBI and the ELIXIR Hub at the Wellcome Genome Campus in Hinxton (UK), together with the close involvement of ELIXIR-UK in this ecosystem, creates a unique environment that combines international, European, and national research structures.

The ELIXIR system can be understood as three interconnected layers, each with a distinct role, function and legal basis:

- **International layer (EMBL / EMBL-EBI):** EMBL ([European Molecular Biology Laboratory](#)) is an intergovernmental organisation independent of the European Union. EMBL provides the legal personality under which EMBL-EBI and the ELIXIR Hub operate, creating an international framework that is not dependent on EU membership.

- **European layer (ELIXIR Hub):** The Hub coordinates strategy, governance, and integration across countries. ELIXIR itself is governed by its member states rather than by EU institutions. Decisions on membership and strategy are made collectively by participating countries, independently of EU membership. The ELIXIR Hub is hosted by EMBL-EBI and operates under EMBL's legal personality through an agreement between EMBL and the ELIXIR member states. The ELIXIR Hub continued to participate in EU-funded projects under EMBL's legal framework, helping to maintain continuity in the infrastructure's coordination and integration functions throughout the Brexit period.
- **National layer (ELIXIR-UK):** ELIXIR operates on a national subscription model. Each of the member countries contributes a percentage of their gross domestic product (GDP) to the Hub, which uses this to operate and run international programmes that fund pan-node technical, people networking, and service work. This distributed model encourages node-node cooperation that has led to numerous consortia for European Commission and pan-European funding proposals and successful projects that do not need to have the Hub as a member. Importantly, this node-to-node support increases resilience when a country faces funding or administrative issues, such as during Brexit, by reducing dependence on a single national system and encouraging ongoing backing from other nodes.

In the UK, ELIXIR-UK receives direct support from UKRI through a rolling multi-year funding programme. In addition, the services, platforms, and expertise contributed by the node are delivered by a consortium of UK organisations that draw on multiple funding streams, including national grants, international programmes, and European research collaborations. This diversified funding model contributes to the resilience of the UK node.

Together, these **three layers contribute to the resilience of the infrastructure** by combining:

- institutional stability and an international legal framework through the international layer (EMBL)
- governance continuity and strategic coordination through the European layer (ELIXIR Hub)
- operational resilience through the distributed design of the national nodes, including ELIXIR-UK.

During the period in which the UK was not yet associated with Horizon Europe (2021–2023), UK organisations participating in ELIXIR remained involved in numerous Horizon Europe collaborations through mechanisms supported by the wider ELIXIR network and national funding arrangements, including support provided through UKRI. In this sense, ELIXIR can be viewed as a mechanism for adaptability, helping UK researchers maintain access to European scientific networks and collaborative opportunities despite broader political uncertainty.

The ELIXIR case highlights how the combination of international legal structures (EMBL), distributed European governance (ELIXIR), and sustained national investment through UKRI, helped mitigate many of the potential disruptions associated with Brexit and maintain the UK's active participation in European life sciences data infrastructures.

- **EMBL-EBI and bilateral scientific diplomacy: A targeted French initiative**

A more novel and adaptive strategy used by research infrastructures to mitigate potential Brexit disruption has been the development of **targeted bilateral science diplomacy and mobility initiatives**. These approaches aim to sustain researcher circulation, maintain training pipelines, and reinforce institutional trust during periods of uncertainty affecting multilateral European programmes.

One illustrative example is the internship programme jointly developed by the European Bioinformatics Institute (**EMBL-EBI**) and the **French Embassy in the United Kingdom**.

The European Bioinformatics Institute is one of Europe's leading centres for bioinformatics research, data infrastructure, and training in life sciences. Located in Cambridge, it operates as part of the European Molecular Biology Laboratory, an intergovernmental organisation independent of the European Union introduced in the previous case study. EMBL-EBI plays a central role in coordinating and delivering large-scale biological data resources and analytical tools used by researchers worldwide. Following the 2016 Brexit referendum, UK-based research organisations faced significant uncertainty, and although EMBL's legal status provided institutional continuity for participation in European collaborations, concerns remained about potential disruptions to talent pipelines, training opportunities, and bilateral scientific partnerships.

