

ERTRAC—European Road Transport Research Advisory Council

A unique opportunity to improve the effectiveness of research on road transport in Europe

Road transport is one of the greatest conundrums challenging the sustainability of our lifestyles today. Mobility is essential—for the individual, for commerce and for industry. Indeed, the increased prosperity of the past 40 years has been underpinned by road transport, the growth of which has repeatedly outstripped all projections. However, this has also created a set of challenges for the sustainability of the road transport industry that we must meet if we are to maintain and improve our lifestyles.

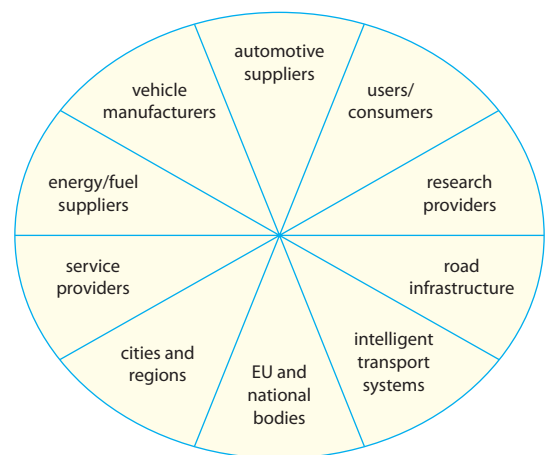
Over the years the quality of fuels and vehicle technologies have improved such that pollutant emissions from new road vehicles have been dramatically reduced. To a large extent the focus of attention has now shifted to greenhouse gas emissions. The oil industry's role is to continue meeting the energy demand in a secure and cost-effective way, while minimising the impact on the environment. Looking further ahead, some CONCAWE member companies are also engaged in research into cost-competitive renewable and alternative low-carbon options.

Clearly, the issue of road transport sustainability is complex and stretches far beyond the vehicles and fuels themselves. New approaches to transport and mobility systems are needed, including improvements to transport infrastructure, traffic management, driver training and greater consumer awareness. The many challenges associated with road transport can only be met through the combined efforts of many stakeholders.

ERTRAC—an Advisory Council

ERTRAC was originally established as an 'Advisory Council' with the objectives to develop a shared Vision of road transport in 2020+ and an associated Strategic Research Agenda, in order to achieve more effective European research in the road transport sector. Initially conceived by the automotive industry, ERTRAC has now

Figure 1 Sectors represented in ERTRAC



brought together all stakeholders in the road transport sector (see Figure 1).

ERTRAC's Vision of Road Transport in 2020+ was published in June 2004, followed by the Strategic Research Agenda (SRA) in December 2004. Both are publicly available on the ERTRAC web site at www.ertrac.org. The research areas are organised under four pillars, with sustainability and competitiveness as core objectives running across all pillars (Figure 2).

ERTRAC—a Technology Platform

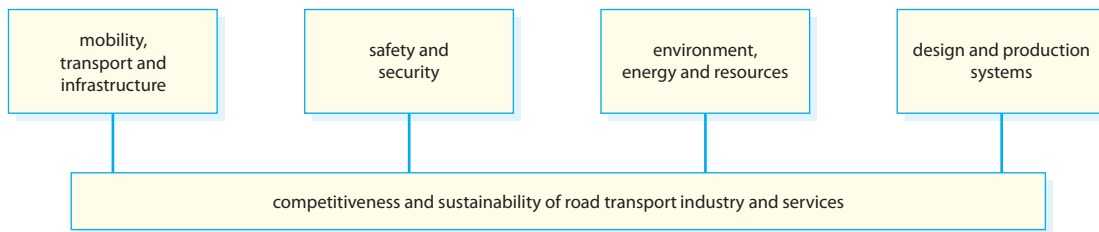
ERTRAC is now evolving into a Technology Platform. This is a new instrument, introduced by the Commission, which will be used under the 7th Research Framework Programme (FP-7). The first draft of FP-7 was presented in April and the final programme should be approved by year end. The first projects under FP-7 are likely to commence in 2007.

The majority of the FP-7 research agenda is likely to be implemented through existing instruments. However, a limited number of issues are expected to be identified which are very ambitious in scope and scale and where

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Figure 2 ERTRAC research areas



major public and private investments are needed. For these issues, the new Technology Platform instrument is envisaged. This may lead to Joint Technology Initiatives involving major public-private partnerships, contributing also to the Commission’s objectives to increase European research spend to 3% of GDP.

