

TEMPLATE FOR CHARACTERISING ENERGY TECHNOLOGY ROADMAPS

REFERENCE	
Title:	Strategic Research Agenda
Date:	December 2004
Author:	European Road Transport Research Advisory Council (ERTRAC)
Funded by:	
Hard copy reference:	
URL:	http://www.ertrac.org/pdf/publications/ertrac_agenda_dec2004.pdf
Date accessed:	August 2007
Web Format:	pdf
IEA topics covered	Transport
Geographical focus:	Europe
Brief Abstract:	This first Strategic Research Agenda, which was produced by the members of ERTRAC, presents the elements of ERTRAC's Vision for 2020, and the expectations and targets for research in order to achieve this vision. It outlines detailed descriptions of the research areas and roadmaps of the path forward towards reaching the necessary objectives.

OUTPUTS	
Short Report?	No
Major report?	Yes. (78 pages)
Visualisations?	Yes
Information held on dedicated software?	No
- which package?	NA

ARCHITECTURE	
Timescales used:	Up to 2020
Trends and drivers?	No
- list	
Enablers?	No
- list	
Performance measures/targets?	Yes
- list areas	MOBILITY, TRANSPORT AND INFRASTRUCTURE: <ul style="list-style-type: none"> • Provide the necessary solutions to

	<p>improve mobility and satisfy the expected 32% increase in individual demand for travel by 2020.</p> <ul style="list-style-type: none"> • Enable fluid and efficient movement of an increasing quantity of goods within the overall freight transport system. • In order that quantifiable targets can be set in the future, a series of robust indicators, such as transport efficiency for passengers and freight, journey time reliability, user service levels and network efficiency, need to be developed. These measures, coupled with greater information provision, can allow appropriate choices to be made. • Full compatibility of Member States' data and models relating to social trends and behaviours is necessary. Development and full integration of mobility forecast models into local and regional network management plans must also be achieved. • Increase network efficiency through reductions in the impact of maintenance activities, prioritised road space and traffic management. <p>SAFETY AND SECURITY:</p> <ul style="list-style-type: none"> • New research solutions could contribute up to 30% of the target reduction in fatalities. Accident prevention could contribute 55-65% of the total gain. Accident mitigation could contribute 35-45%. • Member states should all achieve an equally low level of accidents. • Member States should achieve full compatibility of accident research databases and methodologies. • Research should ensure that new fuels will be handled with the same level of safety as road fuels are handled today. • In an enlarged Europe, the security of people and goods in transit will improve over the levels of 2000. <p>ENVIRONMENT, ENERGY, RESOURCES:</p> <ul style="list-style-type: none"> • Improvements in vehicle efficiency will deliver as much as a 40% reduction in CO2 emissions for passenger cars and 10% for heavy duty vehicles for the new vehicle fleet in 2020. • Good vehicle maintenance and driving for fuel efficiency will reduce fuel consumption and CO2 emissions by at
--	---

	<p>least 10% for cars¹¹ and 5% for heavy duty vehicles.</p> <ul style="list-style-type: none"> • Improvements to the road transport infrastructure, best use of transport modes, information technology systems, higher passenger car occupancy rates and freight loading factors will contribute to further reductions in fuel consumption by 10-20%. Further reductions of carbon emissions associated with fuel production will be achieved. • By 2020, fuel cell vehicles and low carbon / hydrogen fuels will begin contributing to carbon reduction provided sustained research efforts are begun now. • By 2020, Euro-5 & 6 emissions standard vehicles will be well established in the vehicle fleet. The research target is to achieve these near zero emissions levels at minimum cost while still improving energy consumption and CO₂ emissions. • Transport noise will be reduced by up to 10 dB(A) through a systems approach including better indicators and improvements to vehicles, tyres and infrastructure. • Sustainable use of resources and recycling of vehicles and road infrastructure materials will also contribute to the preservation of the environment. <p>DESIGN & PRODUCTION SYSTEMS:</p> <ul style="list-style-type: none"> • Cycle times from new product concept to market will be reduced by at least 50% from today's best practice standards. • Evolution of virtual tools will reduce future development costs of vehicle and infrastructure products and their components by 10-30%. • Flexible production and delivery systems will enable order-to-delivery times for passenger vehicles of less than 5 days by 2020. • World-class productivity will be achieved. • The application of robust, reliable and innovative manufacturing systems will allow 100% utilisation of production sites. • Continuous production of road surfaces will become possible
--	--

TEMPLATE FOR CHARACTERISING ENERGY TECHNOLOGY ROADMAPS

	<p>throughout the full spectrum of climatic and operating conditions.</p> <ul style="list-style-type: none">• New solutions will enable reuse and recovery of materials of 98% for infrastructure and 95% by average weight per vehicle.
Mapping of RD&D activities?	Yes
Critical assessment of capabilities?	No

TEMPLATE FOR CHARACTERISING ENERGY TECHNOLOGY ROADMAPS

PROCESS	
Methods used:	
- Desk study?	
- Consultation	Yes
- Interviews?	
- Facilitated workshop(s)	
- Working groups/task force	Yes
- Integrated Process	
Stakeholders engaged:	
- University based researchers	Yes
- Other public sector researchers	
- Business – technology	Yes
- Business – other	Yes
- Government - energy	Yes
- Government – SET	
- Government - other	Yes
- NGOs	Yes
No of people engaged:	61
Budget (if known):	
Commitment to re-visit?	

ACTIONS IDENTIFIED	
List of actions?	Yes
Actions listed according to timescale?	yes
Actions prioritised?	No
Sequencing/dependencies identified?	No
Responsibility for actions identified?	No
Types of actions identified:	Yes
- Basic research?	
- list areas	
- Applied research?	
- list areas	
- Development & demonstration	
- list areas?	
- Other types of action?	
- list other types	