In this context, EMBL-EBI pursued targeted strategies to reinforce international cooperation. One notable example is [the bilateral internship programme established with the French Embassy in the United Kingdom](#), which was launched in 2017, when the aforementioned issues were particularly acute. The programme sought to preserve Franco-British scientific collaborations in life sciences, including shared interests in environmental genomics and national research priorities such as the France Genomic Medicine Plan, by creating a

structured mobility pathway for French Master's students specialising in bioinformatics and life-science data science. Since its establishment, the programme has supported more than forty students, with growing demand and application numbers.

The wider policy landscape has since evolved. The United Kingdom's association to Horizon Europe and renewed participation in Erasmus+ have reduced some of the systemic risks initially anticipated. Nevertheless, the EMBL-EBI-French Embassy initiative remains a relevant example of how scientific institutions can deploy **science diplomacy and targeted mobility schemes** as adaptive responses to geopolitical uncertainty. More broadly, this case illustrates that large research infrastructures are not only technical platforms but also actors capable of shaping collaboration ecosystems.

5.3.2. Instruct

[Instruct-ERIC](#) is a pan-European research infrastructure that provides access to advanced technologies, services, and expertise in structural biology. Established in 2017, Instruct-ERIC operates as a distributed infrastructure linking specialist centres across member countries through a central coordination hub based in Oxford (UK), offering centralised access, training, and data services.

The ERIC (European Research Infrastructure Consortium) framework was created by the European Union to facilitate the establishment and operation of large-scale research infrastructures such as Instruct. ERICs benefit from a common legal personality recognised across participating countries and are designed to support long-term scientific collaboration through shared governance and coordinated access arrangements. Membership of an ERIC must include at least three EU Member States, but may also include associated countries, third countries, and intergovernmental organisations. Crucially, ERIC regulations specify that the statutory seat of an ERIC - the official legal domicile - must be located within a member that is either an EU Member State or an associated country.

This distinction became particularly important for Instruct and other ERIC infrastructures with statutory seats based in the UK, following the UK's withdrawal from the European Union. To address this uncertainty, Instruct-ERIC revised its statutes in May 2019. The statutes introduced a contingency mechanism that would allow relocation of the statutory seat from Oxford (UK) to Florence (Italy) should the legal conditions for maintaining the seat in the UK cease to be met by ERIC regulations. This amendment did not constitute a relocation of the seat, nor did it change the organisation's governance structure. Rather, it represented a prudent legal safeguard designed to ensure continuity under the range of Brexit scenarios under consideration at the time.

Managing uncertainty through transition periods

The period between the UK's withdrawal from the European Union in January 2020 and its association to Horizon Europe in 2024 created a potentially complex regulatory environment. Although the UK became a third country following the end of the Brexit transition period in 2020, the contingency clause was never activated and the statutory seat remained in Oxford. During this period, Instruct-ERIC continued to operate Horizon 2020-funded activities and other ongoing European collaborations while negotiations regarding the UK's longer-term participation in European research programmes continued. When the UK formally became an associated country to Horizon Europe in 2024, the conditions required under the ERIC framework for hosting the statutory seat were once again clearly secured.

Perhaps the most notable feature of the Instruct case during this transitional time is the **absence of any significant operational disruption**. Throughout the Brexit process, researchers continued to access facilities, services, training programmes, and scientific networks through the infrastructure. There is no evidence that user rights, access mechanisms, service provision or governance structures were altered as a result of the UK's withdrawal from the EU. Instruct's organisational design enabled scientific activities to continue largely unaffected while legal contingencies were managed in the background.

