

# UKRO Horizon 2020 Condensed

## Societal Challenge 4: Smart, Green and Integrated Transport

### What is 'Smart, Green and Integrated Transport'?

The main aim of the Transport challenge is "to achieve a European transport system that is resilient, resource-efficient, climate- and environmentally-friendly, safe and seamless for the benefit of all citizens, the economy and society".

European research aims to strengthen the competitiveness of the transport industries and to develop a better European transport system for the benefit of all. In the transport sector, research is at the core of developing new technologies for greener, smarter, more efficient transport means and innovative solutions for safer, more sustainable and inclusive mobility. Therefore, projects funded under these calls for proposals must often demonstrate potential to move up the Technology Readiness Levels and as part of the Green Vehicles activity, topics focusing on 'close to market' phase exist. There will also be 16 small calls under 'Other Actions', four of which have been newly published in the 2020 Work Programme. These include in the first quarter of 2020 – research into future aviation safety regulation (€13 million) and Strengthening International Policy Dialogue in conjunction with the OECD (€1 million); in the second quarter, work on Data sharing practices (€0.2 million) and Continuation of TRIMIS – Transport Research and Innovation Monitoring and Information System (€2 million) in the fourth quarter of 2020.

The research and innovation priorities in this Work Programme have been defined taking into account the Annual Work Plans of the 'Clean Sky 2', 'SESAR', 'Shift2Rail' and 'Fuel Cells and Hydrogen 2' Joint Undertakings, which launch separate calls for proposals in their respective fields.

The Transport challenge will also continue to contribute to activities under Blue Growth. It will also create synergies with other parts of Horizon 2020, in particular LEIT-ICT, LEIT-NMBP, Energy, Space and Secure Societies. Synergies for further funding are also being encouraged with programmes such as ERDF/ESF+, the Instrument for Pre-accession Assistance [IPA II], private funds or financial instruments (including EFSI).

### What will be funded?

The current Work Programme is structured around four broad lines of activities focused on:

- Resource efficient transport that respects the environment;
- Better mobility, less congestion, more safety and security;
- Global leadership for the European transport industry; and
- Socio-economic and behavioural research and forward looking activities for policy making.

It is divided into three main calls for proposals contributing to the "**Building a low-carbon, climate resilient future**" and the "**Digitising and transforming European industry and services**" Focus Areas of Horizon 2020. Further information on the Focus Areas can be found in UKRO's **factsheet** on Horizon 2020 for researchers.

#### Mobility for Growth

This call addresses mode-specific challenges (aviation, road and waterborne), taking into account the latest developments in the area of transport (e.g. cutting edge technological innovations) and related European policies, including the global targets set by the COP 21 Paris Agreement on the fight against climate change and by the UN in support of Sustainable Development Goals. Challenges require user-centred approaches to ensure targeted impact.

### Automated Road Transport

This call will look at the development and demonstration of connected and automated driving (CAD) systems, to help overcome the existing challenges before these systems become widely available on the market. It will focus on large-scale demonstrations to test the performance and safety of innovative highly automated driving systems for passenger cars, efficient freight transport operations and shared mobility services in urban areas. Equally, the call will address the changing role of the driver and accounting for this through the human centred design of automated vehicles.

### Green Vehicles

This call will focus on the most critical aspects of a large-scale introduction of electrified vehicles, including the following: advances in electric batteries, new architectures, concepts and components, improving the re-charging experience from the view-point of the end-users, supporting the competitiveness of European automotive industries and addressing the urban dimension of introducing electrified vehicles.

## Funding, eligibility and project details

The majority of calls are addressed through collaborative, multi-national/multi-partner Research and Innovation Actions, with either a one- or two-stage application process and 100% reimbursement rates. There will also be several Coordination and Support Action topics, also with single-stage application process and 100% reimbursement rates.

Some calls are addressed through Innovation Actions, with a single or two- stage application process and 70% reimbursement rate (100% for not-for-profit organisations, including universities).

While the way in which applicants choose to address a specific topic challenge is largely at the discretion of applicants, any specific individual topic requirements will be given in the topic description. Topic specific requirements might include, for example, a multi-disciplinary approach, involvement of partners from specific third countries, etc.

## 2019 and 2020 Call timings

For 2019, the single-stage calls had deadlines in April 2019, while the two-stage calls had the first deadline in January 2019 (stage 1) and will have the second deadline in September 2019 (stage 2).

2020 deadlines will follow the same pattern as in 2019, with single-stage calls closing in April 2020 and two-stage calls having deadlines in January 2020 (stage 1) and September 2020 (stage 2).

