

# Promoting a European transport-technology strategy for Europe's future sustainable mobility

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**PURPOSE:** Communication on research and innovation in the EU transport sector and put forward a European strategic transport-technology plan.

**CONTENT:** the [2011 White Paper on Transport](#) makes the case for transforming the European transport system into a sustainable and competitive system that will further improve mobility and continue to support economic growth and employment. It sets ambitious objectives for reducing Europe's dependence on imported oil, improving the environment, reducing accidents and sharply cutting greenhouse-gas emissions. Incremental changes will not be enough to confront the challenges facing Europe and its transport sector. It is therefore essential that Europe's research and innovation capacities are mobilised to support transport policy objectives and societal goals. The White Paper proposes to set up a 'Single European Transport Area' to serve the 500 million citizens in the internal market. The size of this market will allow for the **large-scale testing of a diversity of innovative technologies and services**, reaping economies of scale and scope and creating strong home markets for Europe's globally operating transport industries. This approach interlinks innovation with the other three dimensions of the White Paper: the internal market, infrastructure development and international cooperation.

The Communication presents the Commission's views on how transport research and innovation could contribute to the ambitious objectives of the White Paper on Transport and support the implementation of [Horizon 2020](#) linking also up with strategies for smart specialisation.

**1. Strengthen transport research and innovation:** the Communication recommends strategic actions in four fields:

- **the research and innovation anchorage in transport policy should be strengthened:** the Commission's proposal for Horizon 2020 highlights smart, green and integrated transport as one of the six major societal challenges where European research and innovation can make a real difference;
- **the efforts of individual sectors and actors should be better aligned.** The particularities of innovation in the transport sector suggest that joint or coordinated efforts across sectors and actors may be more effective in specific fields;
- it is important to **overcome technology lock-in and institutional 'silo' thinking.** Existing structures and stakeholder alliances hamper full realisation of the potential offered by transport innovation that draws on other modes and sectors;
- overcome extensive **asset requirements, major investment needs, and high barriers faced by new market entrants which** prevent the transport sector from bringing the necessary transformative solutions to the market.

**2. Research and innovation areas:** the Communication acts as a starting point for strengthening innovation. The Commission proposes three comprehensive research and innovation areas where concrete and deployable results must be achieved in the next twenty years.

- **Means of transport:** a paradigm shift towards alternative propulsion systems, alternative fuels and smart communication technologies should result in the development of clean, smart, safe and quiet rail and road vehicles, aircraft and vessels, together with a more effective interface with the infrastructure. This includes developments in components, materials, and enabling technologies. Besides better serving the needs of the European user, the global competitive edge of the European transport manufacturing industry should be enhanced.
- **Infrastructure:** progress is needed on smart, green, low-maintenance and climate-resilient infrastructure, including for the provision of alternative fuels, modal traffic management and information systems which can support user services, demand management, and other solutions related to optimised infrastructure usage. Capacity building on local, regional and national level is needed for both public authorities responsible for the provision of services and transport operators.
- **Transport services and operations:** major advances are needed with regard to seamless and efficient services for passenger and freight transport to allow stronger integration of all transport modes, in particular in urban and inter-urban areas and in terms of well-designed nodes and efficient transshipment equipment. Progress is also needed on integrated multimodal information, traffic and demand management at European level, seamless logistics and innovative urban mobility solutions, including high-quality public transport.

**3. Fields for road-mapping:** with the three innovation areas, the Communication presents their **ten identified fields** and how they relate to the White Paper's goals and targets. The Commission sees these ten fields as offering significant potential for contributing to the White Paper's objectives by 2030, though in certain fields up to 2050, and they take into account the specificities of the individual modes and multimodal issues. The **fields represent a starting point for organising a road-mapping exercise**, to be launched in September 2012 with the aim of focusing European R&D activities and funding on deployable technologies that contribute effectively to policy objectives. The exercise will also aim at identifying existing gaps and addressing weaknesses along the innovation chain. Its end-result will be one or several roadmaps for each field, identifying funding, instruments and actors and foreseeing monitoring and governance mechanisms able to take on board evolving contexts. The fields are:

- clean, efficient, safe, quiet and smart road vehicles;
- clean, efficient, safe, quiet and smart aircraft;
- clean, efficient, safe, quiet and smart vessels;
- clean, efficient, safe, quiet and smart rail vehicles;
- smart, green, low-maintenance and climate-resilient infrastructure;
- Europe-wide alternative fuel distribution infrastructures;
- efficient modal traffic management systems (including capacity and demand management);
- integrated cross-modal information and management services;
- seamless logistics;
- integrated and innovative urban mobility and transport.

Wherever possible, roadmaps prepared by stakeholders will be the starting point.

**4. Funding:** compared to the private sector and Member States, the EU's current investment in transport research and innovation is modest in monetary terms but its leverage is high. It provided about **EUR 600 million per year in the 7<sup>th</sup> Framework Programme (FP7)**. So far, in FP7, the Marie Curie Actions have awarded EUR 43.5 million to transport-related research, providing attractive career development opportunities to researchers.

Several proposed Commission funding resources will be used to support a new transport system in Europe. The strategic transport-technology plan will support the implementation of the funding programmes proposed by the Commission for the next multiannual financial framework, subject to adoption by the legislative authority. This includes Horizon 2020, the [Connecting Europe Facility](#), the ERDF and Cohesion Fund, and the [proposal on a Programme for the Competitiveness of Enterprises and SMEs \(COSME\)](#). The **European Investment Bank** will be invited to intensify the provision of preferential loans via the Risk Sharing Finance Facility (RSFF), expand its lending to the transport sector under its new lending policy and provide increased technical assistance to public and private stakeholders. Public financial support will need to be provided in full consistency with the applicable EU state aid rules.

With a view to progressing the work, the Commission invites the Council and Parliament to:

- confirm the objective of better aligning transport research and innovation with European transport policy goals, taking into account the current economic and political reality and the long-term sustainability objectives;
- agree to focus efforts on delivering pioneering and sustainable transport solutions at a European, national and local level through innovative technologies, new service approaches and entrepreneurship;
- consider how to find the appropriate balance between the various instruments necessary for market uptake and deployment;
- endorse the approach comprising preparation of a European strategic transport technology plan, and the options for further actions, as outlined in the communication.