

Deliverable 2.1

Relevance of EU and national policies on long distance freight transport in Europe and examples of key demonstration projects.

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Executive summary

FREIGHTVISION is a project funded by the European Commission - DG Energy and Transport - in the 7th Framework Programme. It started in September 2008 with a duration of 18 months. The objective is to develop a long-term vision and robust and adaptive action plans for sustainable long-distance freight transport in the EU, which are supported as much as possible by the relevant stakeholders. A broad consultation process is therefore initiated to stimulate a wide-ranging debate on European freight transport in these time ranges.

This deliverable provides an overview of the relevance of EU and national policies / measures on long distance freight transport in Europe and examples of key demonstration projects. Together with the outcomes of work packages 3 (Technology) and 4 (Mega-trends) this forms the main input for the forecasts to be made in work package 5 - System Integration and Strategic Analysis.

Within WP5 forecasts are defined as projections of future freight transport - under the assumption that no additional actions are taken (do-nothing scenario). The different forecasts (congestions, safety, emissions, dependency of fossil fuels) are thus depended on the inventory of the already decided policy actions – as described in this deliverable. The following table provides an overview of the measures that, from a policy point of view, are considered to be part of the do-nothing forecasts.

	Part of do-noting?	Comments
Infrastructure - TEN-T programme - Green Corridors - Rail freight networks - Motorways of the sea	yes yes yes yes	Due for 2020 To be included in Ten-T and Marco Polo programmes by 2010 Relation Ten-T and ERTMS By 2010 a fully-fledged network should be established
User charging - road transport - rail transport - inland waterway transport	yes yes yes	From 2012 HGV >3.5 tonnes, individual member stated to decide New proposals for rail freight and infrastructure charging set for 2010 To be assessed within NAIADES, legislation framework set for 2013
Legislation - alternative fuels - tyre pressure - mega-trucks - road telematics (ITS) - loading units - rail noise measures - river information system - engines (all modes) - Marco Polo II - single transport document - e-Freight - European maritime space - European single sky - Alpine convention	yes yes no yes yes yes yes yes yes yes yes yes yes yes	Targets set for 2010-2020 Minimum requirements to take effect in 2012 Impacts are currently discussed, various member states are against Relation with EU research agenda and demonstration projects In 2010 new directive for EU high-speed rail system Low noise brakes in 2015 RIS implementation is in progress From 2014 onwards cleaner engines in IWT & road (Euro VI) Second programme 2007-2013 In 2009 study and legislative proposal by EC In 2009 development of roadmap for implementation by EC An interoperable e-customs system by 2013 Towards a truly single sky by 2012 Ongoing, objectives set for 2010
Safety measures - road transport - rail transport - inland waterway transport - maritime transport - air transport	yes yes yes yes yes	As part of European Road Safety Action Plan (2003-2010) Via safety certification, safety authorities and investigations Via technical certifications for vessels As part of Erika I and II packages, IMO regulations As part of Single European Sky II (2009-2012)

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1. Introduction

FREIGHTVISION is a project funded by the European Commission - DG Energy and Transport - in the 7th Framework Programme. It started in September 2008 with a duration of 18 months. In order to provide the reader insight in the FREIGHTVISION project, this chapter presents an overview of the FREIGHTVISION objectives, structure and expected outcomes.

1.1 Overall description of the FREIGHTVISION project

In the next years and decades the European Union faces the following challenges in the freight sector:

- ensure and increase economic growth and
- deal with an increase of freight transport demand,

while at the same time:

- reduce environmental emissions (mainly CO₂),
- reduce dependency on fossil energy,
- reduce accidents,
- avoid congestion as well as other negative impacts on the environment and population.

A lot of different stakeholder groups have created their proposals to achieve sustainable freight transport. Most of them address only part of the problem or focus on only one aspect of a solution. Following this advice leads to sub optimisation and less efficient solutions. A holistic approach is needed integrating all aspects of the problem (infrastructure, vehicles, fuels, interoperability etc.) and all types of criteria in the solution (research, technologies, policies and pricing).

