



**Stick to Science**  
Put science collaboration before politics

## Factsheet

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### **About Horizon Europe**

The EU Research Framework Programmes (FP) are the main instruments used by the European Union to implement its common science and technology policy built on the basis of European scientific collaboration dating back to the 1950s. The aim of FP is to encourage balanced scientific and technological development in Europe. They establish the scientific and technological objectives, the criteria and priorities for selection of research activities, as well as a financial framework. As an instrument, the FP are designed to further integrate research within the EU. Following the principle of subsidiarity, they support research activities which offer advantages over national activities.

The European Union's (EU) 9<sup>th</sup> Framework Programme (FP), Horizon Europe, runs from 2021 to 2027. It is the largest research and innovation funding programme in the world with a budget of almost €97 bn (CHF 100.7 bn, £80.6 bn) including EURATOM, a funding programme to Horizon Europe which covers nuclear research and innovation. The budget will be used to support research and innovation across the EU – mostly through grants for projects and individuals. Associated Countries can top-up this €97 bn European budget with their own association contributions. The selection of projects to be funded is mainly implemented through open calls for proposals, selected according to excellence, impact and the quality and efficiency of implementation. Funding can be received by legal entities from EU countries and from so-called Associated Countries, as they co-finance the European funding pot. Switzerland was associated since 2004 to predecessor FP programmes and is seeking a full association again to Horizon Europe and its related programmes and initiatives. Technical talks towards the association of Switzerland have not started yet. The UK already negotiated its association within the Trade and

Cooperation Agreement and its Protocols, and its association only needs to be now formalised.

## **Political situation**

### **Switzerland**

Switzerland is currently a non-associated third country in Horizon Europe and related programmes and initiatives, as technical talks towards its association have not yet started. Under this status, researchers and innovators in Switzerland can participate in roughly two-thirds of the programme, funded directly by the Swiss government, but can no longer lead or coordinate scientific projects.

All preparatory actions for association were completed on the Swiss side by December 2020. The Swiss State Secretariat for Education, Research and Innovation (SERI) confirmed to the European Commission (EC) the interest of Switzerland for its continuous association, after the Swiss Parliament adopted the Federal Council's budget request of € 5.4 bn (CHF 5.6 bn) for the Horizon package for 2021-2027.

Concerning the general CH-EU relations, the Swiss Federal Council decided in May 2021 to leave the negotiations on the institutional agreement, which aimed at regulating five existing market access agreements, as no consensus on the agreement could be found in Switzerland. Following the break of negotiations, the EC removed Switzerland from the list of countries to be shortly associated to Horizon Europe in June 2021.

Since then, the EC has stated that it is not in a position to discuss the next steps towards association and expects Switzerland to present a new roadmap on how the general CH-EU relations should evolve. For this reason, uncertainty remains as to whether or not Switzerland will be able to participate as an associated country in 2022 or later on in the programme.

Swiss participation in the EU Framework Programme for Research and Innovation is part of the first series of bilateral agreements between Switzerland and the EU that came into effect in 2002 and has to be renewed for each budget cycle. However, the EU now views Switzerland's association to Horizon Europe in the light of overall relations between Switzerland and the EU.

In addition, the EU requests a new form of agreement with third countries such as Switzerland, a so-called "specific agreement", which will take several months to be negotiated and adopted by the EU. This however does not require the conclusion of a new institutional agreement (i.e., no regulation of institutional issues regarding market access agreements), but aims rather for a simpler treatment of Switzerland's participation in EU Programmes (such as Horizon Europe).

Switzerland's status in Horizon Europe can change at any time upon the decision of the EC.

Switzerland has always been, and continues to be, ready to start negotiations for this new form of association agreement and would like to commence negotiations immediately. The Federal Council declared that it is its goal to seek association to Horizon Europe and other related programmes and initiatives as soon as possible.

Further Information on the political situation in Switzerland regarding Horizon Europe can be found here: [www.horizon-europe.ch](http://www.horizon-europe.ch)

## UK

The UK-EU Trade and Cooperation Agreement (TCA) from December 2020 set out a shared ambition for the UK to become an associated country to Horizon Europe and other EU science programmes. The technical details of the UK's participation in EU programmes were agreed in the draft Protocol I, which was included as an annex to the TCA. Protocol I must be adopted by the EU-UK Specialised Committee on Participation in Union Programmes in order for the UK to become an associated country in Horizon Europe.

Presently, the UK is not associated to Horizon Europe, but UK entities are eligible to apply for Horizon Europe calls. In response to the delay in finalising the UK's association, the UK government has announced a financial safety net for successful applicants. This means that regardless of the outcome of the UK's efforts to associate to Horizon Europe, successful applicants will receive guaranteed funding from UK Research and Innovation. Nevertheless, the UK government's priority remains association to Horizon Europe and the guarantee is a short-term measure intended to cover calls until the EU formalises UK's association.

To participate as an associated country in Horizon Europe, the UK will contribute financially to the scheme through an operational fee and a participation fee. The UK's contribution will be topped up with UK receipts exceeding its upfront contribution. There are also mechanisms for the UK to review its participation if funding drops below a certain level.

In the Spending Review 2021, the UK Government announced that it has put aside £6.9 billion (€6.5 bn) for Horizon Europe association up to 2025.

Table: Departmental Capital budgets (Capital DEL) on Research and Development (R&D)

£ bn (current prices)	Plans 2021-22	Plans 2022-23	Plans 2023-24	Plans 2024-25
Department for Business, Energy and Industrial Strategy: EU Programmes Association	1.3	1.2	2.3	2.1

Source: Gov.uk: [Autumn Budget and Spending Review 2021](https://www.gov.uk/government/consultations/autumn-budget-and-spending-review-2021)

If extrapolated until the end of the Horizon Europe programme, the UK would receive £6.9 bn (€8.3 bn) + approximately £4.1 bn (€4.9 bn) in 2026 and 2027 equivalent to £11 bn (€13.2 bn). This means that the UK contribution to the Horizon Europe funding is equal to 13.6% of the European Commission's total funding for the programme - € 95.5 billion (£79.4 bn).

