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 resource-efficient, climate and environmentally friendly, safe and seamless for the benefit of all citizens, the economy and society”.

Projects funded under this Challenge 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. A ‘Small Business and Fast Track Innovation For Transport’ Call was launched, with funding specifically for SMEs, which have an innovative idea that either requires funding for a feasibility study (phase 1) or funding for innovation activities (phase 2), such as demonstration, testing, prototyping, piloting, scaling-up, miniaturisation, design and market replication. There is also a EUR 5 million inducement prize for ‘the cleanest engine’ planned for 2015.

Transport is also addressed in other areas of Horizon 2020, such as the focus areas ‘Blue Growth’ and ‘Smart Cities and Communities’ and in ICT, Energy and Space, as well as by the Joint Technology Initiatives ‘Clean Sky 2’, ‘SESAR 2’, ‘Shift2Rail’, ‘Fuel Cells and Hydrogen 2’.

The Challenge has four broad lines of activities that focus on specific modes of transport (aviation, rail, road, waterborne) but which also address transport integration (urban mobility, logistics, intelligent transport systems, infrastructures).
What will be funded?

There are separate activity lines in the Work Programme for each of the main focus areas it responds to, namely Mobility for Growth and Green Vehicles. Additional, topics also exist in other focus areas.

**Green Vehicles**
Including support to research, technological developments, innovation and demonstration for energy efficiency in road transport vehicles. The scope of the activities covers power-trains technologies, new vehicle architectures and the interface with road infrastructures.

**Mobility for Growth**
This addresses mode-specific challenges (aviation, rail, road and waterborne), areas addressing transport integration specific challenges (urban, logistics, intelligent transport systems and infrastructures) and areas addressing cross-cutting issues (socio-economic and behavioural research and forward looking activities for policy making).

**Smart Cities and Communities**
Projects funded under this activity line contribute to the Smart Cities and Communities focus area and also cover alternative fuels for Smart Cities and stimulating the market demand for smart city solutions.

**Inducement Prize for the Cleanest Engine**
An inducement prize for the cleanest engine is available for projects demonstrating extra-low real-life emissions in automobile engines achieving substantial air quality improvements. The specific rules for the €5 million prize will be published in the first quarter of 2015.

**Funding, eligibility and project details**

Calls are aligned with the four activity lines, with a mixture of single and two-stage Research and Innovation Actions (RIA), Innovation Actions (IAs), or single stage Co-ordination and Support Actions (CSAs). Other project types include SME targeted projects and inducement prizes. While the manner in which applicants choose to address a specific topic challenge is largely at the discretion of applicants, generic minimum consortium requirements will be listed in the work programme and any specific individual topic requirements are given in the topic description.

**Call timings**
The first calls under Horizon 2020 were launched on 11 December 2013. Not necessarily all calls for all areas were launched on this date and as work programmes are expected to cover 2014 and 2015 certain calls will be launched later in 2014 and 2015.
Other relevant Horizon 2020 Work Programmes

The Transport Challenge is strongly connected to two other parts of Horizon 2020, namely ‘Blue Growth’ under Challenge 2 – ‘Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy’ as well as ‘Space’ (Applications in Satellite Navigation) under Leadership in Enabling and Industrial Technologies (LEIT).

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.

Several Joint Technology Initiatives (JTIs) are relevant for this area: Clean Sky, 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
- Logistics
- 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.
More information

- European Commission Research and Innovation Participant Portal for:
  o Calls for proposals  
    [ec.europa.eu/research/participants/portal/desktop/en/opportunities](ec.europa.eu/research/participants/portal/desktop/en/opportunities)
  o Work programme  
- European Commission’s Transport website:  
  [ec.europa.eu/research/transport](ec.europa.eu/research/transport)
- Transport Research and Innovation Portal:  
  [www.transport-research.info](www.transport-research.info)
- Transport 2011 White Paper:  
- Sign up to the UKRO Portal News to stay up to date on Horizon 2020 general developments, calls, events and results:  
  [www.ukro.ac.uk/subscriber](www.ukro.ac.uk/subscriber)
- Use the Portal search function, for example using ‘Horizon 2020’ and ‘Transport’, to find previously published articles:  
  [http://www.ukro.ac.uk/Search/advanced.aspx](http://www.ukro.ac.uk/Search/advanced.aspx)
- For specific questions, contact your UKRO European Advisor:  
  [www.ukro.ac.uk/subscriber/services/eas](www.ukro.ac.uk/subscriber/services/eas)

- Joint Technology Initiatives (JTIs)
  o Clean Sky2 JU website:  
    [cleansky.eu](cleansky.eu)
  o Fuel Cells and Hydrogen 2 JU website:  
    [fch-ju.eu](fch-ju.eu)
  o Shift2Rail JU:  
    [shift2rail.org](shift2rail.org)
  o Single European Sky ATM Research JU (SESAR):  
    [www.sesarju.eu](www.sesarju.eu)

- European Technology Platforms (ETPs)
  o European Road Transport Research Advisory Council – ERTRAC:  
    [ertrac.org](ertrac.org)
  o European Rail Research Advisory Council – ERRAC:  
    [errac.org](errac.org)
  o Advisory Council for Aviation Research and Innovation – ACARE:  
    [acare4europe.org](acare4europe.org)
  o Waterborne:  
    [waterborne-tp.org](waterborne-tp.org)