

EARPA Position Paper
ROAD TRANSPORT RTD IN FP9, HORIZON EUROPE
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In order **to realize sustainable mobility in Europe**, urban passenger road transport will have to be 80% more efficient and long-distance transport 40% more efficient by 2030. No single technology will enable these targets to be reached: a system solution will be essential. A significant part of these efficiency gains will need to be achieved through improving vehicle technology (e.g. aerodynamics, weight reduction etc), by connected, cooperative vehicle automation and interaction with the infrastructure, by influencing travelling patterns, and by implementing low carbon or carbon neutral fuels. At the same time, a considerable contribution will have to come from further improving the energy efficiency of the powertrain.

In this context, EARPA welcomes the discussion about the **possible structure and content of the 9th Framework Programme**, known as Horizon Europe. Through its role in representing the Research and Technology Organisations active within the road transport domain, EARPA would like to stress the importance of continued funding specifically in the mobility arena and particularly to support applied road transport research, that is between Technology Readiness Levels 3 and 5.

The **needs in such research are broad**, covering both system aspects looking at multi-modal mobility within the digitalising environment, and also down to detailed road vehicle and component technologies to ensure further product decarbonisation and energy efficiency improvements. Within such product improvements and whilst retaining some technology neutrality, a focus on the electrification of road transport, particularly within the urban environment is appropriate, but the continued development of alternatively fuelled internal combustion engines, to ensure the smooth transition to zero net carbon longer range mobility by the middle of the century, is needed. Furthermore, applied research needs to be continued on both the development and the production processes of road vehicles, in order to maintain European competitiveness in a fast-changing industry.

As part of its role, EARPA and its members actively contribute to the research needs planning (roadmapping) undertaken by ERTRAC and ALICE and the realisation of the research as part of the Green Vehicles initiatives. For Horizon Europe, **EARPA continues to support the format of a cPPP specifically addressing road transport research needs**, with the appropriate budget allocation, and welcomes the discussion about the possible extension of the EGVI cPPP. As with other organisations, both decarbonisation and connected and automated driving (CAD) are already included in EARPA activities. Hence we recognize the potential synergies of CAD with the research needs of decarbonization. Therefore, enlarging the scope of the existing cPPP is a possible means to ensure the synergies are coherently investigated. Nevertheless, the interests of different research and industrial partners involved within CAD need to be smoothly integrated with those already within EGVI. For example, the relatively different rates of product renewal and assurance, need to be considered; and a means of working with the experts representing the different technologies needs to be clarified with the existing EGVI membership. An agreed proposal on how these aspects are to be achieved should be the next step towards realizing the extension of the cPPP.

Clearly there is also a broader **selection of topics for research** that should be part of a mobility package within the framework programme, for example: inclusive, safe, robust and secure mobility; mobility, delivery and transport as a service (including the internet of things (IoT)); behavioural (including the driver) and sociological aspects; alternatives to electro-chemical batteries for on-vehicle energy storage; real time emissions modelling methods; the circular economy; an impact analysis and validation of all mobility aspects and possibly disruptive technologies over life cycles.

Furthermore, whilst retaining the good practices developed within Horizon 2020, such as the differentiation between RIA and IA, the single and a simple timely two stage application processes, some **other organisational aspects** that should be considered: smaller, flexible scouting activities at the lower TRL to bridge between ERC and RIA projects; single source funding, in order to keep administrative burden low; continued access for third party country partners. Additionally, specifically with respect to research, grant funding should be retained: a change to a more loan based funding mechanism for such organisations as involved in the lower TRL research is inappropriate.

Through the adoption and support of such specifically road transport related research activities and organisation, EARPA believes that **the long-term needs of energy efficiency for decarbonisation and climate change mitigation are supported**. Further, that the potential for innovation and economic growth within the European Union are well supported. We are open to assist further discussion and progression of these suggestions, whenever possible.

About EARPA

Founded in 2002, EARPA is the association of automotive R&D organisations. It brings together the most prominent independent R&D providers in the automotive sector throughout Europe. At present its membership numbers 53, ranging from large and small commercial organisations to national institutes and universities.

For further information, please contact:

EARPA Chairman

Simon Edwards, Ricardo
Simon.edwards@ricardo.com
+49 176 1982 1960

EARPA Secretary General

Margriet van Schijndel-de Nooij, TNO
Margriet.vanschijndel@earpa.eu
+31 6 5384 6379

More information at our website: www.earpa.eu