The FREIGHTVISION team is therefore developing a framework strategy for freight transport and freight logistics in Europe based on scenario building for the time horizons 2020, 2035 and 2050. A broad consultation process is initiated to stimulate a wide-ranging debate on European freight transport in these time ranges.

The expected results are tools for an overall sustainable and efficient long distance freight transport (LDFT), documented in an action plan harmonized with the major stakeholders. This process encourages a wider dialogue between social partners across borders within the EU and notably addressing researchers and actors in the field of freight transport oriented co-modality.

1.2 Objectives of this project

Sustainable freight transport is one of the core goals of the Common European Transport Policy. The EC is faced with a lot of different stakeholder groups and different proposals on what should be done to achieve sustainable freight transport. It is difficult to establish action plans relevant stakeholders are committed to.

FREIGHTVISION therefore:

1. ***develops long-term visions and robust and adaptive action plans both for transport and technology policy for sustainable long-distance freight transport,***
2. ***which are supported as much as possible by the relevant stakeholders.***

With long-term we mean until 2050. Within FREIGHTVISION long-distance corridors are viewed as a linkage of several shorter inter-urban connections, which is finally extended to an European wide high-level transport network covering all distances (except urban transport).

1.3 FREIGHTVISION project structure

In order to develop a vision and an action plan the following tasks are performed within the FREIGHTVISION project:

1. analyzing transport policy, technology developments, and mega trends with regard to long-distance freight transport (WP2-4);
2. integrating them into forecasts (WP5);
3. developing scenarios how to reach a desirable future (WP6);
4. defining for this the vision and action plan (WP7).

A foresight process is implemented to achieve stakeholders' support for the vision and action plan. For this purpose four FREIGHTVISION forums allow for the active involvement of representatives from the Advisory Councils, ERANET (Transport and Road), ministries, infrastructure operators, industries and other stakeholders. The aim of the forums is to reach a common understanding about shaping the future and getting a maximum legitimacy for both the scenarios, the vision and action plan developed.

This structure is presented in the figure on the following page.

