

# Horizon2020 UK Options

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# Introduction

With the UK's departure of the EU, the position of the UK within the current EU science & technology programme, Horizon2020 (H2020), must be considered. There are two likely options in accessing H2020 post-Brexit, associate membership or a non-associated third country. The options for affiliation have been covered in detail in the report "Norway's affiliation with European Research Programmes"<sup>1</sup>, and this document will build rely heavily on this report whilst seeking to examine these options in relation to the UK. Furthermore the document will cover the funding the UK has previously received from framework programmes, focussing on the "space" theme.

## Associateship

The following section builds heavily on the work, [Norway's affiliation with European Research Programmes](#) by technopolis

In article 7 of the H2020 regulation<sup>2</sup>, the association of third-parties is outlined and falls into three categories:

1. Countries that are acceding to the EU, candidate countries to the EU or potential candidates to the EU
2. Members of the European Free Trade Area(EFTA) or European Neighbourhood Policy(ENP)
3. Countries or territories associated to framework programme 7 (FP7), the previous science and technology framework.

Upon leaving, the UK may fall into the second or third categories of this article. Furthermore the article stipulates

*"Specific terms and conditions regarding the participation of associated countries in Horizon 2020...shall be determined by international agreements between the Union and the associated countries."*,

requiring that any involvement in H2020 will need a new agreement regardless of the UK's membership of any organisation such as EFTA/ENP. Contributions of associated members are determined by a formula relating between the GDP of the associate member and the total GDP of the EU.

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<sup>1</sup> [Norway's affiliation with European Research Programmes](#) - Chapter 5 covers various types of affiliations

<sup>2</sup> [REGULATION \(EU\) ... Horizon 2020 - the Framework Programme for Research and Innovation\(2014-2020\) ... pg 8](#)

## Horizon2020 Associated Members<sup>3</sup>

Further information on how these countries are defined and what treaties they are bound by can be found in section 5.2.1 in [Norway's affiliation with European Research Programmes](#)

- Associated through category 1 (acceding countries)
  - Albania
  - Bosnia and Herzegovina
  - the former Yugoslav Republic of Macedonia
  - Montenegro
  - Serbia
  - Turkey
- Associated through category 2 (EFTA/ENP member)
  - European Free Trade Area and European Economic Area (EEA EFTA)
    - Iceland
    - Norway
  - European Free Trade Area (non-EEA EFTA)
    - Switzerland
  - European Neighbourhood Policy (ENP)
    - Armenia
    - Georgia
    - Israel
    - Moldova
    - Tunisia
    - Ukraine
- Associated through category 3 (FP7 member)/Bespoke Association
  - Faroe Islands (International S&T Association Agreement)

## EFTA

The European Free Trade Area(EFTA) is a free trade area set up in 1960 that runs as a parallel alternative to the EU. There are 4 members in total, Iceland, Norway, Switzerland and Liechtenstein.

In relation to H2020:

- Norway and Iceland are associated countries of H2020,
- Liechtenstein is not a member of H2020
- Switzerland has series of bilaterals agreements and is covered in detail below

However, UK's membership of EFTA is unlikely due to the recent announcement by Brexit Secretary, David Davis, that the UK will not join EFTA<sup>4</sup>.

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<sup>3</sup> [Horizon2020 Associated Countries](#)

<sup>4</sup> [David Davis rules out EEA or EFTA membership for UK after Brexit - Business Insider](#)

## Switzerland & H2020

Switzerland's position in H2020 has varied over the years<sup>5</sup>, originally having 'partial' association<sup>6</sup> until February 2014 through a series of bilateral agreements including one on free movement. Switzerland's participation in the science and technology agreements had been mostly successful, 'According to the "Innovation Union Scoreboard 2013" Switzerland was the overall innovation leader' and the fourth highest proposal success rate<sup>7</sup>.

In February 2014, a referendum on limiting immigration to Switzerland was passed, preventing the Swiss government from agreeing to expand free movement to Croatia, consequently negotiation between the EU and Switzerland started on a new agreement. On 26th Feb 2014, after the referendum result, the EU announced that Switzerland would be downgraded to third country status for 2014 and that it could no longer apply for European Research Council grants.

After ratification of free movement to Croatia, Switzerland was readmitted to Horizon2020 on 1st Jan 2017 as a 'full' associated country, giving them access to all areas of H2020.

