

UKRO Horizon 2020 Condensed

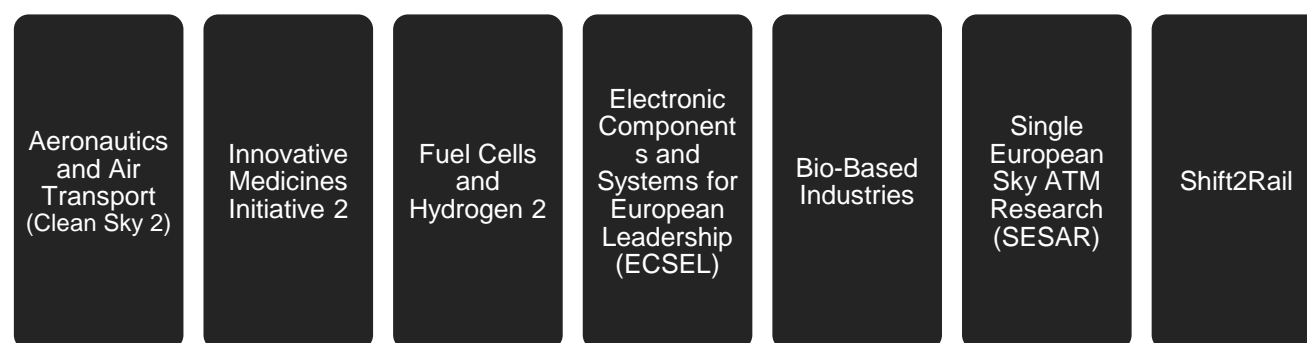
Joint Technology Initiatives (JTI)

What are the JTIs?

JTIs are public-private partnerships, which bring together industry, academia, EU Member States and the Commission in order to help achieve ambitious research goals, which no single country or organisation would be able to pursue on its own. Since their creation under the Seventh Framework Programme (FP7), JTIs have been supporting large-scale multinational research activities and launching their own calls.

Seven JTIs will operate between 2014 and 2024 benefiting from the Horizon 2020 budget:

Joint Undertakings under Horizon 2020



Aeronautics and Air Transport (Clean Sky 2)

Building on the success of its predecessor, the Clean Sky 2 JU continues to focus on developing a new generation of aircrafts for European skies with noise reduction and lower CO₂ emissions at the heart of several major projects. The key elements of the Clean Sky 2 Programme will concentrate on achieving higher level of integration of technologies into vehicle level demonstrators, system-level demonstrators and focused technology streams for airframes, engines and systems; transverse co-ordination of research activity in Small Air Transport and Eco-Design, as well as a continued evaluation of progress towards the main goals of Clean Sky 2.

Participation in Clean Sky 2 is open to a wide range of private and public organisations, including SMEs, academia and non-profit research institutions, and can be three-fold. While 16 Leaders have already committed to delivering the full programme throughout its entire duration, Core Partners making significant long-term commitments towards the Programme will be chosen through open Calls for Core Partners.

Additionally, a number of Partners will be chosen through open Calls for Proposals and invited to participate in specific projects. It is expected that approximately 800 Partners and Core Partners will join Clean Sky 2 during its entire lifetime, and that they will be able to benefit from up to 60% of EU funding allocated to the JU from the Horizon 2020 budget (EUR 1.75 billion), which will be open to competition.

Innovative Medicines Initiative 2 (IMI2)

The IMI 2 Joint Undertaking builds on the success of its predecessor and focuses on developing next generations of vaccines, medicines and treatments, including new antibiotics. The specific aims of

IMI 2 are to deliver a much better success rate in clinical trials of priority medicines identified by the WHO, to deliver clinical proof of concept in immunological, respiratory, neurological and neurodegenerative diseases in just five years, and finally to provide new and approved diagnostic markers for four of these diseases and at least two new medicines, which could either be new antibiotics or new therapies for Alzheimer's disease.

Participation in collaborative projects is open to companies, universities, public laboratories and innovative SMEs, which will be able to benefit from the EUR 1.6 billion EU contribution from the Horizon 2020 budget.