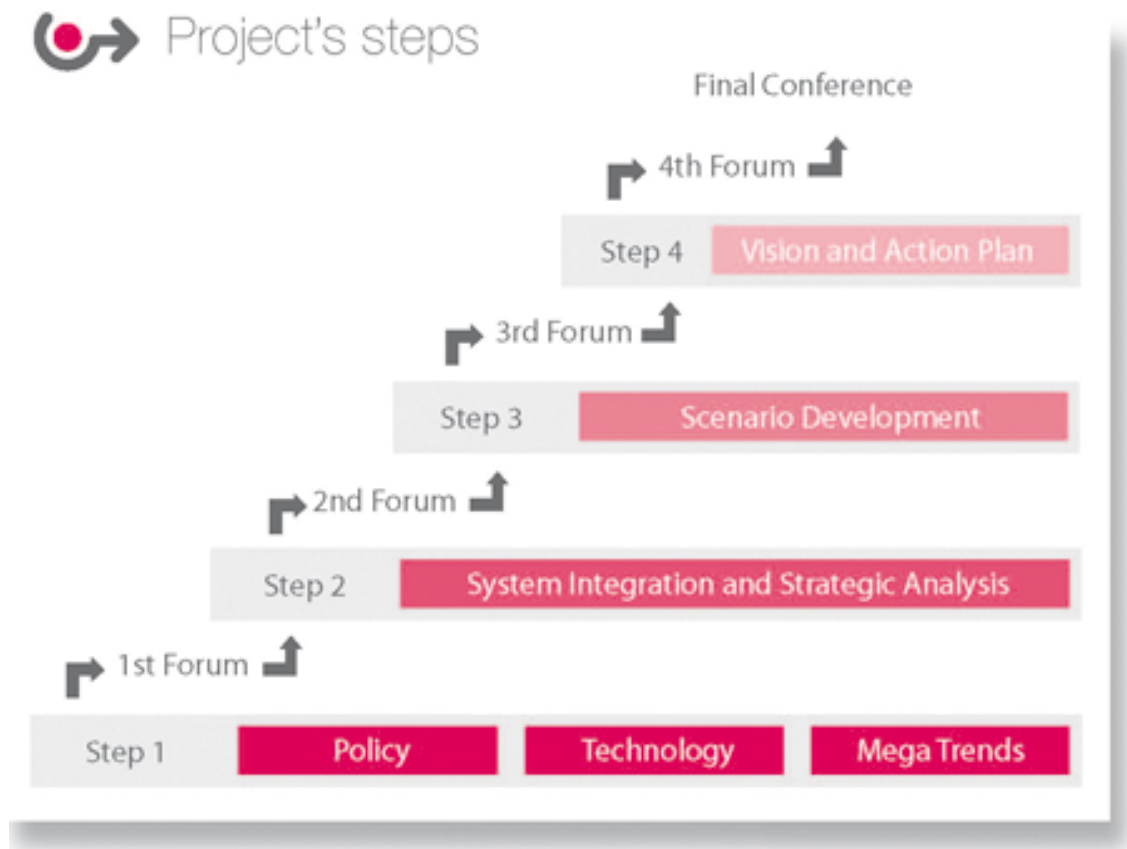


Fig. 1 FREIGHTVISION structure

This deliverable provides an overview of the relevance of EU and national policies on long distance freight transport in Europe and examples of key demonstration projects. Together with the outcomes of work packages 3 (Technology) and 4 (Mega-trends) this forms the main input for work package 5 - System Integration and Strategic Analysis.

1.4 Contents of this deliverable

Chapter 2 contains an overview of the European and national policies relevant for long distance freight transport in Europe and examples of key demonstration projects.

Chapter 3 provides a synthesis of the different policies and demonstration projects and their relevance for WP5.

The internal reports on the European (IR2.1) and national policies (IR2.2) relevant for LDFT and examples of key demonstration projects (IR2.3) are included in the annexes, which come to this deliverable as separate documents.

2. Policies relevant for LDFT

The FREIGHTVISION project is focusing on four impacts of long distance freight transport:

- congestion,
- fatalities,
- emissions (CO₂)
- dependency of fossil fuels.

This chapter provides a short overview of how these topics are covered in the different policy areas of the EU, Member States and demonstration projects. For the details we refer to the three internal reports, which are included in the annexes.

2.1 European policies relevant for LDFT

The importance of a common European transport policy was first mentioned in the *Treaty of Rome* (1957). Effective transport systems were considered essential to the prosperity of the countries involved, having significant impacts on economic growth, social development and the environment.

In 2001, the EU published the *White Paper on the future of the common transport policy for 2010*, that stressed safety, the environment and creating a balance between different modes of transport as important objectives. With the 2004 enlargement, improving transport infrastructure in the new Member States and linking them up to the west became a key goal. The Commission reviewed its transport policy in 2006 in order to check whether the objectives of the White Paper could be achieved or whether additional measures were needed. The review took several new developments into account, which justified an update of the basic hypotheses of the White Paper.

Based on the mid-term review, the Commission launched the Freight Transport Agenda and the Freight Transport Logistic Action Plan in 2007, including a set of policy initiatives to deal with the challenges described in the mid-term review and to improve the efficiency and sustainability of freight transport in the EU. In 2008 the Commission adopted the Green Transport, which focused on moving (freight) transport further towards sustainability.

The FREIGHTVISION project is focusing on the period towards 2050. However, most policy documents and related action plans only have a limited time horizon. For climate change targets are set for 2020 and the TEN-T programme has a similar focus. The other measures described in this deliverable are focusing on a shorter period (2010-2015). Hence, the following paragraphs mainly focus on the period up to 2020.

2.1.1 Congestion

Congestion is mainly a problem of road transport. From 2006 to 2020 a further increase of 40 million vehicles is expected, accompanied by a further growth of road freight transport. Consequently, congestion will likely remain a problem in many places. With congestion estimated to cost currently around 1.1% of EU GDP per year (in comparison to the 0.5% mentioned in the White Paper of 2001), the Commission considers tackling road congestion a priority.

