

# Strategic Transport Technology Plan

The Europe 2020 Strategy includes the flagship initiative "Resource efficient Europe", under which the European Commission is to present proposals to modernise the transport sector and thereby contributing to increasing competitiveness and lowering emissions. Furthermore, under the flagship initiative "Innovation Union", the Commission is to develop a strategic research agenda, which will also include amongst others transport. The flagship initiative "An industrial policy for the globalisation era" calls for promoting technologies that reduce the use of natural resources and for commercialising key enabling technologies.

The challenge of establishing a more resource efficient economy is particularly demanding for the transport sector. Transport continues to rely almost entirely on oil, emitted 34% more greenhouse gases in 2008 than in 1990 and remains a major source of noise and local air pollution. Tackling this challenge requires transforming the transport system, promoting independence from oil, and creating a modern infrastructure and multimodal mobility assisted by smart management and information systems. A collective and intensified effort is needed to ensure that transport research and innovation offers its full support.

The **Strategic Transport Technology Plan (STTP)** will provide a strategic framework for research, development and deployment, based on policy needs. It will present technology areas for which it is essential that the European Union as a whole develops an integrated approach. For the purpose of the STTP, a technology area has been defined as: *a comprehensive set of technologies, methods and practices with a shared focus on application. It encompasses all elements of the research and innovation chain (from research and demonstration to market take-up and standardisation)*. The Commission intends to publish a Communication on the STTP in 2011.

As part of the preparation of a credible and widely supported STTP a consultation of key stakeholders through dedicated workshops is underway. In parallel, a public consultation by means of this on-line questionnaire offers the opportunity to all citizens and stakeholders to express their views in the preparation of the STTP.

This questionnaire is divided into four parts, each including several questions. For each of the topics an introductory text provides the context to understand better the questions. A report with the results of this public consultation will be made available via Internet. It will explain how the results of this consultation will be taken into account in preparation of the STTP. It will be published no later than six weeks after the closing date of the consultation.

## I. Information about respondents

**Are you replying to the survey as an individual or on behalf of an organisation, institution or company? (compulsory)**

- Individual
- Organisation, institution, company

## II. European Union Transport Policy and Technology

The Strategic Transport Technology Plan (STTP) will outline priorities for transport research and innovation, as well as the options for improving the organisation of funding including European, national, public and private funding. The STTP will take into account the policy needs of the new White Paper on Transport. The STTP will look at technology in a broad perspective, covering technical aspects as well as socio-economic aspects. The socio-economic aspects may cover, for example, acceptance of new technology solutions by the public, societal demands e.g. an ageing European society, regulatory constraints and business requirements. The STTP will cover the period of up to 2030, address all transport modes as well as cross-modal issues, and take into account the specific needs of each transport mode.

**To achieve a transformation of the transport system, different options for transport research, innovation and deployment can be pursued. In your opinion, which of the three options below should be followed? (compulsory)**

- Business as usual: a research, innovation and deployment process at EU level that varies in coordination, structuring and management intensity across fields and sectors.
- A research, innovation and deployment process for key technology areas that is strongly coordinated and structured, and operationally managed at EU level.
- A research, innovation and deployment process for key technology areas that is strategically coordinated and structured at EU level, combined with an operational management based on a broad "partnership approach" involving different stakeholders.

**Please indicate to what extent you agree with the statements below.**

	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Undecided or no opinion
<b>The development of different technology areas must be pursued in parallel. (compulsory)</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Technological development must be focussed on a limited number of key priority technology areas. (compulsory)</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>The European Union could reach its transport policy objectives if the technological solutions already available for market take up and</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**deployment are implemented. (compulsory)**

### **III. Transport technology prospects and EU action**

Technologies contributing to a sustainable transport system are currently being developed or are in different stages of market take up and deployment. Here, they are clustered in four technology areas:

