

**Universities UK
International**

HORIZON EUROPE – UUKI INFORMATION NOTE

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Audience:

Research managers, UK and European policymakers, research funders,
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Executive Summary

This information note provides an overview of the European Commission's proposal for Horizon Europe, the next European Union Framework Programme for research and innovation, which is due to start in 2021. It covers the background to this proposal, a summary of the proposed structure, the main facts and figures and UUK's position on some of most important provisions. It also explains the legislative process that the proposal will have to follow.



INTRODUCTION

This information note provides an overview of the European Commission's proposal for the next EU Framework Programme for Research and Innovation, Horizon Europe. It describes the background to the proposal, the key features of the proposed programme, and UUKi's position on these points. It also provides information on the legislative process that will be followed.

The full proposal is available on the European Commission website, accessible via the links in the footnotes.

The information contained in this note is correct as of 4 October 2018.

BACKGROUND

On 7 June 2018, the European Commission published its proposal for Horizon Europe¹, the next European Union (EU) Framework Programme for Research and Innovation. This programme is due to commence in 2021, and will run for seven years. It will replace the existing Horizon 2020 programme (2014-2020).

Although there is evidence to suggest the UK's overall performance in Horizon 2020 has declined slightly since the referendum on membership of the EU, UK universities have enjoyed a strong overall record in Horizon 2020 funding competitions. From the start of the programme in 2014 to May 2018, they had received €3.07 billion, which equates to 24.2% of the total awarded to universities, more than institutions in any other participating country.

Fig. 1 – Overall UK record in the three pillars of Horizon 2020 (to 31 May 2018)

	Number of participations	Funding received (€ millions)
Excellent Science	4 337	2 340
Industrial Leadership	1 699	663
Societal Challenges	3 344	1 519

In addition to providing a substantial source of research income, EU research and innovation funding provides significant added value, such as:

- Facilitating and stimulating research collaboration with EU partners, many of which are large scale and involve many partners
- Maximising competition between researchers and innovators across the continent
- Increasing effectiveness in tackling global challenges
- Reducing barriers and administrative burden with a single set of rules
- Security of seven-year funding settlement
- Broadening researcher networks
- Access to large, internationally-sourced funding pots through a supranational funding authority
- Facilitating researcher mobility
- Economies of scale derived from sharing implementation costs.

The UK's decision to leave the EU has created uncertainty over the UK's ongoing participation in Horizon 2020 and its successor. The UK Treasury sought to address this concern initially by issuing an underwrite guarantee in August 2016 that would cover all EU research funding applied for before the UK leaves the EU. Subsequently, in December 2017, the joint statement from the article 50 negotiations provided confirmation that, subject to the conclusion of a withdrawal agreement, the UK would continue to participate in and receive funding from Horizon 2020 until the end of the programme in 2020. In July 2018, the UK Treasury extended its underwrite guarantee to cover funding applied for after the UK leaves the EU until the end of the programme in December 2020.

Since the conclusion of the joint statement, focus has moved to the UK's future relationship with the successor to Horizon 2020, which will be called Horizon Europe. As this programme will start after the end of the proposed implementation period on 1 January 2021, the UK's relationship with this programme will need to be negotiated from scratch. Universities UK has insisted ever since the referendum that it is vital for the UK to be a full associate member of this programme, meaning that UK researchers can apply for and receive funding from all parts of the programme in return for an appropriate financial contribution. In May 2018, the Prime Minister announced that the UK Government would be prepared to make an appropriate financial contribution in return for full access to and some form of influence over Horizon Europe as part of the proposal for a UK-EU Science and Innovation Accord.

