European Transport Research Alliance

ETRA INPUTS FOR
THE 1ST PLURIANNUAL WORK PROGRAMME
OF THE TRANSPORT CHALLENGE,
OF THE SOCIETAL CHALLENGES RESEARCH
IN THE H2020 PROGRAMME

The **European Transport Research Alliance (ETRA)** was formed in September 2012 to promote and support the full completion of the *European Research Area* in the field of Transport (ERA-T). In doing so, it brings together the strengths of its Partner Associations and coordinates activities on common issues for European Transport Research. The founding Partners of ETRA are well known European Associations representing a wide range of member organisations in transport research.

The ETRA is expected to further strengthen its unique role as a broad Alliance promoting the interests of research organisations from academia, public and private research institutes and transport researchers in general. As a representative of research organisations, ETRA will complement the European Technology Platforms with a greater emphasis on many of the non-commercial ERA building activities.

In fulfilling this objective, the priority activities of ETRA are to facilitate
(i) the wider exploitation of major transport research Infrastructures (RIs);
(ii) the improvement of human skills and competences in transport research;
(iii) the knowledge-sharing and know-how transfer mechanisms and practices;
(iv) the development of common position papers and advice representing the views of its partners (i.e. the transport research providers).

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Introduction

As the process for the formal adoption of the new 7-year Programme for EU funded research, *Horizon 2020,* is moving on and coming to its close at the end of this year, ETRA considers it important to express a number of reflections on the potential content and priorities of the research work programme for the Transport Challenge. This position paper contains a number of suggested priority themes and guiding principles concerning the work-programme content for the first years of the 7-year Horizon 2020 programme.

These comments are based on ETRA partners' perception of the needs for the future state of European transport, as expressed in the new White paper of 2011 on Transport Policy, and the gaps identified in the previous programmes. They are also aligned with the priorities expressed in the relevant texts and Commission papers. Since this text is to form the principal guide and framework for all the multiannual transport research programmes that will follow, and given that the process of its finalisation is still going on, we take this opportunity to voice here some possible suggestions.

Transport research is a major contributor to fulfilling the goals of the vision 2020 and the ETRA wishes to underline its strong opposition to any planned reduction in the EU resources foreseen for research in the Transport challenge. In this respect we fully subscribe to the recent EUCAR initiative to issue a petition to defend the original EC proposed H2020 budget for the transport challenge.

By delivering its inputs, ETRA wishes to note also that its partner Associations have, in the recent past and on various times and occasions, put forward their own more focused position papers and advice towards the Commission. Many of the Partners have also contributed extensively through the submissions of the European Technology Platforms in which they are active. The Partners also would like to re-direct the Commission's attention to the final report of the DETRA (Developing the European Transport Research Alliance) project that informed much of the Partners common thinking[1].

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[1] This report can be found at :
http://detra.fehrl.org/index.php?m=3&mode=download&id_file=14957

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Principles and priorities for the first work-programme

There are many aspects and viewpoints that can be put forward in developing a work programme appropriate for the transport challenges of the vision 2020. We believe that a few of them merit immediate specific attention, and must be mentioned here, as they can be the distinguishing factor of the new programme versus the previous ones, and they can also help to answer to the other new challenges faced by our societies.

Perhaps the most pressing such new challenge is the economic crisis facing many European member states. This makes it necessary to investigate the transport system, not only as an "instrument" enabling the mobility of persons and goods but also as an "enabler" for European economic recovery and for a better European competitive position in a globalized economy.

Other important elements and challenges that would need to be taken into account when drafting the new work programme for Transport, are the following:

1. The need to investigate how the transport system of the future should be organized, run, and supervised. A fully integrated, "intelligent", and adaptive, transport and distribution system is not only a question of the technologies that are applied (these are important too) but it is also dependent on the way the system is organised to work as a "system" and the way in which we can ensure that its various elements are properly planned and monitored.
2. The need to provide and optimise a fully "sustainable" mobility system for our societies as opposed to a "transport modes" system of today. This means that increased importance must be placed on issues such as demand management and trip planning capabilities that would provide the basis for optimal usage of existing transport systems and infrastructures in terms of meeting the energy and environmental challenges facing urban areas (especially but not exclusively) in Europe and the world while still satisfying mobility needs.
3. The importance of investigating and taking into account the social and economic implications of the transport system. Socio-economic research in relation to the "sustainable mobility" provision mentioned earlier should be considered as a necessary ingredient for all H2020 calls in the future.
4. The need to have a longer term vision and time frame in our proposed solutions. This would stem from the fact that the challenges faced are of a longer term nature (e.g. the alternative energy solutions, changing climate conditions, changing demographics, the financial constraints, safety and security issues, etc).
5. The need to take full advantage of technological developments and their impact on the ways in which the transport system is organised and used. Such developments would

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include, for instance, autonomous vehicles, new energy and propulsion systems, information and control systems, remote sensing, closer integration of vehicle and infrastructure, etc.