- **Information and Communication Technologies (ICTs)** - such as traffic management; freight route planning and optimisation; traveller information, route planning and optimisation, ticketing and payment; electronic communication between vehicles and between vehicles and infrastructure; technologies related to "virtual accessibility", tele-working etc.; e-initiatives (e-Freight, e-Maritime, etc. )
- **Fuels and energy technologies** - such as biofuels; electrification and low carbon electricity; hydrogen and fuel cells; hybrid vehicles; incremental improvements of conventional engines; alternative propulsion for shipping, such as wind, solar-or nuclear energy based solutions, propulsion for aviation;
- **Materials and vehicle design** - such as the use of lightweight or new materials for vehicles; downsizing of vehicles; aerodynamic design of vehicles;
- **Transport infrastructure and services** - such as multimodal freight consolidation centres, passenger terminals; construction materials; new infrastructure and service concepts such as bus rapid transit (BRT), personal rapid transit (PRT), multimodal/on-demand services, pipelines, intermodal integration.

This list of technology areas is not exhaustive but attempts to capture where action might be needed to provide high quality mobility services to European citizens and support the competitiveness of European industry while increasing resource efficiency. The fields listed above cover all transport modes.

Creating the framework conditions and incentives for the development and take-up of innovative options is often a matter of public policy. Elements of socio-economic nature also play an important role. A whole range of instruments is available at European and national levels to help accelerate the development of technologies. Typically, instruments can be financial incentives for research and development or they can take the form of regulations or market instruments that encourage the use of a specific innovative solution. Another European level of action can also be the coordination of European research, developments and innovation efforts (research networks, technology platforms, etc.) to better pool resources and avoid overlaps.

Please indicate in the table below the areas that you consider having the greatest potential to contribute to a low-carbon, high-quality, secure and competitive European transport sector by 2025/2030 and in a longer term perspective, by 2050. You can select as many boxes as you wish.

	Potential by 2025/2030	Potential by 2050	Additional EU action: coordination	Additional EU action: funding	Additional EU action: legislation / standards
<b>Information and communication technologies (optional)</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Alternative fuels and energy technologies (optional)</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Materials and vehicle design (optional)</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Infrastructure and services (optional)</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Socio-economic elements (optional)</b>	<input type="checkbox"/>				

**In your opinion, what are the three most important technology improvements that could transform the European transport sector up to the years 2025/2030? (These may be more specific than the technology areas mentioned above.) (optional) (maximum 1000 characters)**

1. Improvement of E-Freight: CLECAT considers e-freight as a very important technology improvement that can facilitate the intermodal and international transport of goods by reducing paperwork and repetitive processes, and contributing to make co-modal solutions more effective and competitive. E-freight can also help to keep control of goods switching between different transport modes and operators. We need a common dataset for exchanging documents but currently, there are still insufficient standardisation of information exchange and interoperability of devices, as well as a disparate disposition of market actors to use ICT. Improvements in this respect could transform the way freight transport is carried on.
2. Improvement of clean vehicle technologies: One of the most important technology improvements concerns the development of low carbon technologies for transport vehicles like Heavy Goods Vehicles. On this issue, CLECAT believes that hybridisation for freight transport (especially for HGVs) might be necessary to be developed first before considering any further technological breakthrough concerning alternative fuels. Nonetheless it is also important to improve the performance of alternative fuels. While we expect only limited use of batteries for heavy goods vehicles (e.g. in urban transport), biofuels, hydrogen and liquefied petroleum gas will and need to play a more prominent role in the future, the earlier the better. The Commission can support further research in this area, without picking winners too early.

3. Improvement of Global Navigation Satellite Systems and Vehicle-to-Infrastructure (V2I) technology (and vice-versa): A more precise GNSS would allow a more accurate tracking and tracing of freight, as well as more efficient route planning and optimisation for transport operators. It could also help for the choice of modes to be used between origin and destination.

**In your opinion, what are the three most important types of socio-economic research and innovation activities necessary to support the successful implementation of innovative technology improvements in transport? (optional) (maximum 1000 characters)**

On this issue, CLECAT would be in favour of exempting any technology that does not ensure interoperability in all modes of transport from subsidies.