The principal concept of a Technology Platform is: ‘Stakeholders getting together to define a Strategic Research Agenda on a number of strategically important issues with high societal relevance where achieving Europe’s future growth, competitiveness and sustainable objectives is dependent upon major research and technological advances in the medium to long term’. Technology Platforms will generally involve three stages:

- **Stage 1:** Stakeholders get together
- **Stage 2:** Stakeholders define a shared Vision and associated Strategic Research Agenda
- **Stage 3:** Stakeholders implement the Strategic Research Agenda

ERTRAC has now completed Stage 2 and has a well-established multi-stakeholder group with a shared Vision and Strategic Research Agenda. In Stage 3, ERTRAC has a unique opportunity to improve coordination of European research on road transport (including EU, National, private and public programmes) as well as to establish multi-sector research initiatives on the key road transport issues.

Under the Energy, Environment and Resources pillar, which is the primary interest area for CONCAWE, research falls into two key areas:

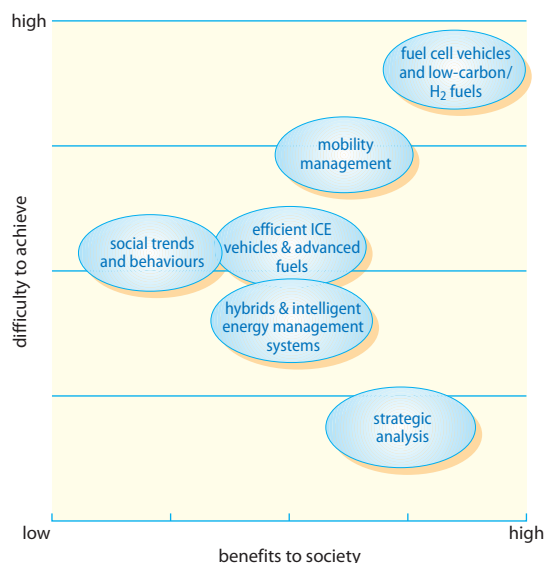
- reducing GHG emissions, and more efficient energy use; and
- environment, including impact on communities and natural habitats.

The principal research themes that have been identified under these two areas are shown in Figures 3 and 4.

GHG emissions and efficient energy use (see Figure 3)

Up to 2020, the main improvements in energy use and GHG emissions will come from efficient internal combustion engines (ICE), and their associated advanced fuels. Hybrids and intelligent energy management systems will be an important associated technology. Research is also needed on hydrogen and fuel cell vehicles, although these will not make a significant contribution in the market until after 2020. Strategic analysis, including well-to-wheel studies, will be important to making the right technology choices. Energy use will also be influenced by mobility management, including high quality infrastructure and use of intelligent transport systems to ease traffic flow, and by social trends and behaviours which may impact upon transport demand and fuel-efficient driving.

**Figure 3
GHG emissions/efficient energy use**



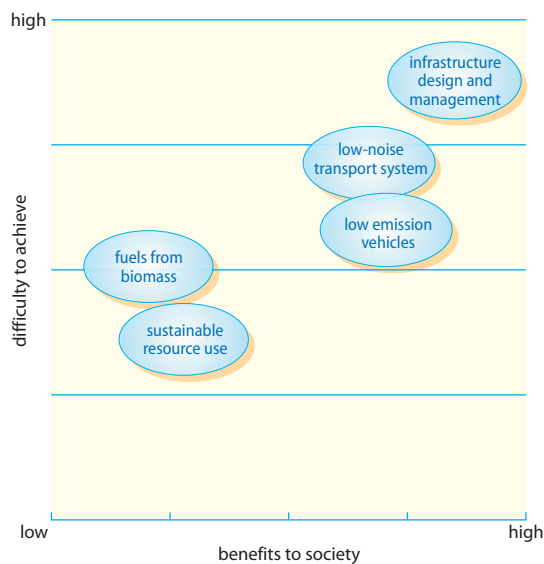
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Environment, including impact on communities and natural habitats (see Figure 4)

Low emission vehicles, meeting Euro 4, 5 and 6 and progressively introduced up to 2020 will dramatically reduce air pollution from road vehicles, while developing a low noise transport system will require an integrated approach. Research is needed on road infrastructure design and management to mitigate its impact on people and natural habitats. Increased use of renewable materials and recycling will lead to sustainable resource use. The impact of biofuel crops on water pollution and biodiversity also needs to be considered.

Figure 4
Environment, including impact on communities and natural habitats



Future CONCAWE role

CONCAWE will continue its active role in ERTRAC's overall research planning process, in particular on the issues relating to Energy, Environment and Resources. This will provide opportunities for the oil industry to participate in specific projects, either through CONCAWE or as individual companies depending on the subject.

In addition to ERTRAC, many other Technology Platforms are at various stages of development.¹ In March 2004 there were more than 25 proposals, though only a few are likely to be finally implemented as Technology Platforms. Others may be progressed in other ways, for example as so-called 'integrated projects'. CONCAWE is currently also involved in the development of Technology Platforms on industrial safety and water.

¹ Further information on 'Technology Platforms' is available at www.cordis.lu/technology-platforms