Adding the Swiss contribution (CHF 4.7 bn = €4.5 bn), the total of UK + CH funding would bring to the table is more than €17 billion. That is approximately an 18% top-up to the €95.5 bn budget of Horizon Europe.

## **Contribution to the predecessor programme Horizon 2020**

### **Switzerland**

Switzerland and the EU share a long-standing and successful cooperation in the area of research and innovation. Within the framework of Horizon 2020, more than 4,000 Swiss project participations came about, with a total of around CHF 2.6 billion (more than 2.5 billion Euros) flowing into Switzerland, Switzerland being the most active associated country. The Swiss federal government paid around CHF 2.4 billion (more than €2.3 bn) into the programme. Researchers based in Switzerland coordinated a total of 1,211 projects (this corresponds to 3.8 percent of all European coordinations). Projects with Swiss participation rank amongst the ones with the highest publication impact, enhancing thus their scientific quality.

Sources: [SERI, Facts and Figures on the Swiss Participation in the EU Framework Programmes for Research and Innovation](#) and [SERI, Added Value of Swiss Participation in the EU Framework Programmes for Research and Innovation](#)

### **UK**

The UK was a full participant in the entire Horizon 2020 programme until its conclusion at the end of 2020, even after the UK left the European Union in January 2020. The UK participated in calls with 160 countries in Horizon 2020. The UK's share of funding dropped from a peak of 26.7 percent in 2014 to 13.4 percent in 2020. Nonetheless, the UK was one of the top performing nations in the programme, especially when looking specifically at university participation. UK university researchers participate in and lead more Horizon 2020 projects than any other participant country, and the UK had one of the programme's highest funding bids success rates (15%).

Source: [UUKi, International Facts and Figures 2021](#)

### **Longstanding and attractive partners**

Scientific cooperation between Switzerland and the European Union has a very long tradition and includes highlights such as the founding of CERN in 1954. CERN is the world's largest research centre in the field of particle physics. Switzerland is also a founding member of the European Space Agency (ESA), established in 1975, and has been cooperating with the

European Atomic Energy Community (Euratom) in the field of nuclear fusion and plasma physics since 1978 - a few of many examples.

The UK has a long-standing relationship in research with the European Union Member States. Similarly to Switzerland, the UK is a member of CERN, and multiple pan-European research organisations, such as: the European Synchrotron Radiation Facility (ESRF), the European Molecular Biology Organisation (EMBO), European Molecular Biology Laboratory (EMBL), the European Southern Observatory (ESO), the ITER Organisation, the European Space Agency among others.

The UK hosts the headquarters of 6 pan-European research facilities, distributed across multiple participating countries, and is part of ten pan-European research facilities located in other European countries. Similarly to Switzerland, the UK is a member of pan-European research facilities entirely based beyond its borders, such as the European Hard X-Ray Free Electron Laser (European XFEL) based in Germany.

The exclusion of Switzerland and the UK damages long-standing research networks built over years and thus the quality of European cutting-edge research such as quantum computing, artificial intelligence, and climate mitigation.

The Swiss research projects funded by the ERC regularly address some of the most important challenges of today - for Europe as well as worldwide. The latest Starting Grants for ETH Zurich researchers, for example, concern projects around antibiotic resistance, trustworthy AI, and the robustness of security authorities' databases. Switzerland has an above-average success rate in obtaining grants (ratio of the number of funded projects to the number of project proposals submitted), which indicates a high quality of participation. In Switzerland, this ratio is 17.5%, representing 2.5 percentage points above the average of all member states and associated countries (for the period 2014 - 2019).

Source: [SBFI, Research and Innovation in Switzerland 2020](#) and [Added Value of the Swiss participation](#).

The UK has traditionally been a key figure in producing innovative research to address global challenges. UK researchers are at the forefront of the fight against the pandemic, working with partners from Europe and around the globe to produce high performance ventilators at low cost and increase disaster resilience. UK universities continue to strengthen their research partnerships with European counterparts post-EU exit, with the government announcing that the UK will associate to Horizon Europe.

In 2020, UK universities continued to produce high-quality and globally collaborative research, attracting world-leading researchers and investment from around the world. The UK is a science superpower, with a research base that continues to outperform its demographic status. Although the full impact of the Covid-19 pandemic on the R&D sector is not yet clear, the UK has continued to prioritise international research collaboration.

The UK and Switzerland have some of the best universities in the world. In this year's [QS ranking](#), five of the top ten places are held by institutions from the two countries.

In order to assess the scientific performance of a country, it can also be helpful to look at the number and quality of scientific publications. Publications by UK and Swiss researchers account for 4.7% and 1.1% of the global scientific output. Both countries have an excellent impact factor (frequency with which a publication is cited in other publications); in an international comparison with selected countries\*, the UK ranks second and Switzerland third in this regard. They are also well connected internationally: The proportion of publications produced by researchers from different countries is an indicator of the mutual exchange of knowledge. In the period from 2014 to 2018, the proportion of publications based on international partnerships in Switzerland was 85%. This positions Switzerland at the top of the list of comparator countries; the UK follows in fourth place.

\*In the study conducted by the SERI the following countries were compared: Switzerland, China, Denmark, Germany, Finland, France, Israel, Italy, Japan, Austria, the Netherlands, Norway, Sweden, Singapore, South Korea, the USA and the United Kingdom.

Source: [SERI, Research and Innovation in Switzerland 2020](#)