## ENP

The European Neighbourhood Policy (ENP)<sup>89</sup> is a EU policy designed to strengthen relations and encourage reform in countries neighbouring the EU. The ENP has two main areas, the Eastern Partnership (EaP) covering post-soviet states in the East and North African countries. The policy operates by providing funding for social and political reforms in these countries, in return, bringing them closer to a fair and democratic society.<sup>10</sup>

As the UK does not meet the aims of such a policy, it is unlikely that it would be admitted into the policy.

## International S&T Association Agreement

### Faroe Islands & H2020

*"Legally, this Agreement is similar to the previous construction under which ENP countries were associated."*<sup>11</sup>

The Faroe Islands are a self-governing nation within the Kingdom of Denmark and are not part of the EU. They hold associated country status with H2020 after having been associated with FP7.<sup>12</sup>

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<sup>5</sup> [Debunking the myths about British science after an EU exit - Mike Galsworthy, LSE Blog](#)

<sup>6</sup> 'partial' due to Switzerland's non-involvement in all areas of H2020 - [Swiss participation in Horizon 2020](#)

<sup>7</sup> see 5

<sup>8</sup> [New neighbourhood policy strategy](#)

<sup>9</sup> [ENI - the European Neighbourhood Instrument \(2014-20\)](#)

<sup>10</sup> [A New Response to a Changing Neighbourhood : A review of European Neighbourhood Policy](#)

<sup>11</sup> [Norway's affiliation with European Research Programmes : Section 5.2.1](#)

The Faroe Islands are neither part of the EU nor the Schengen Area,<sup>13</sup> however, they are part of the Nordic Passport Union, which allows movement and residency rights between Iceland, Denmark, Norway, Sweden, and Finland without travel documentation.

## Third Countries

As noted in “Norway’s affiliation with European Research Programmes”, there are two ways to affiliate as a third country with Horizon2020,

*“they can either sign a bilateral S&T cooperation agreement, or they can be labelled as an international cooperation partner country (ICPC)”.*

### International Co-operation Partner Country (ICPC)

ICPCs are labelled as low-income countries using the World Bank’s definition. These countries are *“eligible to participate in the FP and receive funding according to the same rules for remuneration applicable to member states and associated countries.”*. The UK is not in this category and therefore ineligible for funding.

### Bilateral S&T Agreement

These are agreements between the EU and developed/emerging economies for common research interests. The UK is likely to fall into this category as a developed country, so the EU would not generally support funding, although there are exceptions. For example, in the EU guidance for the USA, it notes

*“While the European Union will fund the participation of partners from developing countries, it does not automatically fund the partners from industrialized countries such as USA.”*

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<sup>12</sup> [Agreement between the EC and the Government of the Faroes ...associating the Faroe Islands to the European Community's Seventh Framework Programme](#)

<sup>13</sup> [Agreement on ... Kingdom of Denmark to the Convention implementing the Schengen Agreement](#)

# Likely UK-EU Science Situations

Scientists for EU

*“freedom of movement will cease to apply in the UK”, we openly wonder at the notion that Brexit Britain should have a more privileged status with the EU than Switzerland or Norway who subscribe to Free Movement, accept ECJ jurisdiction on projects and have close Single Market bonds.”<sup>14</sup>*

Based on previous cases of non-EU H2020 access, the two most likely scenarios are association through an S&T Association agreement (e.g Faroe Islands) or a third party country through bilateral S&T agreement (e.g USA). Due to compromises that Switzerland has made over the four freedoms, it is unlikely that the UK would receive a similar association.

Examining the conclusions drawn from *Norway’s affiliation with European Research Programmes*, similar conclusions can be applied in the UK, using scenarios 3 & 4 from the report. Scenario 3 being H2020 associated country and scenario 4 being third party country.

	UK as associated country	UK as a third-party
Programme influence	The UK loses its formal vote on Programme Management Committees, but still can observe	The UK loses its position on H2020 Committees  The UK loses funding access from EU, particularly ERC grants.  Only available in “ <i>unique research infrastructures, essential participation of certain legal entities, reciprocal opening of research programmes and IPR problems.</i> “
Financial Contribution	GDP formula, same as current situation	Contribution reduced due to selective nature
Collaboration	No expected differences to current	Can no longer lead H2020 consortia
Legal Agreements	Likely to be a lengthy procedure, impacting researchers access to calls and funding. For Switzerland and Norway, expected time for	On US-EU S&T agreement : “ <i>It is renewed every five years. If certain calls lead to cooperation of</i>

<sup>14</sup> [Scientists for EU and partners respond to the UK Government’s position paper on Science](#)

	agreement was 2 years.	<i>U.S. legal entities, specific legal agreements have to be signed on this cooperation. U.S. legal entities have to bring their own money”</i>
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# UK Research Funding