1. Internalisation of costs that users impose on society (such as noise and congestion) through smart road charging systems will be a key element and the proposal to revise the directive on infrastructure charging for heavy goods vehicles will be a main instrument in the road sector. The implementation of user charging in rail and IWT might have a negative impact on congestion if only applied to these sectors, since this could lead to a modal shift in favour of road transport.
2. The trans-European network (TEN-T) is focusing on solving infrastructural bottlenecks creating unnecessary obstacles to the efficient flow of goods. Besides upgrading of the existing network, new infrastructure will be built for all transport modes (road, rail, IWT and SSS) to solve missing links, with a focus on the latter three. It has been assessed that completing the total network will result in a 14% reduction in road congestion by 2020.
3. The Commission is considering adapting the rules on weight and dimensions of commercial vehicles. Mega-trucks (25.25 metres, 60 tonnes) offer roughly one-third extra payload capacity, meaning that fewer trucks are needed (-7 to -10%). It has been assessed that freight transport with longer and heavier vehicles is also cheaper, slightly better for the environment and better for safety (less chances on accidents involving a truck).
4. In 2009 the Commission will come forward with proposals to improve the efficiency and effectiveness of freight transport. This includes simplification of administrative processes (single transport document, maritime transport space), paperless information flows (e-freight), uniform loading standards (interoperability). The objective is to remove barriers, in order to make alternatives for the road, including intermodal transport, more attractive.
5. Through the Marco Polo II programme (2007-2013) the Commission is supporting projects shifting freight transport from the road to sea, rail and inland waterways. This means fewer trucks on the road and thus less congestion, less pollution, and more reliable and efficient transport of goods. A yearly aggregated shift of 20.5 billion tonne-kilometre freight from road transport to short sea, rail, inland waterway and zero-traffic (traffic avoidance) is expected.

2.1.2 Accidents

In 2001, a total of 1,300,000 accidents a year caused more than 40,000 deaths and 1,700,000 injuries on European roads. The direct and indirect costs have been estimated at 160 billion euros, i.e. 2% of the EU's GNP. Approximately two times the cost of congestion! Hence, the Commission has set itself the target of halving the number of road deaths by 2010. Although achievements have been realised, the most recent figures indicate that at the present rate, road fatalities are likely to stand at 32,500 in 2010. This would mean that the target of 27,000 is not going to be achieved. Safety will thus remain a priority, with actions being taken in all relevant areas: vehicles, behaviour, infrastructure and enforcement.

6. Cars and trucks have become safer and safer. Driver assistance systems and in-vehicle safety applications help to prevent and reduce the effects of accidents. The Commission will therefore come with a proposal for a Directive laying down the framework of further deployment and use of ITS in road transport, hoping that road fatalities decrease with more than 5,000 per year.
7. Around 90% of all accidents are caused by human errors. Influencing the behaviour of drivers (training and education, creating awareness through safety programs, regulating conditions etc.) will thus remain essential. If restrictions were accepted, 12,000 lives per year on European roads could be saved.
8. The infrastructure is a major contributing factor in one out of three fatal accidents. To give an example, the "self-explaining road" will influence and guide the driver's behaviour and the "forgiving road side" will protect the road users in case a vehicle crashes.
9. The Commission is working on a Directive to facilitate the enforcement of financial penalties against drivers who commit an offence in another Member State than the one where the vehicle concerned is registered. The proposed Directive will cover four types of road traffic offence: speeding, drink-driving, not wearing a seat belt and failing to stop at a red light.

Compared to road transport, other transport modes are relative safe. Far less fatalities occur in rail, IWT and SSS. Therefore the measures taken for these modes are considered to be less relevant for the FREIGHTVISION project, since their influence on the total number of fatalities is limited. Besides, the measures taken in maritime transport primarily focus on reducing the environmental impacts of accidents (pollution). This is outside the scope of the FREIGHTVISION project.

2.1.3 Emissions

The EU ratified the Kyoto Protocol in 2002 and committed itself to an 8% reduction in greenhouse gas emissions by 2012 compared to 1990. In 2007, the EU committed itself to achieving a 20% reduction in greenhouse gas emissions by 2020 and a 30% reduction if this is part of an international agreement. To meet the target set, the Commission proposed concrete targets for each Member State. Some countries are allowed to increase emissions, while others should decrease them. These targets cover sectors that are not in the Emissions Trading System (ETS), such as transport.