Looking ahead, uncertainty may again arise regarding full or partial participation in Horizon Europe successor, FP10 (and subsequent). As demonstrated during the Horizon 2020–Horizon Europe transition, such changes would likely be accompanied by transitional arrangements and ongoing project lifecycles that would provide time for adaptation rather than requiring immediate institutional restructuring. However, this highlights the ongoing dependence on governance arrangements and underscores **the need for long-term sustainability plans** for the broader EU–UK research relationship.

The Instruct-ERIC case demonstrates that the consequences of Brexit for research infrastructures extend beyond questions of access, funding, or participation. For infrastructures operating under EU legal frameworks, Brexit also generated uncertainty regarding regulatory compliance and governance arrangements. Instruct's response illustrates how proactive legal planning and transitional arrangements can mitigate such risks while preserving operational continuity.

5.3.3. CERN

[CERN](#) is one of the world's leading research infrastructures in particle physics, hosting major facilities such as the Large Hadron Collider (LHC). Established in 1954, CERN operates as an intergovernmental organisation under international treaty law, independent of the European Union. Its governance is centred on the CERN Council, where Member States are represented and contribute financially to the organisation's long-term scientific programme. This model provides CERN with legal autonomy, financial stability based on national contributions, and a high degree of insulation from EU political and regulatory

changes. Operationally, CERN combines a centralised physical infrastructure located in Geneva with large-scale international scientific collaborations, bringing together thousands of researchers from across Europe and beyond.

In contrast to infrastructures established under EU legal frameworks, Brexit has not directly affected CERN's legal structure or the UK's formal status within it. The UK remains a full Member State, retaining representation in governance bodies, continued participation in experiments, and access to facilities and leadership roles within major collaborations. This reflects the robustness of CERN's intergovernmental model, which operates independently of EU membership and has historically enabled stable, long-term cooperation across political boundaries.

However, recent developments suggest that **Brexit-related effects** may be emerging in more indirect ways, particularly through **national funding decisions**. Ongoing discussions around UK science funding have raised concerns about the country's ability to sustain its financial commitments to major CERN upgrade programmes, including those associated with the High-Luminosity LHC and detector upgrades such as LHCb. [Reports](#) and [press releases](#) indicate that potential reductions or reallocations of UK funding could affect the pace and scope of these upgrades, prompting responses from scientific collaborations, parliamentary scrutiny, and exchanges between the UK government and UKRI.

This situation underscores a key distinction in how Brexit affects different types of research infrastructures. In CERN's case, the legal and governance framework remains intact, but the infrastructure is inherently dependent on sustained national contributions from its Member States. As a major contributor, any change in the UK's funding commitments has the potential to influence specific experiments, delay upgrade timelines, or require adjustments within the broader collaboration. More broadly, it reflects an emerging tension between the long-term, collective investment model required by large-scale infrastructure and the shorter-term budgetary and strategic pressures shaping national research systems in the post-Brexit context, in which scientific priorities may no longer fully align between the UK and the EU.

In this sense, CERN demonstrates both the resilience and the evolving vulnerabilities of intergovernmental research infrastructures. Its legal independence has ensured stability in the face of geopolitical change, but its reliance on national funding exposes it to new forms of risk. The UK remains an integral part of CERN, yet its future influence and level of participation will increasingly depend on sustained national financial commitment and alignment with long-term international scientific priorities.

5.3.4. The Human Brain Project and EBRAINS

The Human Brain Project (HBP) was one of Europe's most ambitious large-scale research initiatives, launched in 2013 under the EU's Future and Emerging Technologies programme. Over a ten-year period, it brought together more than one hundred institutions across Europe, integrating neuroscience, computing, and data science to develop advanced digital tools, data platforms, and computational models for brain research. The project was primarily funded through EU Framework Programmes (FP7 and H2020), complemented by substantial national investments, and included strong participation from UK institutions. These institutions played prominent roles across the project, including scientific leadership, coordination of work packages, and contributions to the development of core infrastructure components.