NOTE

¹ <https://bit.ly/2Lx5PBp>

HORIZON EUROPE: THE STORY SO FAR

Horizon Europe will be the ninth EU Framework Programme for Research and Innovation. It will succeed the existing programme, Horizon 2020, which runs between 2014-2020. The process for developing the next programme began in 2016 with the initiation of three major reports by the European Commission:

- The mid-term evaluation of Horizon 2020²
- A high-level expert group report on priorities for the next programme, chaired by Pascal Lamy, former Chair of the World Trade Organisation³
- A foresight exercise to identify the emerging scientific and technological trends to which the EU needs to respond⁴

The most important of these three outputs was the LAB-FAB-APP report from the Lamy group, which was published in July 2017. It set out ten key themes that the next programme should prioritise. The European Commission responded positively to the findings of this report. A formal stakeholder consultation was then held in early 2018 to further inform the

Commission's proposal for the next programme, to which Universities UK International submitted a position paper⁵ recommending the following priorities:

- Budgeting for excellence
- Fostering 'distributed excellence' across the continent
- Capitalising on global collaboration opportunities
- Enhancing impact and incorporating arts, humanities and social sciences
- Continue to make the programme more accessible
- Reinforcing the knowledge triangle
- A diverse and inclusive programme
- Driving forward the Open Science agenda

The final draft proposal for the Horizon Europe programme was published on 7 June 2018.



NOTE

² <https://bit.ly/2EOIB3J>

³ <https://bit.ly/2sEIMKP>

⁴ <https://bit.ly/2wwyxgo>

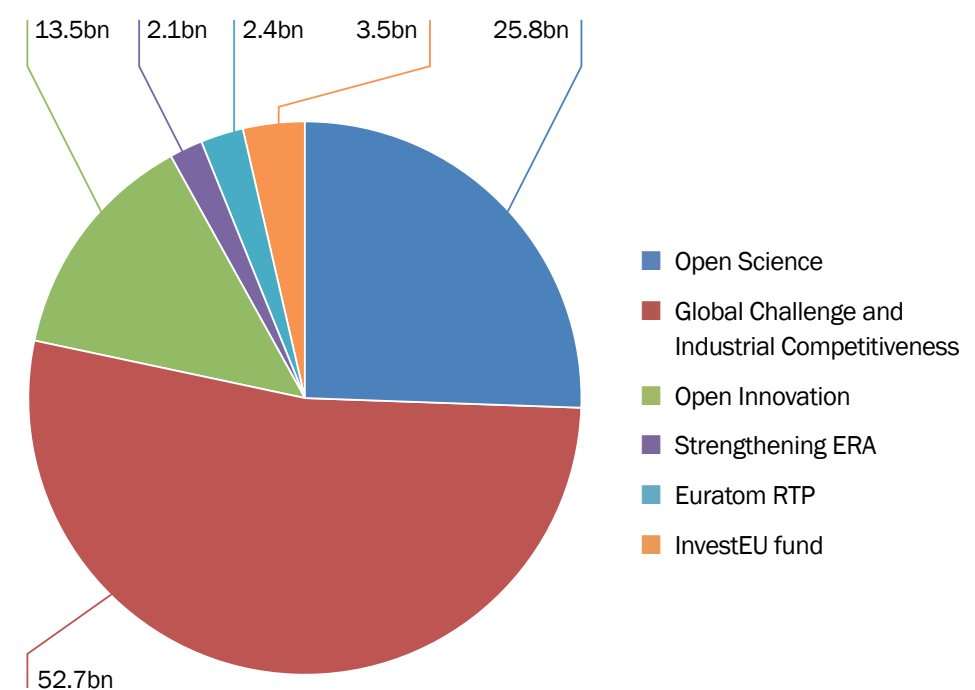
⁵ <https://bit.ly/2Q43RdJ>

THE HORIZON EUROPE PROPOSAL

Overview

A budget of €100 billion has been proposed for the new programme, compared with €74.4 billion for Horizon 2020. This includes €94.1 billion for the core Horizon Europe programme, €2.4 billion for the Euratom research and training programme and €3.5 billion to be allocated under the InvestEU fund for SMEs. A full breakdown can be found in figure 2.