10. Increasing *energy efficiency* in freight transport will lead to fewer emissions per kilometre, as well as reducing dependency on oil imports. In 2007 the European Council agreed to a target of increasing energy efficiency by 20% by 2020 compared to the business-as-usual growth that would otherwise take place. Tyres and tyre pressure for instance can lead to a vehicle fuel efficiency of more than 4% for trucks. Fuel consumption and emissions of mega-trucks can –when fully used- be reduced by up to 10% compared to ‘regular’ trucks.
11. Through its *research agenda*, the Commission is promoting research into more sustainable modes of transport. Work package 4 of the FREIGHTVISION project is dealing with technologies influencing emissions. For more information on this topic we refer to the WP4 deliverables.
12. The *Euro VI proposal* of the European Commission specifies the new emission standards for trucks and busses. For the first time CO₂ emissions from road freight will be regulated. The implementation of the Euro VI emission standards is expected to result in a reduction of approximately 30% in the number of locations where the air-quality norm for nitrogen oxide will be exceeded in 2015. For the other modes similar regulations regarding emission of new engines apply.
13. Besides the positive impacts on congestion (see point 1), completing the TEN-T networks will also bring important benefits for the environment. Based on current trends, CO₂ emissions from transport would be 38% greater in 2020 than in 2003. However, completing the 30 priority axes should slow down this increase by about 4% (mainly modal shift), representing a reduction in CO₂ emissions of 6.3 million tonnes per year.
14. The promotion of *alternative fuels* in transport is a priority on the European political agenda. Biofuels and fuels from renewable energy sources can reduce the environmental impact of transport. The EU aims to increase the use of renewable energy by 20% by 2020. The Commission recently proposed that 10% of petrol and diesel used for transport should come from sustainable biofuels by 2020. Depending on the types of biofuel used, this has different impacts on emissions.

15. In 2007 the Commission introduced the *green transport corridors*, which should allow more traffic on existing corridors between major hubs, while encouraging environmental sustainability and energy efficiency. In practical terms this concept should mean suitable transshipment facilities and supply points for biofuels with other alternative fuels possibly being covered later. This concept will thus help to make road transport cleaner and less dependent on fossil fuels. This concept will be included in TEN-T and Marco Polo (priorities before the end of 2010).
16. *Infrastructure charging* for heavy goods vehicles is considered a main instrument for the EU in its ambition to reduce CO2 emission (see also point 1).

2.1.4 Dependency of fossil fuels

In 2000 the energy dependency in the EU was 50%, which went up to 54% in 2006. It is projected to reach 70% by 2030. These imports concern almost exclusively fossil fuels. Transport has a leading position in energy consumption; it accounts for 67% of the final demand for oil, and nearly all of it is dependent. The import dependency of petrol and diesel is expected to be 93% by 2030, which was 82% in 2005.

17. Today, *biofuels* are considered as the only way to significantly reduce oil dependence and one of the ways to reduce green house gas emissions in the transport sector. Tools to encourage the use of biofuels involve taxation of energy products and electricity, as well as tax exemptions for biofuels and biofuel obligations.
18. The *Intelligent Energy for Europe* programme was established to help bridge the gap between successful demonstrations of innovative technologies and effective and successful market entrances and to ensure that renewable energy is given the highest priority.

2.2 National policies relevant for LDFT

In the FREIGHTVISION survey the following countries have been taken into account: Austria, Czech Republic, Denmark, France, Germany, Ireland, Slovak Republic, the Netherlands and the United Kingdom. In general, the national (transport) policies of these countries focus on reliable, safe and sustainable freight transport, while maintaining the quality of life.

However due to the different geographic, economic and financial situation, national policies' key drivers and trends differ between Member States. Countries with a high economic dependence on international trade (e.g. Denmark, Netherlands, Italy and Spain) have a different focus than countries in environmentally sensitive areas in the centre of Europe. (e.g. Austria). Old member states with high congestion (e.g. Netherlands, UK, France, and Germany) also have a different focus than new Member States with relatively low congestions (e.g. Slovakia, Romania, Bulgaria). And last but not least, different infrastructure availabilities and financial capabilities have impacts on national policies. There are nevertheless common key drivers for all Member States, although the importance differs between the Member States.