Fuel Cells and Hydrogen 2 (FCH2)

The Fuel Cells and Hydrogen 2 Joint Undertaking is a continuation of a Joint Technology Initiative already existing under the Seventh Framework Programme. As its predecessor delivered a number of positive results, including the creation of strong partnerships and most importantly, the introduction of several crucial market applications in the form of energy forklifts and small back-up power units, FCH2 will continue developing innovative applications for the European markets.

The main aims of FCH2 are to significantly reduce the cost of fuel cell systems for transport applications, to increase electrical efficiency of fuel cells for power production and to demonstrate the viability of large scale hydrogen production from electricity generated from renewable energy sources.

Electronic Components and Systems for European Leadership (ECSEL)

The ECSEL Joint Technology Initiative is a merger of the ARTEMIS embedded systems JU and the ENIAC nanoelectronics JU set up under the Seventh Framework Programme. Its objective is to secure the supply of key technologies underpinning innovation, such as semiconductors, in all sectors of European economy and to ensure the best use of such technologies to accelerate economic growth, as well as to ensure Europe's leading position in design and systems engineering.

The distinctive feature of this Joint Undertaking is that EU Member States are also partners, alongside the European Commission and three private industrial associations, and match the EUR 1.2 billion EU contribution coming from the Horizon 2020 budget. ECSEL will be the largest of all five Joint Technology Initiatives showing Europe's commitment to becoming a leader in the design and production of key technologies underpinning innovation.

Bio-Based Industries (BBI)

The Bio-based Industries Joint Undertaking is a brand new initiative of the European Commission proposed alongside four other JTIs in July 2013 as part of the 'Innovation Investment Package'. Its main aim is to foster 'radical innovation' in the area of production of bio-based products across Europe and to ensure the competitiveness of Europe's bio-based industries in global markets.

The JTI will focus on three main streams of activities: feedstock, by fostering sustainable biomass supply with increased productivity and new supply chains; biorefineries, by optimising efficiency through R&D and building flagship refineries; as well as markets products and policies, by developing markets for bio-based products and contributing to the improvement of policy frameworks.

The BBI JTI is a partnership between the EU and industry, currently operating as the Bio-based Industries Consortium (BIC) and bringing together almost 50 European companies, clusters and organisations from a wide variety of sectors. The BBI Joint Undertaking is open to new members able to contribute with resources to the achievement of its objectives.

Single European Sky ATM Research (SESAR)

The SESAR JTI will continue under Horizon 2020. This JU aims to modernise air traffic management (ATM) in Europe by overcoming the current fragmentation. The main aim of SESAR is to execute the 'European ATM Master Plan', which will lead to the use of new generation ATM systems from 2020 onwards.

Under its new mandate, the JU will operate until 2024 and receive EUR 600 million in funding from the Horizon 2020 budget. Its rules are fully aligned with those of Horizon 2020 with no derogations in place.

Shift2Rail (S2R)

In June 2014, the Transport Council approved a new JU in the area of rail transport called Shift2Rail. Its aim is to develop and accelerate the bringing to market of technological breakthroughs, thus leading to increased numbers of passengers and cargo transported by rail across Europe.

The founding members of the JU include the Commission and eight enterprises operating either as rail equipment manufacturers or infrastructure managers: Alstom, Ansaldo STS, Bombardier, Siemens, Thales, CAF, Trafikverket and Network Rail and membership will be open to other public or private entities willing to commit the necessary resources to carry out research and innovation activities in the area of rail transport.

The JU will receive EUR 450 million in funding from the Horizon 2020 budget and the rules are fully aligned with the Horizon 2020 Rules for Participation with no derogations.

What will be funded?

All Joint Undertakings functioning under Horizon 2020 will organise calls for proposals and tenders in accordance with their respective Work Plans. In most cases, a significant percentage of the Programme's funding will be reserved up-front for leaders (core partners) in the JU that show the biggest commitment to the initiative's goals, while the majority of EU funding will be open to competition through calls and tenders.

Call timings

Participation in the Joint Undertakings is open to a wide range of organisations, including universities, SMEs and research institutes.