Fig. 2 – Proposed budget breakdown for Horizon Europe (€ billion)



The budget increase has been spread across all three pillars, though it is not possible to make a direct comparison with the previous programme because of the changes to the pillars that have been proposed.

a. Open science (pillar 1)

With a budget of €25.8 billion, Open Science will be the second largest pillar in the programme. The only significant difference between this and the Excellent Science pillar in Horizon 2020 is that the 'Future and Emerging Technologies' strands have been removed. Most of the budget (€17 billion) is earmarked for the European Research Council.

b. Global challenges and industrial competitiveness (pillar 2)

This will be the largest pillar in Horizon Europe, with a budget of €52.7 billion. It will bring together the Societal Challenges pillar with the 'Key Enabling Technologies' and Space and ICT focus areas from the Industrial Leadership pillar in Horizon 2020, hence its augmented share of the budget. It will remain the main source of funding for internationally collaborative multi-partner projects. Instead of the existing seven challenges, the new pillar will be broken down into five thematic 'clusters'.

Fig. 3 – Areas covered by clusters proposed by the European Commission

Cluster	Areas covered
Health	<ul style="list-style-type: none"> Health throughout the life course Environmental and social health determinants Non-communicable and rare diseases, infectious diseases Tools, technologies and digital Health care systems solutions for health and care
Inclusive and Secure Societies	<ul style="list-style-type: none"> Democracy Cultural heritage Social and economic transformations Disaster-resilient societies Protection and Security Cybersecurity
Digital and Industry	<ul style="list-style-type: none"> Manufacturing technologies Key digital technologies Advanced materials Artificial intelligence and robotics Next generation internet Advanced computing and Big Data Circular industries Low carbon and clean industry Space
Climate, Energy and Mobility	<ul style="list-style-type: none"> Climate science and solutions Energy supply Energy systems and grids Buildings and industrial facilities in energy Communities and cities transition Industrial competitiveness in transport Clean transport and mobility Smart mobility Energy storage
Food and Natural Resources	<ul style="list-style-type: none"> Environmental observation Biodiversity and natural capital Agriculture, forestry and rural areas Sea and oceans Food systems Bio-based innovation systems Circular systems

c. Open innovation (pillar 3)

This will be the smallest pillar with a budget of €13.5 billion. The main component will be the new European Innovation Council, in addition to funding for European Innovation Ecosystems. The European Institute of Innovation and Technology will be brought into this pillar, having previously sat outside of the three-pillar structure.

UUK supported the Lamy report recommendation for a significant uplift in the Horizon Europe budget. We therefore welcome the proposed budget increase, although we have some concerns about how it is distributed across the pillars. Universities would have liked to have seen a larger increase for the ‘Open Science’ pillar given the significant added value of this pillar.

Similarly, while acknowledging the importance of EU funding for innovation, we have concerns about the allocation of such a substantial proportion of the budget to the European Innovation Council, given that it is an as yet unproven mechanism with limited scope to support the valuable innovation activity that takes place in European universities.

On widening participation, UUKi fully supports the ambition to increase the level of research excellence across the continent, and our members have actively engaged with ‘Teaming’ and ‘Twinning’ projects to this end. However, we would not like to see the Framework Programmes fundamentally reoriented towards this goal as they alone will never be able to address the more fundamental reasons for national disparities in success in EU research funding competitions. As such, we note the increase for ‘Sharing Excellence’ as a genuine effort to achieve this objective but would object any further increase for this type of funding as a share of the overall budget.

Third country association (Article 12)

As the UK will no longer be an EU Member State when Horizon Europe starts, it will be necessary for the UK to negotiate ‘associated country’ status to the programme in order to continue to receive EU funding. The provisions for association to the Horizon Europe programme by third countries have been updated from Horizon 2020. They can be found in article 12.

Overall, the wording of the article is positive in that it leaves the door open for full UK participation, subject to negotiation of the UK-EU Science and Innovation Accord.

Regarding the specific requirements for the countries in category (d), we would like to see more details about how the financial correction mechanism will work in practice (i.e. how often the balance will be corrected and using which data). The UK should only pay into parts of the programme to which UK entities have access.