2.2.1 Congestion

In the Member States taken into account in this survey, congestion mainly plays a role in road transport. In the coming years, increasing road freight volumes are expected. Forecasts for 2025 show a possible growth in freight volumes of approximately 75-80% in Denmark, Germany and the Netherlands, leading to even further congestion problems.

1. Major investments in new road infrastructure are planned. This includes a new link between Denmark and Germany, new motorways in the Czech republic, Slovak republic and Ireland. Apart from physical infrastructure many road authorities have plans to implement telematics systems to increase the utilisation of the existing road network.
2. Austria, the Netherlands, the UK and Ireland expect significant improvements in freight volumes, which will be dealt with partly through investments in (dedicated freight) rail infrastructure, partly through improved (cross-border) traffic management. Just like the liberalisation of the rail sector, this is expected to lead to more competitive and better rail freight services, ultimately leading to a larger market share for rail, thus reducing road congestion and limiting the negative aspects of road transport.
3. Inland waterway transport plays an import role within Dutch freight transport (40% in tonnes kilometres). In most other countries, inland waterway transport is often restricted to major rivers (Rhine, Danau, Rhone, Meuse, etc.) In order to reduce road congestion, most countries plan to invest in IWT infrastructure and to modernise navigable inland waterways and vessels. IWT volumes in

Austria are expected to double towards 2015, the UK aims to adapt measures to help IWT volumes to increase with 5%.

4. Many countries already have some kind of road pricing policy (AT, CZ, DE, FR). In most cases this is in the form of toll, a vignette or a 'congestion charge'. The reason for this differs per country: funding of new infrastructure, tackling the negative effects of traffic, improving accessibility. In DK and NL a road pricing scheme is foreseen (approximately 2011) which will differentiate between time and place as well as that 'cleaner' vehicles will pay less. This should reduce congestion at peak hours and at most congested road sections as well as contributing to a reduction of CO₂-emissions and air pollution. It should be noted that freight transport is expected to be relatively 'insensitive' for the 'time' and 'place' element.
5. In several countries (for example in AT, CZ, DE, SK), trucks are not allowed to drive during weekends and national holidays, although many variations exist. In all countries Community rules on driving time are in force, which are increasingly monitored through (digital) tachographs. Even more strict driving regulations are under discussion. Both strict driving bans and driving time regulations will have a positive impact on modal shift, since it will result in a competitive advantage for the other modes (rail, SSS and IWT). As a result there will be a (slightly) positive impact on congestion, safety, energy consumption and environmental emissions.

2.2.2 Accidents

The direct and indirect costs of road accidents within the EU have been estimated at 160 billion euros per year, i.e. 2% of the EU's GNP. Hence, the Member States have committed themselves to the target of halving the number of road fatalities in the EU by 2010. Although good progress has been made, the most recent figures indicate that at the present rate the target will not be achieved. Safety will thus remain a priority, with different actions being taken.

6. All national traffic and transport policies focus on improving road safety and reducing the number of fatalities.
7. Most measures are general in nature and not specifically aimed at trucks: infrastructure enhancement, significant marking and signalling, introduction of modern telematic equipment, road user education, daytime running lights, and police enforcement.
8. Specific measures aimed at road freight transport include: efforts on right turn accidents (DK, NL), driver training (UK, NL), truck safety (A, NL) and policy and legal frameworks (A).

2.2.3 Emissions

The transport sector accounts for approximately 25% of the EU green house gas emissions. The combined EU countries have therefore set themselves the objective of reducing the greenhouse gas emissions by 20% in 2020. In order to meet EU directives on air quality, national authorities aim to reduce emissions from transport through the following measures:

9. In order to reduce air and noise emissions, co-modality (using the most efficient transport mode in terms of economic interests and sustainability) enjoys widespread support in national transport policies.
10. Germany has set itself the objective of reducing the greenhouse gas emissions by 40% by 2020 (compared with 1990 levels). The transport sector –and especially road haulage– has to play its part in achieving this goal. Financial assistance is given to encourage the purchase of cleaner and quieter HGVs.
11. Low Emission Zones are introduced in various German, Danish, and Dutch cities. They should avoid vehicles not fulfilling EURO emission limits to enter into selected city areas. Entering conditions are gradually tightened up, thus resulting in cleaner cities in due time (-30% of diesel particles). The impact on long distance freight transport (LDFT) will be lower, due to the fact that LDFT is frequently performed by larger trucks than the ones that enter city centres (distribution vehicles).
12. The Czech and UK authorities support infrastructure measures including highway bypasses of cities, noise barriers along highways and railways, reducing environmental impacts caused by excessive burdening of settlements by noise and emissions of pollutants from ground traffic.
13. Mega-liners (25.25 metres, 60 tonnes) are seen as a solution for reducing the negative impacts of road transport. In Sweden mega-liners are already allowed for many years. Tests are now undertaken in Denmark and The Netherlands. Expected benefits are foreseen in energy consumption and environmental emissions (-15% to -40%). Nevertheless, Germany, Austria and England have said “No” to allowing these kinds of trucks on their roads.

2.2.4 Dependency of fossil fuels

Energy consumption has been rising for decades in most Member States. It is likely that this trend will continue in the next few years. The transport sector has a leading role in the energy consumption; it accounts for 67% of the final demand for oil (see internal report 2.1).

14. Biofuels are considered the main measure to significantly reduce oil dependence. All countries support the use of this alternative for oil in freight transport.

15. Within Austria, the Netherlands, the UK and Denmark the authorities aim to constitute 5.75% of fuel use for land transport in 2010 and 10% in 2020. This corresponds to the EU goals.
16. After many years of advisory studies, the Dutch government decided not to support the production of the current available biofuels, but to stimulate the more cost-effective second-generation biofuels. Research for second-generation biofuels has therefore been stimulated, but not with the same persistence as e.g. in Germany.

2.3 Key demonstration projects

The FREIGHTVISION team has screened a large number of projects / pilots related to LDFT. The approach has been to find interesting projects that could have a broader implementation both nationally but certainly also internationally and on an EU-wide level, although this mostly has not been investigated within the scope of the demonstration project concerned.

Many projects aim at reduction of the congestion on European roads, reduction of fuel consumption and environmental emissions through different measures and reduction of the number of accidents where trucks are involved. These issues are seen as vital for the development of the aims of mobility and sustainable development already with a short-term frame and the actions and policy framework within these areas will be even more important for the road transports in the future.

Many of the described projects are intermodal, ie concerning logistics operations with more than one mode of transport, whereas for example the combined transports address the intermodal road/rail transports. Shifting cargo from the congested road network onto short sea shipping (MoS projects), onto the extensive inland waterway network and the rail network are expected to reduce the heavy impact that the long-distance road transports have on the European transport system.

2.3.1 Road transport projects

1. Modular Haulage Denmark describes the 3-year trial project that is expected to reduce the fuel consumption by 15%. The project also addresses congestion as 2 modular haulage road vehicles are comparable to 3 semi-trailers and this is expected to influence the congestion, although trucks are not seen the main cause to congestion in Denmark.

2. The Chauffeur II project aims at reducing the truck drivers' workload through vehicle-to-vehicle systems; Electronic Tow Bar; Chauffeur Assistant; and Chauffeur Platooning. This road transport project identified the following benefits: Improvement of traffic flows; increased safety; lower fuel consumption (up to 20%); reduced environmental impact and no special infrastructure needed. The project has been demonstrated on test trucks but has not been implemented in real operation.
3. The Anti-accident systems for trucks project (NL). This project concerns reduction of the number of accidents involving trucks, accounting for 2-3% of the congestion caused by incidental factors such as accidents, road works, events and the weather). Trucks are responsible for 5% of the accidents with fatal results and these are the facts that the project addresses. The project is currently running and when it is proven to be effective as regards to less accidents and road fatalities, implementation could be made compulsory in new trucks in the future.
4. Reducing truck energy consumption is a project using different measures for optimisation for a large Danish haulier company. The project looks into different measures to reduce the fuel consumption in road transport through shifting to Euro 5 trucks from Euro 3 trucks. Further measures include training courses for drivers – eco-driving, and technical equipment as for example windbreakers and eco tyres.

