

Transport 2050 Strategy of the EU

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Introduction

At the end of March, the European Commission adopted a comprehensive strategy (Transport 2050) for a competitive transport system, which will increase mobility, remove the greatest obstacles in key areas and support growth and employment. The proposed measure will also dramatically decrease Europe's dependency on oil imports and the CO₂ emissions from transport will decrease by 60% by 2050.

In order to attain this goal, the current transport system in Europe will have to be transformed. The main objectives that must be realised by 2050 are:

- No more conventionally-fuelled cars in cities;
- 40% use of sustainable low carbon fuels in aviation and at least a 40% cut in shipping emissions; and
- A 50% shift of medium distance intercity passenger and freight journeys from road to rail and water transport.
- All of the specified measures will lead to a 60% cut in transport emissions by 2050.

European Commission Vice-President Siim Kallas, whose areas of responsibility includes transport, emphasised that, *"Transport 2050 is a roadmap for a competitive transport sector that increases mobility and cuts emissions. We can and we must do both. The widely held belief that you need to cut mobility to fight climate change is simply not true. Competitive transport systems are vital for Europe's ability to compete in the world, for economic growth, job creation and for peoples' everyday quality of life. Curbing mobility is not an option; neither is business as usual. We can break the transport system's dependence on oil without sacrificing its efficiency and compromising mobility. It can be win-win."*

The Transport 2050 Roadmap to a Single European Transport Area sets out to remove major obstacles in many key areas, specifically in the fields of transport infrastructure and investment, innovation and the Single Internal Market. The goal is to create a Single European Transport Area with a more intense level of economic competition and a fully integrated transport network, which is based on linking the different modes of transport and makes it possible to make in-depth changes in the transport models for passenger and freight transport. For this purpose, the roadmap presents forty specific initiatives for the next decade, which make up the contextual base of the aforementioned White Paper.

The Transport 2050 roadmap sets different goals for different types of journeys - within cities, between cities, and long distance.

Intercity transport

In the case of intercity travel: 50% of all medium-distance passenger and freight transport should shift off the roads and onto rail and water transport.

- By 2050, the majority of medium-distance passenger transport (approximately 300 km and beyond) should go by rail.
- By 2030, 30% of road freight over 300 km should shift to other modes of transport, such as rail or water. By 2050, this percentage should exceed 50%.
- A fully functional EU-wide core network of transport corridors, which includes facilities for ensuring efficient transfers between different modes of transport (the TEN-T core network), should be operational by 2030. A high-quality high-capacity network should be in place by 2050, together with a corresponding set of information services.
- By 2050, all core network airports should be connected to the rail network, preferably a high-speed network. It should be ensured that all core seaports are sufficiently connected to a rail freight system and, where possible, an inland waterway system.
- By 2020, a framework should be established for European multimodal transport, including the relevant information, management and payment systems, both for passengers as well as for freight.
- There should be a move towards the full application of the "user pays" and the "polluter pays" principles and the private sector should be included in the process of eliminating distortions, generating revenue and ensuring the financing for future transport investments.

Long-distance transport

In the case of long-distance travel and intercontinental freight transport, air travel and ships will continue to dominate. New engines, fuels and traffic management systems will increase effectiveness and reduce emissions.

- The use of low-carbon fuels in aviation should reach a level of 40% by 2050. CO₂ emissions from maritime bunker fuels should be reduced by 40% at the EU level by 2050 as well.
- With the implementation of the Single European Sky by 2020, Europe's air traffic control system should be completely modernised, with the end result of shorter and safer air journeys and increased capacity. The European Common Aviation Area should be completed by 2020, incorporating fifty-eight countries and 1 billion inhabitants.
- Intelligent land and water transport management systems should start to be used (e.g. ERTMS, ITS, RIS, SafeSeaNet and LRIT).
- Cooperation with international partners and in international organisations, such as ICAO and IMO, should be initiated to promote European competitiveness and climate goals at a global level.