## IV. The research and innovation chain

The innovation cycle typically starts with a research and development phase, followed by demonstration and market take-up activities. The third and final phase entails deployment and implementation. The funding of the various phases varies considerably across Member States, sectors, technologies, EU financial instruments and in other parameters. The Commission intends to use funding where it would yield the greatest value and speed up reaching transport policy objectives.

**Please rank in the order of importance which of the three phases of the innovation cycle you consider requires EU support most.**

**On a scale of 1 to 3 with 1 requiring the least EU support and 3 requiring the most EU support.**

	1	2	3
<b>The research and development phase (compulsory)</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>The demonstration and market take-up phase (compulsory)</b>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
<b>The implementation and deployment phase (compulsory)</b>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

**The research and innovation cycle and its funding. Please indicate to what extent you agree with the statements below.**

	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Undecided or no opinion
<b>EU financial support should be focussed on transport research, development and innovation to improve the individual transport modes. (compulsory)</b>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>EU financial support should focus on transport research, development and innovation in multi and intermodal improvements (i.e. on the interfaces between modes). (compulsory)</b>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Transport research and innovation activities in Europe are well coordinated.(compulsory)</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
<b>The results of transport research and innovation are sufficiently disseminated across Europe. (compulsory)</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
<b>The results of transport research and innovation are sufficiently exploited across Europe. (compulsory)</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

## V. Global competitiveness

As an important driver of the world economy, the transport sector has to compete on a global market where it faces severe competition.

**In your view, which areas should be supported to improve European competitiveness? (E.g. basic research, applied research, intellectual property rights, regulatory aspects, etc.) (optional) (maximum 2000 characters)**

- Optimisation of the existing research areas: CLECAT believes that the most effective innovative initiatives at EU level are not necessarily those focussing primarily on the development of new technologies. We think for instance about the improvement of existing technologies that would facilitate the deployment of a European Electronic Toll Collection Service enabling a driver to pay tolls or fees everywhere in Europe with one on-board equipment. We also think about the research areas facilitating the

adoption and implementation of the European Modular System (EMS) at EU level, leaving Members States free to use it if they so choose also in cross-border transport in their respective countries, which can bring savings in costs and emissions and can contribute to better and more interoperable road transport, as well as better interactions with other transport modes.

- CLECAT would also like to underline that the lack of courage to adapt legislation is very often a source of inefficiency and hampers European competitiveness (as is the case with the cabotage rules, the European Modular System, and authorised applicants in the rail sector).

## **VI. Further comments**

**If you have further comments on the role the EU could play in supporting European research and innovation in the transport sector, please add them here. You can also upload a position paper or further information. (Please specify titles) (optional) (maximum 5000 characters)**

The deployment of innovative technologies is important for the transport industry to be able to maintain or improve its efficiency in spite of increasing problems like congestion and maintain decent level of service for its customers. Freight movements, deliveries, collections, fleet managements etc. can indeed greatly benefit from interoperable and harmonised technologies. For this reason, CLECAT supports the setting up of a Strategic Transport Technology Plan if it creates the conditions for a well-thought, cost-effective, interoperable and harmonised introduction of innovative technologies in logistics and if it is deployed in harmony with, and without the ambition to impose itself onto, the market.

However as a general comment, CLECAT would like to remind the Commission that even if technology can assist to meet current and future challenges, it certainly cannot solve them alone. Even if innovative technologies can significantly contribute to mitigating congestion and creating the condition for a more efficient use of existing infrastructure, one should not see them as "miracle cures" that could substitute improvements in infrastructure maintenance or substitute badly needed investments in new infrastructure.

Finally, we also remind the Commission that CLECAT already provided its views on the future STTP when participating to the hearings organised by DG MOVE on road transport and logistics, urban mobility and inter-modality. Our replies for these hearings are uploaded to this questionnaire for your information. A comprehensive reply may be submitted after the consultation process.