



ECTRI position on the European Commission Communication on “The Future of Transport” COM (2009) 279 (final) of 17 June 2009

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The European Conference of Transport Research Institutes (ECTRI) is an international non-profit association that was officially founded in April 2003. It is the first attempt to unite the forces of the foremost multimodal transport research centres across Europe and to thereby promote the excellence of European transport research. Today, it includes 22 major transport research institutes or universities from 17 European countries. Together, they account for more than 3,000 European scientific and research staff in the field of transport. ECTRI is committed to provide the scientifically based competence, knowledge and advice to move towards its vision to have “an efficient, integral European transport system that provides completely safe, secure and sustainable mobility for people and goods”.

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1. The European Conference of Transport Research Institutes (ECTRI) welcomes the thorough and comprehensive process that the European Commission has followed in the preparation of the Communication "The Future of Transport" and the opportunity it offers to the different stakeholders to provide their views.
2. ECTRI particularly appreciates the quality of the underlying scientific base gathered in the "TRANSvisions"-report. Without having the pretension and ambition of analyzing the comprehensive report in depth, we would like to put forward some reflections in the next paragraphs.
3. First ECTRI would like to underline that the challenges we have to face when thinking about "The Future of Transport" have reached new dimensions. It is the first time in human history –some crises or war periods excepted – that we have to take into account the fact that global energy demand will grow while conventional energy supply will dwindle and energy prices will drastically increase. We have also to take into account the big climate change issues. While passenger and freight transport has brought Europe together and contributed to jobs, wealth, and quality of life we have to recognize that major changes of how transport is conducted are looming on the horizon in view of rising energy prices and the demand for sustainability. It is a matter of fact that we have to get accustomed to improve our new ways of mobility; business as usual is out if Europe wants to keep its standard of living and stay a global economic force.
4. Having said that, ECTRI stresses the importance of a long-term vision on the transport system and reiterates its commitment to contribute to this vision. To meet the challenges ahead investments in broader transport research are indispensable; co-modality has to replace the competition between modes. ECTRI will promote, together with other partners, the development of scientific and technical excellence, allowing on one hand progress for each mode, on the other progress for intermodality and co-modality. This commitment is expressed in the *Lyon Declaration*¹ signed on 11 December 2008 in Lyon.
5. ECTRI recognizes the fact that realizing long-term visions may deviate from problem solutions experienced or accepted by the present generation of European citizens. Research can play a major role to reconcile this gap by offering consistent or – where necessary – revolutionary paths into the future. These pathways are marked by diverse challenges we are facing. One of the main challenges is the necessity to help people to change their behaviour and to assure the social acceptability of technological innovations. In the field of research, that means a multidisciplinary approach; integrating engineering sciences and human sciences is more and more necessary.

Challenges

6. The 'images' of the future presented in the report, which form the basis for many of the policy oriented recommendations are very powerful and helpful in the formulation of future challenges in the traffic and transport system.
7. However, the analyses of major trends seem to underestimate the increased need for "reliability" of the transportation system. This "need for reliability and robustness" could well outweigh the "need for speed".
8. The soon to be released OECD/JTRC-report "*Improving Reliability on Surface Transport Networks*" distinguishes three factors that drive this "need for reliability" :
 - 1) The transport task in our economy and our lifestyles. Transport networks form the vital conduits of our economies and the arteries that facilitate our patterns of living. Transport enables the trade in our global economy to function and is a vital aspect of the labour market mobility that delivers higher economic productivity and lower inflation. The passenger task enables travellers to commute or do business, to socialise and enjoy leisure activities. Thus, "consuming" transport fulfils a means to an end in fulfilling trade and lifestyle desires rather than (in most cases) being an activity in its own right.

¹ http://www.ectri.org/Documents/Publications/Strategic-documents/Lyon_Declaration_signed.pdf

2) Transport unreliability impacts on personal and commercial activities. The smooth flow of traffic along the transport arteries enables vital commercial activities and enriches personal well being. Thus, not only do disruptions along the arteries worsen the “transport experience” of network users but, more importantly, they adversely affect the commercial and personal activities that are based on reliable timetabling.