6. The urgent emphasis that must be given to research on strategies , concepts and technologies for the adaptation of transport infrastructures to climate change. This stems directly from the emphasis given in the proposed Transport challenge, under the title: "Resource efficient transport that respects the environment". This is an issue that must be tackled adequately in this framework period if we are to have usable and effective implementation of results in place for the time periods when climate change is expected to take full hold.

7. Finally, there is an obvious need, in creating the various work-programmes, to always strive to achieve a good balance between multimodal (i.e. systemic) research themes and mode-related ones. One cannot be without the other and the synergies of a "co-modal" approach should always be sought in "balanced" transport research programme in the above sense. In this respect the ETRA would propose to improve the coordination between the mode-specific technology platforms on a wider-range of activities.   The joint working group on urban mobility (ERTRAC/ERRAC) and the joint task force on transport infrastructure (ERTRAC/ERRAC/ACARE/Waterborne/ECTP) are good examples of this which could be explicitly encouraged by the Commission

Suggested themes and research topics

The above priorities and research challenges can be detailed in a number of indicative research themes or areas (which could justify a number of Topics in each case). The following list is not exhaustive but rather selective in the sense that we give emphasis on themes which were either marginally addressed in the past, or they necessitate further attention due to the foreseen new challenges in the future. This list should also not be seen as excluding the more "traditional" transport research themes of the past FPs where work could usefully be extended into H2020.

A. Systemic or multimodal aspects

➢ Worldwide mobility / tourism (improving the door to door mobility for worldwide passenger travel for business and recreation),
➢ Worldwide freight transport efficiency (improving the door to door efficiency and security for worldwide freight transport chains)[3],
➢ Transport safety and security issues with emphasis on road safety,
➢ Situation awareness and Resilience building in the Transport system,
➢ Innovative infrastructure design for seamless and attractive intermodal transport
➢ Transport needs of key economic sectors – transport and land use interaction (trip generation, travel information, trip characteristics, etc),

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- ➢ Efficient mechanisms for financing transport infrastructures,
- ➢ Labour market issues in the transport area, incl. scientists & engineers of the future.
- ➢ Demand management issues,
- ➢ Climate change adaptation for all modes' infrastructures,
- ➢ Seamless transport
- ➢ Transport Economics: transport real cost estimation, impact of low cost proposals for common transport, ticketing and pricing

B. *"Horizontal" aspects*

1. *Education and training issues in Transport and its infrastructure*. This is a wide subject area involving investigating the provision of new forms of Transport-related courses, schemes for the mobility of researchers (we suggest that the possibility is given to fund such mobility schemes through research projects and specific research actions thus creating a virtual Transport Marie-Curie programme focused on specific subjects and issues).

2. *Socio-economic research.* This would involve research on a number of issues that aim to investigate the public's perception, reaction, and requirements concerning the transport system operation. Of particular relevance here, is behavioural research in all aspects of travel behaviour especially modal choice behaviour as well as the impacts of economic crisis on travel behaviour.

3. *International cooperation*. The work that started in this field at the end of FP7 must be continued and expanded towards implementing specific International Cooperation promoting actions. These actions must be of both "soft" and "hard" character i.e. further analysis and data collection or workshop and Conference types of actions (these would be the "soft" type) as well as actions on benchmarking with a view to harmonising research governance and evaluation methods, support for the growth of research platforms focussed on international cooperative participation and working on a specific subject of international importance ("hard" actions), etc.

We believe that the above recommendations are fully compatible, and in line, with wider and more strategic goals and policies of the EU and its bodies in the field of Transport. The ETRA and its partner Organisations would gladly support the Commission in the further elaboration and definition of the above themes.

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Current Partners of ETRA

The current partners (members) of the ETRA are the following European Organisations – in alphabetical order. Most of these ETRA partners are themselves Associations of other individual Transport Research providing Organisations:

- ECTRI (European Conference of Transport Research Institutes)
- EURNEX (European Rail Research Network of Excellence)
- FEHRL (Forum of European National Highway Research Laboratories)
- FERSI (Forum of European Road Safety Institutes)
- HUMANIST (Human centered design Network for Information Society Technologies)

Through the above partners of the European Transport Research Alliance there are, collectively, more than 75 individual Transport Research providing Organisations with more than 10 000 transport researchers, from almost all countries of Europe.

For more information and data concerning each of these Organisations and its activities the visitor is prompted to visit their sites through the links provided above.

ETRA is welcoming additional partners, who shall be membership-based research Associations or similar types of Organisation. Applications for partnership (and associate partnership) are currently being considered from entities based in EU and EFTA countries whose main focus is transport research and with members from at least five EU/EFTA countries.

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