Urban transport

In the case of urban transport, there should be a significant shift towards cleaner cars and more environment-friendly fuels. There should be a 50% shift away from conventionally fuelled cars by 2030, and they should gradually be phased out in cities by 2050.

- The use of 'conventionally fuelled' cars in urban transport should be halved by 2030. By 2050, their use in cities should be gradually phased out. By 2030, there should be an essentially CO₂-free movement of goods in major urban centres.
- By 2050, road transport related fatalities should be close to zero. In line with this goal, the EU aims at halving road casualties by 2020. The EU should become a leader in the safety and security of aviation, rail and maritime transport.

Transport 2050 – Main Tasks

Why is it important?

Transport is of fundamental importance to our economy and to our society. Mobility is vital for economic growth and job creation. The transport industry directly employs around 10 million people and accounts for about 5% of gross domestic product (GDP). Effective transport systems play a key role in ensuring that European companies are able to compete in the global economy. Logistics, such as transport and storage, account for 10–15% of the cost of a finished product for European companies. The quality of transport services has a major impact on the quality of life. On average, 13.2% of every household's budget is spent on transport goods and services.

Main Tasks

Mobility will continue to increase. European transport is however at a crossroads. The EU transport system faces a number of tasks that must be completed:

- Oil will become scarcer in future decades, as it is sourced more and more from unstable parts of the world. It is projected that oil prices will more than double by 2050 in comparison to 2005 levels (USD 59 per barrel in 2005). Based on current developments, it is obvious that oil prices fluctuate greatly.
- Transport has become more energy-efficient but it still depends on oil for 96% of its energy needs.
- Traffic congestion costs Europe approximately 1% of gross domestic product each year.
- There is the need to drastically reduce world greenhouse gas emissions in order to limit climate change to 2° C. If this goal is to be attained, by 2050 the EU must reduce emissions to be 80-95% below 1990 levels .

- Congestion, both on the roads and in the sky, is particularly worrisome. It is anticipated that by 2030 freight transport activity will increase by approximately 40% as compared to 2005; by 2050, the difference will be slightly over than 80%. Passenger traffic is expected to increase at a slightly slower rate than freight transport, specifically 34% by 2030 and 51% by 2050.
- Infrastructure is unequally developed in the eastern and western parts of the EU. In the new Member States there are currently only around 4,800 km of motorways and no separate high-speed rail lines; the conventional railway lines are often in poor condition.
- The EU's transport sector faces growing competition in the quickly developing world transport markets.

Transport 2050 – Key Measures

The objective of the strategy outlined in the development plan for transport up to the year 2050 (the Transport 2050 Roadmap), aimed specifically at creating a Single Transport Area, is to introduce profound structural changes with the goal of transforming the transport sector.

The following key measures are planned for the next few years (2011-2014):