The proposal states that the category (d) countries will have ‘no decisional power’, but this is already true for associated countries in that they do not hold any formal legislative role. However, given that they pay into the overall budget, it is fair, reasonable and appropriate for associated countries to expect to participate in scientific programming and offer the benefit of their extensive experience and expertise to the development of world-leading, effective and impactful programmes.

UUK would like to see more detail around what is meant by ‘reciprocal access to equivalent national schemes’. It is hard to see how any national scheme could be considered as ‘equivalent’ to a €100bn international funding programme.

NB. It should be noted that the Horizon Europe proposal itself only sets the legal parameters for association to the programme by third countries. In this sense, it does not imply any expectation, requirement or entitlement for the UK to become an Associated Country. This is negotiated separately by the European Commission and the country in question through an ‘association agreement’. Such an agreement would have to be renegotiated for each subsequent framework programme. The UK Government has stated that it would like to negotiate full access to the Horizon Europe programme.

Missions (Article 7)

As set out in the report entitled ‘Mission-Oriented Research and Innovation in the European Union’ by Professor Mariana Mazzucato⁶, the European Commission has placed ‘missions’ at the heart of the ‘Global Challenges and Industrial Leadership’ pillar. According to article 7, paragraph 3, the missions shall:

- have a clear EU-added value and contribute to reaching Union priorities;
- be bold and inspirational, and hence have wide societal or economic relevance;
- indicate a clear direction and be targeted, measurable and time-bound;
- be centred on ambitious but realistic research and innovation activities;
- spark activity across disciplines, sectors and actors;
- be open to multiple, bottom-up solutions.

NOTE

⁶ <https://bit.ly/2EViOZ4>

UUK is supportive of the mission-driven approach, but careful thought will need to be given to the identification and management of the missions for them to succeed. First and foremost, it is vital that the missions take a truly interdisciplinary approach which fully incorporates the arts, humanities and social sciences, including the composition of the mission boards and evaluation panels.

Moreover, while it is reasonable for the Commission to take ‘Union priorities’ into account in the identification of missions, these priorities may not necessarily coincide with the resolution of global challenges as set out in the UN Sustainable Development Goals (SDGs). If the Commission truly wants to tackle ‘global challenges’ in this pillar, the SDGs should figure in the framework for identifying missions. EU interests should be considered alongside shared global challenges. This will help to maximise societal impact.

Open science (Article 10)

Having already mandated open access for research publications in Horizon 2020, the European Commission has strengthened its commitment to the open science agenda by requiring that Horizon Europe research data is open in accordance with the FAIR (findable, accessible, interoperable and re-useable) principles.

While it is reasonable to state an ambition that the FAIR principles should become embedded over the course of the programme, Universities UK is concerned that this could become a requirement from the outset. Researchers need support to make open data a reality, such as continued access to the European Open Science Cloud and training and development opportunities. There is also the question of funding: preserving and curating data over time costs money. If it is to be mandated by the Commission, there needs to be long-term funding to support open access and open data beyond the project life.

Eligibility (Article 18)

The new proposal introduces a new eligibility requirement for Horizon Europe whereby research consortia will have to include three different Member States or Associated Countries and at least one Member State. In Horizon 2020, Member States and Associated Countries were given equal footing.

Any strengthening of eligibility requirements represents a constraint on university and researcher autonomy. Requiring the inclusion of one EU Member State would be acceptable given that there are very few existing consortia that would not meet this requirement. However, any further increase would have significant and detrimental implications for the integrity of research consortia, which would increasingly be built according to geographic imperatives rather than research excellence.

In addition, the European Commission proposes that Associated Countries and Third Countries may be excluded from calls where they touch on ‘Union strategic assets, interests, autonomy or security’. Such exemptions are reasonable but only in very limited circumstances; as a general rule, the wider the eligibility pool, the better this is for science, research and innovation outcomes. These should only be applied where there is a genuine risk, and it is hard to see where this might occur outside of the ‘Inclusive and Secure Societies’ cluster of the ‘Global Challenges and Industrial Competitiveness’ pillar.