The following section builds a lot of material from the report, [The role of EU funding in UK research and innovation](#) by technopolis

As noted in the technopolis report, the EU provides funds for research in three main methods:

1. EU Framework Programmes for research and innovation
2. European Regional Development Fund (ERDF)
3. Loans from the European Investment Bank (EIB)

This section will focus on funding through the first channel, the framework programmes of the EU. The framework programme has changed over the years, with the altering of the thematic themes<sup>15</sup>. Prior to FP6, “Space” was not on the framework agenda, in FP6, the “Aerospace” thematic theme was introduced, followed with “Space” in FP7 and FP8, showing the growing importance of the space sector. The space sector appears in two parts of H2020, firstly, through the “space” thematic area previously mentioned, these grants are focussed on industry and capability development. The second part is funding through European Research Council (ERC) grants, which are for fundamental research.

Currently, the UK receives approximately €1.1bn a year from EU framework programmes and EU regional development funds<sup>16</sup>, equivalent to more than 10% of government R&I spending. In 2014/15, Higher Education Institutions reported £725m in EU funding, accounting for 12% of their research income. Natural Sciences dominate these funds with

*“HEIs reporting around £366m in EU research income (50%) for the top five subjects (by income) combined. These comprise Clinical medicine (£119m), Biosciences (£90m), Physics (£55m), Chemistry (£54m) and IT (£46m).”*

Looking at FP7, the thematic area of space received €1.43bn (2.8%) of the €50.5bn FP7 budget.<sup>17</sup> In addition, from the ERC grants that funds fundamental research, the Universe Sciences thematic area received €250m(3.3%) of the €7.51bn allocated. The UK has been particularly successful in these grants, receiving 22.4% of them during FP7<sup>18</sup>.

Moving forward to Horizon2020, the total budget has increased to €87.7bn and the “space” thematic theme budget raised to €1.5bn<sup>19</sup>. Looking at the work programme yearly budget, between the years 2016 and 2017 the H2020 budget for space increased from €167m to €184m, representing a 10% increase<sup>20</sup>.

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<sup>15</sup> [Ex-Post-Evaluation of the 7th EU Framework Programme \(2007-2013\) : page 18](#)

<sup>16</sup> [The role of EU funding in UK research and innovation : page 18](#)

<sup>17</sup> [EU webpage of Space thematic area of FP7](#)

<sup>18</sup> [The role of EU funding in UK research and innovation : page 13](#)

<sup>19</sup> [THE SPACE THEME OF THE HORIZON 2020 PROGRAMME](#)

<sup>20</sup> [Horizon 2020 Work Programme 2016 - 2017 : 5 iii. Leadership in Enabling and Industrial Technologies -Space](#)

# Conclusion

Jo Johnson, minister of state for universities, science, research, and innovation:

*“We haven't been specific about the exact mechanisms and modalities that would make that kind of relationship possible, because, as you understand, it's all still subject to the discussions that are ongoing in Brussels.”<sup>21</sup>*

There was a €3.4 billion surplus between UK-EU R&D contributions (€5.4bn) and EU-UK R&D funding (€8.8), which €6.9bn was through FP7, during the 2007-2013 period. This loss of funds will have a large effect on UK science, particularly in domains where a large portion of funds are provided by the EU<sup>22</sup>.

The UK government has agreed to underwrite all H2020 projects up to 2020<sup>23</sup>, providing some stability in the research community. However, in the government's recent policy paper<sup>24</sup>, no further guarantees have been made on continued framework participation.

There are moves by the UK government to fund international research outside the EU, which have been welcomed by the science community. For example, the UK's £65m investment in the Long Baseline Neutrino Facility (LBNF) and Deep Underground Neutrino Experiment (DUNE)<sup>25</sup>, representing the first large scale government support for UK-US science collaboration.

Considering the immense challenge of Brexit and the current stage of the negotiations, a picture of post-Brexit science is hard to paint. Trying to resolve the government's commitment to EU science collaboration, stating that *“the UK would also like to explore forging a more ambitious and close partnership with the EU than any yet agreed between the EU and a non-EU country.”<sup>26</sup>* and the government's non-committal stance on the four freedoms, it is difficult to foresee the future S&T relationship with the EU based on current evidence.