Five Joint Undertakings: Clean Sky 2, IMI 2, Fuel Cells and Hydrogen 2, ECSEL and Bio-Based Industries launched their first calls for proposals on 9 July 2014, while the SESAR and Shift2Rail Joint Undertakings did so in 2015. The 2014 round of calls was worth a total of €1.13 billion in public funding and was match funded by industry partners.

Other calls have been and will continue to be successively launched throughout Horizon 2020.

2019 Work Plans

The 2019 work plans have been published. These include the Bio-Based Industries (calls will open 4 April 2019 and close 4 September 2019), FCH (calls close 23 April 2019), IMI (deadline for short proposals on 25 April 2019 and for full proposals 7 November 2019), ECSEL (deadline for short proposals on 7 May 2019 and for full proposals 18 September 2019), and S2R (Deadline 18 June 2019).

What are the derogations in JTIs?

Derogations from Horizon 2020 rules for participation and dissemination in indirect actions:

Clean Sky 2	IMI 2	FCH 2	ECSEL	BBI	SESAR	S2R
Minimum one legal entity established in an EU Member State or an Associated Country	Large companies not eligible for research funding. Intellectual Property rules relaxed	No derogations Additional eligibility criteria may apply	Different reimbursement rates for EU funding may apply, depending on the type of participant Additional eligibility criteria may apply	Large companies not eligible for research funding.	No derogations	No derogations

The future of European Partnerships in Horizon Europe

Joint Programming is a priority for the European Commission, as it sees Public to Public and Public to Private Partnerships as a way to leverage funding from national/industrial partners and to better align activity across the European Research Area. The European Commission is however proposing a new approach to future European Partnerships, highlighting the complexity of the landscape (there are currently nearly one hundred different partnerships).

More information on the future format for European Partnerships is detailed in the full Proposal for a Regulation of the European Parliament and of the Council establishing Horizon Europe – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination.

The key points are:

- The new approach to European Partnerships will be more impact-focussed.
- The need to establish future European Partnerships or renew existing ones will be identified as part of the strategic programming process of the Framework Programme.
- All European Partnerships will be open to all types of stakeholders (e.g. industry, Member States and philanthropic foundations) and will be limited in time with clear conditions for phasing out from the Framework Programme funding.
- They will be designed based on the principles of Union added value, transparency, openness, impact, leverage effect, long-term financial commitment of all the involved parties, flexibility, coherence and complementarity with Union, local, regional, national and international initiatives.
- The future partnership landscape will ensure optimal coherence between Framework Programme actions and partnerships.

The Commission's proposal envisages only three types of partnerships in the future:

- Co-programmed European Partnerships, based on memoranda of understanding or contractual arrangements;
- Co-funded European Partnerships, based on a single, flexible programme co-fund action; and
- Institutional European Partnerships (based on Art. 185 or 187 TFEU).

More information:

- European Commission Funding and Tender Opportunities Portal: <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home>
- ERA-Learn support platform: <https://www.era-learn.eu/p2p-in-a-nutshell/type-of-networks/public-private-partnerships-other-era-relevant-partnerships#JU>
- Clean Sky 2 JU: cleansky.eu
- Innovative Medicines Initiative (IMI) 2 JU: imi.europa.eu
- Fuel Cells and Hydrogen 2 JU: fch-ju.eu
- ECSEL JU: ecsel.eu
- Bio-Based Industries JU: biconsortium.eu
- SESAR JU: sesarju.eu
- Shift2Rail JU: shift2rail.org
- Europe 2020: ec.europa.eu/europe2020
- Report of the independent High Level Group on industrial technologies:
[ec.europa.eu/research/industrial technologies/pdf/re finding industry 022018.pdf](http://ec.europa.eu/research/industrial_technologies/pdf/re_finding_industry_022018.pdf)
- Horizon Europe proposal: ec.europa.eu/info/designing-next-research-and-innovation-framework-programme/what-shapes-next-framework-programme_en
- Sign up to the UKRO Portal to stay up to date on the JTI and Horizon 2020 general developments, calls, events and results: ukro.ac.uk
- For specific questions, contact your UKRO European Advisor.