Evaluation (Article 26)

The Commission proposal implies that evaluation panels may not always need to be composed of independent external experts and may include representatives of the EU institutions. Universities UK finds this to be a concerning development. For the Horizon Europe programme to be truly excellence-based, it is imperative that it is based on rigorous peer review. This means that evaluation panels should be composed exclusively of independent experts, drawn from the global talent pool. Without further detail about how this provision would be applied, it is difficult to think of any situations in which it would be necessary to deviate from this principle.

LEGISLATIVE PROCESS

The Horizon Europe programme will be adopted via the **co-decision procedure** (i.e. the European Parliament and Council of the EU must agree on the text for it to become law). The European Commission’s draft proposal is the first step in this process; it will now be reviewed and amended by the European Parliament and Council.

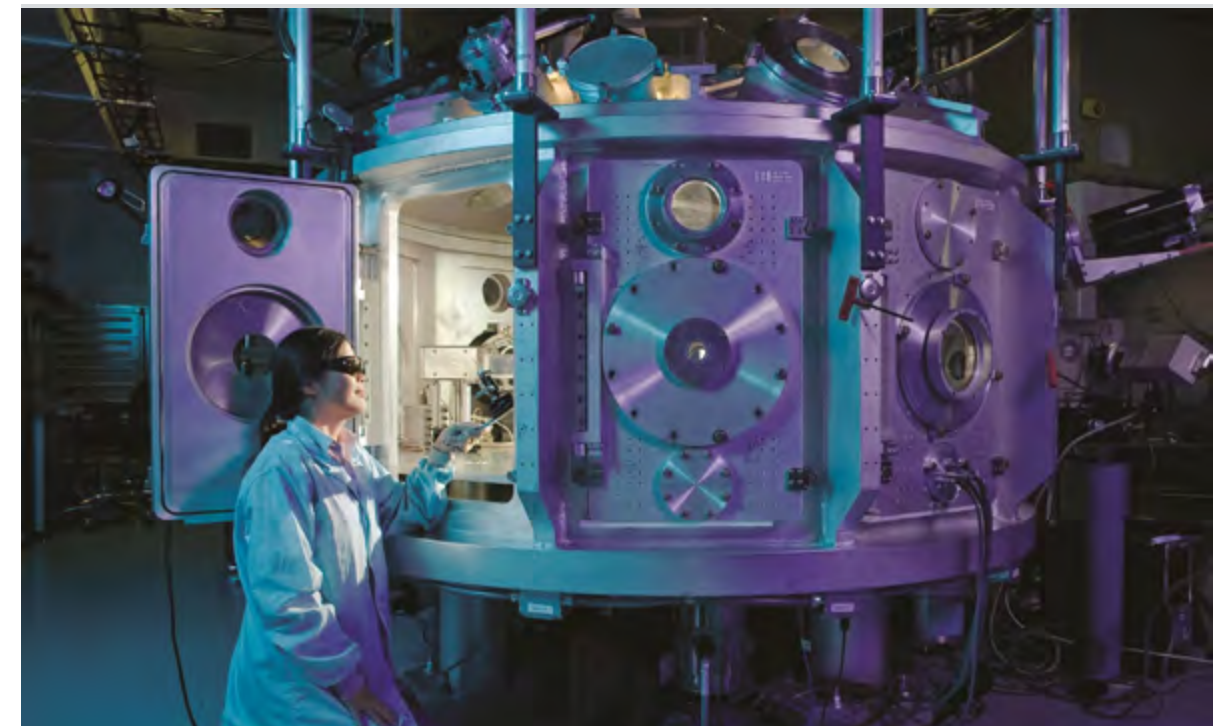
The legislative process for previous EU Framework Programme (Horizon 2020) took over two years, but there is pressure for the institutions to reach agreement more quickly on this occasion. This is because there are European elections scheduled for April 2019 and the installation of a new European Commission in 2020. If the proposal is not agreed before the elections, then the process is likely to be substantially delayed as the new Parliament will take several months to get up and running and will typically spend most of its first year on confirmation hearings for new commissioners. Similarly, the new European Commission would be able to replace the entire proposal, if it were minded to do so.