3) Trends in transport and reliance on reliability. In the past, declining transport costs –through vehicle and infrastructure improvements– have enlarged the operational sphere of influence for travellers and businesses alike. Personal travel –commuting and leisure activities– covers longer distances. Businesses have consolidated into larger, but fewer, physical locations. Complementary activities have been offshore outsourcing of production and just-in-time stockholding. However, while fast, reliable transport shapes industry structure, it has also increased the vulnerability of the supply chain to perturbations, especially with lengthening supply lines. Further, the costs of these disruptions are likely to be higher than in the past, when, for instance, stocks on hand provided insurance against late delivery. With transport costs increasing, research will have to explore new forms of freight management and transport to offer better reliability with better costs.

9. During the last decades, the travel distances have increased and the average time spent for travelling remained stable over time. We do not know how the different stakeholders will react to the increase of the cost of energy in the short and medium term. Will there still be a “need for speed” present at a transport system level? Here we face a situation where technology seems to have a limited impact: break through technologies as magnetic levitation and supersonic aircrafts have not (yet) succeeded in conquering a position in the transport system. Congestion and safety considerations are other limiting factors. It means that special attention has to be given to organizational aspects of the transport system especially regarding spatial planning, nodes/transfer points, intermodal cooperation, robust networks and Intelligent Transport Systems, and, of course, human behaviour.
10. Urban aspects will be increasingly important, as a growing percentage of Europe’s citizens will live in cities. In urban conurbations the transport system has to serve competing flows of long distance and commuting trips, passenger and freight transport. Furthermore, urban mobility alongside measures in the field of urban planning and energy-saving buildings is a major factor in realizing the vision of a “carbon neutral city”
11. A related concept is the “compact city” where the concept of multiple land uses is applied and where a combination of transport, housing and commercial activities is sought. It is a promising concept when addressing (physical) accessibility and congestion issues. But, of course, the acceptance by the population of the “compact city” model has to be checked in depth. In other words, we can assume that urban sprawl is only the consequence of cheap energy and cheaper land, but it may also be a good answer for the need of the human being to have space at his disposal and to live closer to nature.
12. A strong growth of air traffic is expected at a global level but, at the European scale, high speed trains could be a strong alternative (like in France) This raises many new (research) questions. Especially the link between airport development and the geographical distribution of economic activities is uncertain. A first step in tackling this question is to incorporate air travel in the usual statistics and models for mobility. In a long term, should Europe support two networks, one for air traffic, and one for high-speed trains? At the same time the integration of air transport with high-speed rail transport is a perfect example of co-modality.
13. This is a good example of the necessity to look for the optimisation of our transport networks. Until now, our European habit is to deal with the safety issues on one hand, on the operational issues on the other hand. Then we have conflicts between safety, capacity, and speed. As we have not enough money to continue building new infrastructures we would like to have, and as the need for renewal is huge and huge, we think that research should focus more and more on optimisation issues. One major tool is modelling, both in the fields of road and rail traffic: research is expected to bring a strong contribution.

14. ECTRI underlines the important role of technology in meeting the important challenges society is facing. However, the term “technology-led” to be found in the title of the Communication might suggest that technological development is an autonomous phenomenon. However, policy guidance is required as we deal with competing concepts in the field of propulsion systems, energy sources, information systems etc. The examples of the supersonic aircraft and magnetic levitation show that traditional and new technologies do not necessarily coexist. A thorough technology assessment of short and long term solutions is an important policy task.
15. Behavioural change is a fundamental issue. For instance, new technologies, especially ICT, are linked to social change, and they become relevant only when they are taken into meaningful common use in social practice, i.e. in everyday life. Thus more effort is required in identifying the needs and hopes of end users and the society as a whole in policy and ICT development. Taking into account the great heterogeneity of the population (elderly people, with most often difficulties with new technologies, young people at the opposite very keen to use them) is a great challenge for multidisciplinary research (human-machine interactions)
16. Globalisation and the rise of emerging economies in Asia, but also Latin America and Africa will have an enormous impact on the European Union. First it will affect the distribution of economic activities and the related transport flows. This calls for an “intelligent’ and adaptive transport and distribution system. Rising welfare in those regions will influence the consumption and mobility patterns of their citizens. Tourism is already now a major economic sector. Tourist locations are not evenly spread and will affect specific (European) transport nodes, e.g. airports. As in developed countries, tourism is responsible for an important part of the anthropogenic green house gas emissions; the impact of the increasing price of energy has to be strongly studied, as well as the behaviour of tourists when considering climate change issues.
17. Globalisation trends will affect global climate and energy targets. As an example, cheap, technologically simple vehicles can fulfil the needs of an emerging middle class and outweigh the efforts of reducing emissions through clean technologies. You could speak of a Toyota Prius vs. Tata Nano dilemma. But maybe cheap technologies will not allow efficiency, as far as vehicle to vehicle or vehicle to infrastructure communication is needed to insure road safety or traffic efficiency. The development of clean and cheap technologies is essential and could open markets for European industries. Nevertheless room will probably remain in developed countries with high levels of traffic, for more sophisticated technologies. Research has to explore both directions.
18. Reaching our sustainability targets depends on being successful in a “double decoupling”: economic growth and transport growth on the one hand and transport growth and (CO₂-) emissions on the other hand. A double strategy aiming at mitigation and adaptation needs to be pursued.