The main legacy of the HBP is EBRAINS, designed to bring together data, models, atlases, software tools and computing resources into a single, accessible ecosystem. Recognising the need for long-term sustainability and Europe's priority research infrastructures, EBRAINS was established in 2019 as an independent international non-profit association (AISBL, Association Internationale Sans But Lucratif). This fact marked a transition from project-based development to a sustainable, **more institutionalised, and membership-based model** (ESFRI) where infrastructure long-term planning, access to governance and strategic decision-making is determined by formal institutional participation. Due to its current strategic importance it was suggested to adopt a European Digital Infrastructure Consortium (EDIC) legal structure as a future option, aligning with other mature European infrastructures.

Brexit has had a significant and visible impact on the UK's position within this transition in two aspects. While UK institutions were deeply embedded in the HBP and contributed substantially to its scientific and organisational development, **no UK organisation is currently a formal member of EBRAINS**. Consequently, the UK is not represented in the infrastructure's governance bodies and does not participate in strategic decision-making processes, including the definition of future priorities, investment directions, and infrastructure development pathways. Although UK researchers can still access EBRAINS services and collaborate scientifically, their engagement is now largely external to the core institutional framework. On the other hand, EBRAINS, as a permanent infrastructure, relies on a combination of EU project funding (e.g. Horizon Europe), member contributions and national node support. Changes in the UK's relationship with EU funding mechanisms therefore had direct implications for long-term participation, leadership opportunities and infrastructure sustainability.

This marks a clear shift from **active leadership and coordination within a major EU-funded project to absence from governance in its successor infrastructure**. Compared to other research infrastructures analysed in this report, EBRAINS represents one of the most pronounced examples of Brexit impact, where the transition from a project-based model to a formal legal entity has effectively resulted in the **absence of UK institutions from governance structures**, rather than simply a reduction in participation or influence.

Looking ahead, EBRAINS is further consolidating its role within the European research landscape, including the development of a long-term roadmap for 2026–2036, which will define priorities in digital neuroscience, data infrastructure, and AI integration. [Participation in this process](#) is critical for shaping the future direction of the infrastructure and aligning national research strategies with European developments. By engaging at this formative stage, the UK could help shape, rather than react to, the future architecture of European digital neuroscience infrastructure in ways that support both scientific leadership and long-term economic and health impact. In this context, the absence of UK institutional membership not only limits the country's ability to influence emerging priorities, but also risks reducing its visibility, integration, and leadership in a rapidly evolving and strategically important field.

6. Conclusions

Brexit has not broken the relationship between the UK and the European research community, but it has fundamentally altered the terms on which that relationship operates. Across funding, mobility, and shared infrastructure, the evidence gathered in this report points to a research relationship in which formal access has been largely preserved or restored, but in which the depth, reciprocity, and strategic reach of collaboration have been materially affected. The restoration of formal association and the continuity of operational access to major research infrastructures confirm that the institutional foundations of EU-UK scientific cooperation remain intact. However, the data consistently indicate that restoration of formal access and restoration of substantive participation are not equivalent, and that the distance between the two reflects structural adjustments that extend beyond what formal re-association alone can resolve.

In research funding, the UK's re-association with Horizon Europe in 2024 has restored a baseline level of engagement, and early indicators suggest that UK organisations are performing competitively where they do participate, converting engagement into funded outcomes at a relatively high rate. Nevertheless, participation levels and funding volumes remain well below those recorded under H2020, and the pattern of engagement reveals meaningful structural shifts. The UK's thematic funding profile is distinctively weighted toward Pillar 1 relative to all comparator countries, with the UK being the only participant for which Excellent Science funding exceeds Global Challenges funding in absolute terms. This reflects not a weakness in individual research capacity, but rather the erosion of the consortium relationships and collaborative networks that are necessary for sustained success in applied, mission-oriented, and multi-partner research. Pillar 2 participation is inherently dependent on established joint working arrangements, institutional familiarity, and a track record of collaborative delivery, precisely the conditions that a prolonged period of non-association is likely to have disrupted. The divergence is also visible at the instrument level: the ERC shows the most pronounced contraction, with UK-based principal investigators accounting for just 4% of applicants compared to approximately 18% under H2020, while the EIC has shown greater continuity. Collaborative links since re-association are concentrated among the larger, research-intensive member states, and the 3,055 joint projects established to date represent an early-stage rebuilding of bilateral research connections rather than a consolidated recovery. The extent to which participation in consortium-based and mission-oriented research recovers will depend on the gradual re-establishment of the working relationships and bilateral partnerships that underpin success in this domain.