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<sup>21</sup> [U.K. science seeks 'a new and special relationship with the EU'](#)

<sup>22</sup> [UK research and the European Union : The role of the EU in funding UK research](#)

<sup>23</sup> [Chancellor Philip Hammond guarantees EU funding beyond date UK leaves the EU](#)

<sup>24</sup> [Collaboration on science and innovation : A FUTURE PARTNERSHIP PAPER - 06/09/17](#)

<sup>25</sup> [UK strikes research deal with US in run-up to Brexit : BBC News](#)

<sup>26</sup> see 24

# Appendix

## Further Reading

UK research and the European Union : The role of the EU in funding UK research	<a href="https://royalsociety.org/~media/policy/projects/eu-uk-funding/uk-membership-of-eu.pdf">https://royalsociety.org/~media/policy/projects/eu-uk-funding/uk-membership-of-eu.pdf</a>
Norway's affiliation with European Research Programmes : Options for the future	<a href="https://www.regjeringen.no/globalassets/upload/kd/vedlegg/forskning/rapporter/eu-forskningeng.pdf?id=2305819">https://www.regjeringen.no/globalassets/upload/kd/vedlegg/forskning/rapporter/eu-forskningeng.pdf?id=2305819</a>
Collaboration on science and innovation : A FUTURE PARTNERSHIP PAPER - 06/09/17	<a href="https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/642542/Science_and_innovation_paper.pdf">https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/642542/Science_and_innovation_paper.pdf</a>

## Sources

REGULATION (EU) No 1291/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2013 establishing Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020) and repealing Decision No 1982/2006/EC	<a href="https://ec.europa.eu/research/participants/data/ref/h2020/legal_basis/fp/h2020-eu-establact_en.pdf#page=8">https://ec.europa.eu/research/participants/data/ref/h2020/legal_basis/fp/h2020-eu-establact_en.pdf#page=8</a>
REGULATION (EU) No 1290/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2013 laying down the rules for participation and dissemination in "Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020) " and repealing Regulation (EC) No 1906/2006	<a href="http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R1290&amp;qid=1504864748406&amp;from=EN">http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R1290&amp;qid=1504864748406&amp;from=EN</a>
Guidance note — Funding of applicants from non-EU countries & international organisations	<a href="http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/3cpart/h2020-hi-3cpart_en.pdf">http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/3cpart/h2020-hi-3cpart_en.pdf</a>
Swiss participation in Horizon 2020	<a href="http://ec.europa.eu/research/participants/data/ref/h2020/other/hi/h2020-hi-swiss-part_en.pdf">http://ec.europa.eu/research/participants/data/ref/h2020/other/hi/h2020-hi-swiss-part_en.pdf</a>
Ex-Post-Evaluation of the 7th EU Framework Programme (2007-2013)	<a href="https://ec.europa.eu/research/evaluations/pdf/fp7_final_evaluation_expert_group_report.pdf">https://ec.europa.eu/research/evaluations/pdf/fp7_final_evaluation_expert_group_report.pdf</a>

## Legal Association Agreements

<b>Tunisia - FP6</b>	<a href="http://ec.europa.eu/research/iscp/pdf/policy/agreement_tunisia_ec_en.pdf#view=fit&amp;pagemode=none">http://ec.europa.eu/research/iscp/pdf/policy/agreement_tunisia_ec_en.pdf#view=fit&amp;pagemode=none</a>
<b>Switzerland - H2020</b>	<a href="http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:22014A1230(01)&amp;from=EN">http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:22014A1230(01)&amp;from=EN</a>
<b>Israel - H2020</b>	<a href="http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:22014A0617(01)&amp;qid=1504782542736&amp;from=EN">http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:22014A0617(01)&amp;qid=1504782542736&amp;from=EN</a>
<b>Faroe Islands - H2020</b>	<a href="http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:22015A0211(01)&amp;qid=1504864285428&amp;from=EN">http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:22015A0211(01)&amp;qid=1504864285428&amp;from=EN</a>
<b>Balkan Agreements</b>	<a href="http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:22015X0919(01)&amp;qid=1504780931558&amp;from=EN">http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:22015X0919(01)&amp;qid=1504780931558&amp;from=EN</a> <a href="http://europa.eu/rapid/press-release_IP-14-746_en.htm">http://europa.eu/rapid/press-release_IP-14-746_en.htm</a>
<b>Albania SAA</b>	<a href="http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2005.192.01.0001.01.ENG&amp;toc=OJ:L:2005:192:TOC#L_2005192EN.01000201">http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2005.192.01.0001.01.ENG&amp;toc=OJ:L:2005:192:TOC#L_2005192EN.01000201</a>
<b>Montenegro SAA chapter 25</b>	<a href="https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/pdf/montenegro/screening_reports/screening_report_montenegro_ch25.pdf">https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/pdf/montenegro/screening_reports/screening_report_montenegro_ch25.pdf</a>

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