The role of research

19. We consider research to be an important agent in building a road between present needs and challenges lying ahead in the future. It provides evidence and criteria to make choices along that road.
20. ECTRI would have welcomed more reference in the Communication on that role. As a matter of fact, the term “research” does not appear in the document. Fundamental and applied research is a *condition sine qua non* to “keep Europe at the forefront of transport services and technologies”. At the same time it helps to build a sustainable transport system that identifies and satisfies an increasingly diversified demand of its users and is economically viable.
21. In the course of our contribution we have sketched some specific fields of action: foresights, technology assessment, an integrated approach to urban issues in view of CO₂ reduction, inclusion of air travel (and tourism) in statistics and modelling; robustness and adaptability of transport systems, behavioural aspects, economic effects on globalisation, especially on decoupling aspects.

22. The Technology Platforms active in the field of transport have produced excellent and converging visions of the future transport system in their Strategic Research Agendas. Some common research issues have emerged: Life Cycle Cost analysis, maintenance of infrastructure, deployment options and optimum conversion strategies for alternative fuels, security, decision support tools, statistical data, etc.
23. Eight Thematic Working Groups of ECTRI are preparing Strategic Research Agenda's for their activity fields: *Urban Mobility, Traffic Safety and Security, Energy and Climate change, Freight transport, Intelligent Transport Systems and Intelligent Infrastructures, Mobility, Transport Economics and Policy, and Transport, Urban Environment and Health*. These SRAs will be available by the beginning of 2010. At the same time four Networks (or virtual centres) of Excellence (EURNEX, HUMANIST, ISN, and NEARCTIS) are making a similar effort.
24. In the spirit of the Lyon declaration, ECTRI puts its contribution on the table, in order to share it with its partners, and reciprocally. The signatories of the Lyon declaration have put in place a working group, dedicated to the preparation of FP8. This way, we hope to support the European Commission to make the relevant choices, but also to contribute to joint programming activities between European States.
25. Looking at the future in relation to transport research, ECTRI would like to underline the necessity to stimulate young professionals and researchers to discover the transport sector as a challenging and attractive field of activities. ECTRI is committed to this endeavour and organizes with FEHRL and FERSI a biennial Young Researchers Seminar². This and initiatives as the YEAR³ event are opportunities offered to achieve this goal.
26. Finally, we would like to stress the importance of dissemination of research results and the cross-border scientific debate. This is to be considered just another element of the building of the European Research Area. The fora and instruments for the debate are enhanced by information technologies, but the basic activity of organizing and making the results fit for presentation and discussion remains and intellectual effort often under pressure by financial and time constraints. The Transport Research Knowledge Centre (TRKC) of the European Commission is a good example: it is a well-conceived and useful instrument; its usability is however limited by the coverage of recent research results. Other important instruments are the scientific conferences such as TRA, ETC, the ITS-congresses (etc...): ECTRI is willing to bring a strong contribution, together with its partners of the Lyon declaration, to strengthen their position and impact.

² <http://www.ectri.org/Activities/Seminars.html>

³ <http://year2010.fehrl.org/>