Therefore, the European Parliament’s deliberative process has already started. The Committee for Industry, Transport and Energy (ITRE) will lead the process, producing a report on the proposal considering opinions from nine other committees.

This report will be debated and voted on at a plenary hearing.

In parallel, the Council has made the Horizon Europe proposal one of its top priorities for the presidency of the Austrian Government (July-December 2018). The Council’s working party on research will discuss the Commission proposal over the Autumn with a view to adopting a ‘partial general approach’, intended to give the European Parliament an indication of their position before adopting a formal first reading position.

At this point, with a view to finding a consensus position as early as possible, informal (non-binding) meetings of Parliament, Council presidency and Commission representatives are held, called ‘trilogues’. The purpose of these meetings is to broker a compromise agreement that would be acceptable to all the EU institutions. If an agreement can be found, this to be adopted by the institutions separately to become law. In addition, adoption is subject to the agreement of the overarching **EU multi-annual financial framework**, which will set the overall budgetary envelope for EU spending over the 2021-27 period.



TIMETABLE

Below is approximative timetable for the legislative process for the Horizon Europe programme, based on the assumption that the EU institutions will adopt a final text prior to the end of the European Parliamentary term in May 2019.

Fig. 4 – Indicative timetable for the adoption of the Horizon Europe programme

	European Parliament	EU Council
September 2018	Deadline for amendments to the ITRE committee report	
October		Ongoing discussions by the Council working party and agreement of a partial general approach
November	ITRE committee votes on its report	
December	First reading of Horizon Europe proposal in European Parliament plenary session	
January 2019		Trilogue meetings
February		
March	Text agreed by European Parliament and Council	

RECENT DEVELOPMENTS

European Parliament

There is a European Parliament ‘rapporteur’ for each of the two dossiers that make up the Horizon Europe proposal; the regulation to establish the Horizon Europe programme (the main text) and the decision to establish the specific programme (implementation details). The rapporteur for the regulation is Dan Nica MEP, a Romanian member of the Socialist and Democrat group (centre-left), and the rapporteur for the specific programme is Christian Ehler MEP, a German member of the European People’s Party group (centre-right). These two rapporteurs must work in close cooperation to ensure the two texts are compatible.

Each of these MEPs has prepared an initial report that will form the basis of the ITRE committee reports. Both rapporteurs have proposed changes to the programme which will increase its overall budget to €120 million and make some changes to the structure of the programme (most notably in the ‘Global Challenges and Industrial Competitiveness’ pillar). However, the Nica report includes some additional recommendations that have provoked concern, including:

- Restricting access to mono-beneficiary funding streams (i.e. ERC, MSCAs) and the EIC for certain Associated Countries (including the UK).
- Preventing Associated Countries from coordinating projects.
- Strengthening the rhetoric around exploitation of research results, with researchers required to ‘ensure’ exploitation first takes place on EU territory.

- Increasing the eligibility requirement for project consortia from one to three Member States.
- Giving priority in funding decisions to projects with more ‘Widening Participation’ countries (those with lower overall levels of participation in the framework programmes).
- Repeated references to the primacy of EU interests throughout the text.
- Only selecting independent experts for evaluation panels from Member States.
- Establishing a Europe-wide remuneration framework for researchers in EU projects.

Council of the EU

The negotiations in the Council working party are less transparent. However, the German Federal Government has published a position paper on the Horizon Europe proposal which includes the same recommendation as the Nica report that certain Associated Countries (including the UK) should not be allowed to participate in the mono-beneficiary funding streams.

The Council has also launched a legal challenge to the Commission’s choice of legal base for the specific programme, which could substantially delay the agreement of the proposal.

NEXT STEPS

Universities UK International will monitor the development of the Horizon Europe programme and will update members as the process evolves. We continue to engage closely with stakeholders in the EU institutions, EU Member States, Associated Countries and third countries with a view to ensuring that the programme is not only open to full UK association but also meets UK universities’ expectations as presented in our position paper in March 2018.⁷



NOTE

⁷ <https://bit.ly/2Q43RdJ>