In mobility, the effects of Brexit are among the most pronounced documented in this report, and they span multiple dimensions of the academic community. EU student enrolments in UK higher education have fallen by approximately 58 to 59% since 2020/21, and the decline in EU postgraduate research students, at around 41 to 47%, carries particular significance given the centrality of this cohort to research productivity, joint doctoral networks, and the longer-term bilateral research pipeline. The EU share of new international

postgraduate research enrolments has contracted from approximately 25% to 11% over this period, a shift with cumulative implications for co-authored outputs and the formation of research relationships across career stages. Among academic staff, the trajectory is more gradual but directionally consistent: EU nationals remain a significant presence in UK universities, but their numbers have plateaued and edged into modest decline since the pre-Brexit peak, while non-EU academic staff have grown at a substantially faster rate and now surpass EU nationals in absolute terms. The overall inflow of overseas researchers into UK higher education has remained positive, but this flow is increasingly driven by non-EU recruitment, meaning that the specifically European dimension of research workforce mobility is contracting even as aggregate numbers hold up. In structured mobility, the UK's withdrawal from Erasmus+ removed the reciprocal dimension of EU-UK student exchange, and the Turing Scheme, while growing and covering approximately 40% of its outflows to Erasmus+ member countries, operates on a unilateral basis that leaves incoming EU mobility without a comparable structured mechanism. This asymmetry limits the degree to which formal mobility programmes can sustain the bidirectional exchange of students and researchers that characterised the pre-Brexit relationship.

In shared research infrastructure, Brexit's effects have been most visible in governance, strategic influence, and the conditions under which UK institutions engage, rather than in operational access, which has generally continued. Research infrastructures have demonstrated considerable institutional resilience, deploying a range of adaptation strategies to preserve scientific links and operational stability. Where international legal status has insulated infrastructures from EU regulatory frameworks, continuity has been achieved with relatively limited disruption. However, this operational continuity has in certain cases been accompanied by a shift in the UK's formal position within governance structures, with UK institutions moving away from consolidated decision-making bodies, leadership roles, and strategic planning processes. Research infrastructures are not solely facilities for scientific access; they are also arenas in which long-term research agendas are negotiated and priorities are set. The UK's reduced governance role therefore carries implications beyond day-to-day operational participation, affecting its capacity to shape infrastructure roadmaps, influence funding priorities, and maintain the institutional relationships that support strategic collaboration over time. Sustaining the UK's role in these infrastructures will rely on: i) continued funding association; ii) active participation in roadmapping and governance processes, and iii) targeted bilateral engagement that reinforces the UK's position as a substantive partner within European research infrastructure networks.

Across all three dimensions, a common structural dynamic is apparent. The period of non-association and the broader post-Brexit transition did not simply interrupt established patterns of collaboration; in several areas they prevented new relationships, networks, and partnerships from forming. Early-career researchers, doctoral students, and emerging collaborative consortia are particularly affected by this, as the disruption occurred during a period that would otherwise have nurtured the next generation of cross-border working relationships. The restoration of formal frameworks is a necessary condition for addressing

this, but the recovery of substantive collaboration is a slower and more contingent process. It will depend on the gradual rebuilding of values of scientific cooperation, including openness, trust, reciprocity, and people-to-people exchange. These are values that underpin European and UK research ecosystems alike, therefore it is a matter of reestablishing institutional familiarity and the accumulated experience of joint working across European research communities.

**The EU-UK
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Funding, Mobility,
and Shared Research
Infrastructure**

Review of key indicators
by CONNECTS-UK

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