## Relevant EU policy areas and developments

Innovation has been identified as essential to reach the 2011 Transport White Paper (Roadmap to a Single Transport Area – Towards a competitive and resource efficient transport system) ultimate objective of cutting carbon emissions in transport by 60% by 2050 and a number of other EU policy targets. To meet the objectives of the White Paper, in 2012 the Commission adopted a Communication (Research and Innovation for Europe's future mobility, developing a European transport-technology strategy) to develop a Strategic Transport Technology Plan (STTP) which identifies a set of ten key technology areas which will enable a coherent approach across all the various transport research and innovation funding sources during the next financial programme and beyond. The STTP will prioritise fields of greatest relevance to research and innovation and propose actions to overcome any barriers to deployment.

A new Aviation Strategy for Europe, which includes research and innovation in this sector as one of its focus areas was presented by the Commission in late 2015. It is a milestone initiative aiming at generating growth for European business, fostering innovation and letting passengers profit from

safer, cleaner and cheaper flights. It contributes directly to the Commission priorities on Jobs and Growth, Digital Single Market, Energy Union and the EU as a Global Actor.

The Strategy has the following three priorities:

- Tapping into growth markets by improving services, market access and investment opportunities with third countries;
- Tackling limits to growth in the air and on the ground, by reducing capacity constraints and improving efficiency and connectivity;
- Maintaining high EU safety and security standards.

Several Joint Technology Initiatives (JTIs) are also relevant for this area: Clean Sky 2, which aims to develop environmentally-friendly and cost efficient aircrafts; Fuel Cells and Hydrogen (FCH) accelerating the process of developing fuel cells and hydrogen technologies in Europe for commercial use; Shift2Rail accelerating the integration of new and advanced technologies into innovative rail product solutions, as well as SESAR, which aims to establish a high-performance air traffic control infrastructure across Europe. JTIs are industry-led collaborations in key interest areas that issue their own calls. The EU contribution to JTI funding comes from the Horizon 2020 budget.

Furthermore, the European Commission had supported the development and helps to facilitate the role of five European Technology Platforms (ETPs) active in the area of transport:

- Advisory Council for Aviation Research and Innovation in Europe – ACARE
- European Rail Research Advisory Council – ERRAC
- European Road Transport Research Advisory Council – ERTRAC
- Alliance for Logistics Innovation through Collaboration in Europe – ALICE
- Waterborne

ETPs are industry-led stakeholder forums, comprising representatives of the industry, regulators and financial institutions, with the aim of defining medium and long-term research and technological objectives and developing roadmaps to achieve them.

The European Commission supports the development of high performing, sustainable and efficiently interconnected trans-European networks in the fields of transport, energy and digital services through the Connecting Europe Facility (CEF, which is a key EU funding instrument to promote growth, jobs and competitiveness through targeted infrastructure investment at European level. CEF investments fill the missing links in Europe's energy, transport and digital backbone.

In February 2017, the European Commission launched a new and innovative way to finance transport infrastructure projects in Europe, which envisages combining €1 billion of grants from the Transport part of CEF with financing from public financial institutions, the private sector and the European Fund for Strategic Investments (EFSI).

## More information:

- European Commission Research and Innovation Participant Portal for:
  - Calls for proposals  
[ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities](https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities)
  - Transport Challenge Work Programme 2018-2020  
[http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-transport\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-transport_en.pdf)
- European Commission's Transport website: [ec.europa.eu/research/transport](https://ec.europa.eu/research/transport)
- Transport Research and Innovation Portal: [www.transport-research.info](http://www.transport-research.info)
- [Transport 2011 White Paper](#)
- [EU Aviation Strategy](#)
- [Connecting Europe Facility](#)
- Joint Technology Initiatives (JTIs):
  - Clean Sky2 JU website: [cleansky.eu](http://cleansky.eu)
  - Fuel Cells and Hydrogen 2 JU website: [fch.europa.eu](http://fch.europa.eu)
  - Shift2Rail JU: [shift2rail.org](http://shift2rail.org)
  - Single European Sky ATM Research JU (SESAR): [sesarju.eu](http://sesarju.eu)
- European Technology Platforms (ETPs):
  - European Road Transport Research Advisory Council – ERTRAC: [ertrac.org](http://ertrac.org)
  - European Rail Research Advisory Council – ERRAC: [errac.org](http://errac.org)
  - Advisory Council for Aviation Research and Innovation – ACARE: [acare4europe.org](http://acare4europe.org)
  - Alliance for Logistics Innovation through Collaboration in Europe – ALICE: [etp-logistics.eu](http://etp-logistics.eu)
  - Waterborne: [waterborne.eu](http://waterborne.eu)
- Focus Areas Booklets:
  - [Building a low-carbon, climate resilient future](#)
  - [Digitising and transforming European industry and services](#)
- Sign up to the UKRO Portal to stay up to date on Horizon 2020 general developments, calls, events and results: [ukro.ac.uk](http://ukro.ac.uk)
- For specific questions, contact your UKRO European Advisor.