- **A major overhaul of the regulatory framework for rail transport** (rail package 2012/2013). At the heart of the development plan for Transport 2050 Roadmap lies the need to transform the rail sector in order to make it more appealing and to ensure that by 2050 it carries a very significantly increased share of the market for passenger and freight over middle distances (up to 300 km). At the same time, it aims to triple the length of the current high-speed rail network by 2030. All this will require major changes to the regulatory framework for rail transport, including opening the market for domestic passenger services; introducing common management structures for the rail freight corridors; structurally separating the infrastructure managers from the service providers; improving the regulatory environment with the goal of making rail transport more attractive for private sector investment. The Commission will bring present an ambitious package of legislative initiatives for the rail transport sector over the course of the 2012-2013 timeframe.
- **A backbone network of strategic infrastructure is essential for the creation of a true Single European Transport Area.** In 2011, the Commission will present new proposals for a European "multi-modal" backbone (including the publication of guidelines, maps and financing proposals for the TEN-T trans-European network). EU resources from the TEN-T Fund, the Cohesion Fund and the structural funds should be used conceptually and for this reason they will be provided through a single framework. The conditionality of the financing will provide a guarantee that focus will be placed on the EU's priorities and the introduction of new technologies (e.g. recharging/refuelling stations for new vehicles and new traffic management technology).
- The creation of a fully functional multi-modal transport system requires the **removal of bottlenecks and obstacles** in other key areas of the network, for example through an **airport package** to improve airport efficiency and capacity (2011), a **communication on inland waterway transport** to remove barriers and improve the effectiveness of inland waterway use (2011), and the **"e-maritime" initiatives** for paperless and intelligent maritime transport (2011), which is a part of the idea to create a real "Blue Belt" area without any barriers for maritime transport. The Commission will also work to remove restrictions to **road cabotage** (2012-2013).
- **Creation of a fair financial environment: a new approach to transport charges.** Transport charges must be restructured in order to ensure a wider application of the "polluter pays" and "user pays" principles. The main measures for the coming years include:
- The publication of guidelines for linking **infrastructure costs with personal vehicles (2010)**. The second stage will consist of a proposal that defines a framework for the **internalisation of costs for all road vehicles** (except those with a Eurovignette), including the costs of infrastructure as well as the social costs associated with congestion, local pollution from CO₂ emissions (if it is not included in fuel tax), noise pollution and traffic accidents. The member states will be able to decide independently as to whether or not to collect these charges, but those that decide to do so will be able to proceed according to a common EU framework.
- The continuation of the process for internalising external costs for the other modes of transport.

- Ensuring stable financing for transport through applying the principle of earmarking revenue collected from transport service users for the development of an integrated and efficient network (i.e. a certain portion of transport charges must be re-invested in transport, thus ensuring the necessary funding for a high-quality transport infrastructure).
- The progressive **implementation of European electronic tolling systems** (for example an electronic toll service for cargo vehicles will become operational starting in October 2012, and two years later, it will be applied for all types of vehicles), and the provision of a guarantee that cargo vehicle drivers can pay different tolls for the use of motorways electronically and through a single service provider for the whole of Europe. This could replace the many various systems that are currently used by the twenty-one member states that collect road charges. The principle is the same as that for mobile phones – the charge goes back to the national operator / relevant authorities no matter where in Europe they are located. In addition, with electronic tolling the charges can be easily adjusted according to varying conditions (peak times, vehicles that generate more pollution, etc.).
- **An EU Strategic Transport Technology Plan (2011)**. In order to decrease transport emissions in the EU, as well as in the rest of the world, research and the efficient implementation of new technologies for urban, intercity and long distance transport will be of key significance. In 2011, the Strategic Transport Technology Plan will be the major initiative and it should include the regrouping and refocusing of European transport research and development efforts.
- Priority will be placed on producing **clean, safe and quiet vehicles for all modes of transport**, from road transport to maritime transport, from barges to aircraft and including rolling stock. Primary attention will be focused on the following areas: alternative fuels, new materials, new propulsion systems and information technology and tools for managing and integrating complex transport systems. The aforementioned strategic plan will define the areas to which we want to channel research funding; the deployment strategy that should be used to encourage and ensure the introduction of new technologies on the market; and how to prepare the necessary Union standards in order to ensure a consistent approach across all of Europe.
- Within the framework of the overall strategic plan, the Commission will publish a **clean transport systems strategy** in 2012, which will include information on the specific measures that should be used to encourage and facilitate the introduction of clean means of transport and on the preparation of EU-wide **standards for the introduction of clean means of transport**, e.g. rules for the interoperability of the recharging infrastructure, guidelines and standards for filling stations, etc.
- **A three-part strategy for urban transport**. A key component of the Transport 2050 Strategy consists of making progress in the gradual phasing out of conventionally fuelled cars in cities by 2050 and replacing them with electric cars, hydrogen and hybrid engines, public mass transport, walking and cycling. The responsibility for **urban transport** remains primarily with the member states and individual cities, which must make a decision on the appropriate transport mix for their particular territory.
- However, in order to facilitate the shift to cleaner urban transport:
- The European Commission will introduce procedures and financial assistance for **urban mobility audits** and **urban mobility plans**, to be implemented on a voluntary basis. In addition, the Commission will determine the possibilities that are available for allocating resources from the regional development funds and the Cohesion Fund to the cities and regions that submit an urban mobility plan;
- The Commission will submit proposals for an EU framework for **collecting charges for urban road use** and access restriction schemes, in order to support the increasing number of member states that want to use charging schemes in order to alleviate congestion and shift transport patterns in urban areas. This will ensure that the different systems will function within a coherent Union-wide framework and that they are non-discriminatory;

As far as the technological solutions for cleaner modes of transport are concerned, no city can succeed on its own. The EU will therefore focus its research efforts on this area. It will introduce strategies for the Union-wide implementation of new technologies and will support the creation of the appropriate market conditions to facilitate the use of new cleaner vehicles in urban areas, as the transition to cleaner passenger cars is one of the major priorities included in the Strategic Transport Technology Plan (2011).

In the case of long-distance transport, which will continue to be dominated by air and maritime transport, attention will primarily be focused on increasing competitiveness and reducing emissions with the assistance of:

- A complete modernisation of Europe's air traffic control system (SESAR) by 2020, thus completing the **Single European Sky** with shorter and safer air journeys and increased capacity. During the first phase, which is to be completed by the end of 2012, the member states are cooperating in the creation of Functional Airspace Blocks. Thanks to the Single European Sky, the number of flights will be decreased by 10%, consequently leading to a significant reduction in fuel consumption and emissions.
- For an overall improvement in the effectiveness of all transport modes and in order to decrease emissions, similar **major improvements are required in the area of traffic management**. This means the use of advanced land and water transport management systems (e.g. ERTMS, ITS, RIS, SafeSeaNet and LRIT).
- Other key measures for air and maritime transport will include: The introduction of cleaner engines, designs that takes environmental aspects into consideration and a shift to sustainable fuels (**included in the Strategic Transport Technology Plan**), the completion of the European Common Aviation Area that includes fifty-eight countries and 1 billion inhabitants by 2020; as well as cooperation with international partners and in international organisations, such as ICAO (International Civil Aviation Organisation) and IMO (International Maritime Organisation), in order to promote European competitiveness and climate goals at a global level.
- Particularly in the case of maritime transport, the **targets for reducing emissions from bunker fuels by at least 40%** can be attained through operational and technical measures, including new vessel design and low-carbon fuels. Given the global nature of maritime transport, these measures need to be prepared only at the international level within the IMO framework, otherwise they will not be efficient in the future.
- **Significant support for travel planning using various means of transport and integrated ticketing**. The creation of a Single European Transport Area depends on effective and interoperable European-wide systems for multi-modal travel planning and integrated ticketing.
- In the short term, significant support will be provided for the preparation of the necessary EU measures, which are intended to facilitate **multi-modal integrated travel planning**. The first step is to prepare the key standards that will simplify **rail travel planning in the EU (2012)**, as well as the necessary legislative measures, which will ensure that service providers have access to **real-time travel and traffic information**.

The high-quality of services in all transport sectors is dependant on the consolidation and enforcement of **passenger rights legislation** across all transport modes. Following the completion of the legislative framework for passenger rights with regard to all modes of transport, the Commission will publish reports on the application of air passenger rights and, towards the end of 2011, it will present guidelines on the common interpretation of passenger rights across all modes.

The overview provided above is not an exhaustive list. Its objective is to draw attention to certain key measures that must move forward the most during the 2011-2014 timeframe in order to ensure the implementation of the most critical structural changes that are required for the creation of an integrated Single European Transport Area.

A full list of the initiatives included in the Transport 2050 Roadmap – including more than forty specific areas of road, rail, air, maritime, and river transport – can be found at these webpages:

- http://ec.europa.eu/transport/index_en.htm
- http://ec.europa.eu/transport/air/sesar/sesar_en.htm