2.3.2 Short sea shipping and inland waterway projects

5. Esbjerg – Zeebrugge describes a specific "Motorways of the Sea" project with double-stacked 45' pallet-wide containers, hereby aiming at reducing the number of road transports between the ports of Zeebrugge and Esbjerg, with an efficient ro/ro system. When taken into full operation, with an efficient schedule and possibly also adding further ports into the network, this can lead to major reductions of both CO₂-emissions and dependency on fossil fuel.
6. Waterslag describes a system for barges on inland waterways and some 185.000 truck rides could be avoided by using barges on the 2020 horizon and this both reduces congestion significantly, and the test area also foresees reductions in emission of CO₂, NO_x and dust/soot particulates. Inland Waterways across Europe could profit from similar barge systems.
7. Distriavaart is an intermodal distribution system for development of an inland waterway network for distribution with high frequency schedule and fast transshipment for fast moving consumer goods connecting inland waterway with road transport. In the project period (2002-2004) four breweries, four supermarket chains and Coca-Cola used the River Hopper and with a full-automatic loading system the system was expanded to twice-weekly operation of the network. The project was put on hold in 2005 due to the need for investments in ships and development of the technical installations. The project showed large potential for further development and increase into an international network as the pallet shipment is competitive to road transport for distances above 140-160 km.

8. Via Donau is an evaluation of alternative procurement strategies for supply-chains, by looking at a shift from road transport to inland waterway for transports between Rotterdam and Austria.

2.3.3 Intermodal transport projects

9. DIOMIS is a project regarding the development of combined transports (road/rail) in Europe, where a total growth of the volume from 125.3 million gross tonnes in 2005 to 268 million gross tonnes in 2015 is expected. The project describes a large number of measures to be taken in order to reach the goal set of shifting further road volumes onto rail. The Agenda 2015 includes dissemination of a large number of measures to reduce bottlenecks, and active cooperation of the different stakeholders concerned. The project continues in DIOMIS II, where the Central and Eastern European countries will also be included.
10. A Risk Approach for Inland Terminals describes a handling method for the different risks that inland terminals might face on different level in the operation.

3. Overall synthesis

3.1 Main conclusions of WP2

This document details the relevance of EU and national policies on long distance freight transport in Europe. It also contains examples of key demonstration projects that could influence LDFT policies. The importance of a common European transport policy was first mentioned in the *Treaty of Rome* (1957). In 2001, the EC published the *White Paper on the future of the common transport policy for 2010*, which stressed safety, the environment and creating a balance between different modes of transport as important objectives. In 2006 the Commission reviewed its transport policy. The measures envisaged in 2001 were considered inadequate for achieving the objectives established. Complementary actions have been taken, focusing on making transport more efficient and sustainable.

In the national surveys the following countries have been taken into account: Austria, Czech Republic, Denmark, France, Germany, Ireland, Slovak Republic the Netherlands and the United Kingdom. Due to the different geographic, economic and financial situation, the focus of national policies differs between Member States. Countries with a high economic dependence on international trade (e.g. Denmark, Netherlands) have a different focus than countries in environmentally sensitive areas in the centre of Europe. (e.g. Austria). Old member states with high congestion (Germany, The Netherlands and the UK) also have a different focus than new Member States with relatively low congestions (Czech and Slovak republics). Nevertheless there are common key drivers for all Member States, although the details differ between the Member States. All Member States focus on reliable, safe and sustainable freight transport, while maintaining the quality of life.

The relevance for LDFT has been clustered in the following four categories:

Infrastructure

To improve the quality of LDFT, measures are being taken to tackle infrastructural bottlenecks across all modes, causing obstacles to the efficient flow of goods across the EU. The TEN-T programme is creating a multimodal EU network – with a focus on alternatives for road- to ensure that the most appropriate transport mode is chosen for each stage of the journey. In general, this is supported by national investments in the infrastructure of all modes.

User charging

Internalisation of costs that transport imposes on society (such as noise, emissions and congestion) will be a key element in future EU policies. The proposal to revise the directive on infrastructure charging for heavy goods vehicles is an important measure for the road sector. If fully applied in all modes, this will favour the use of alternatives for road transport.

Nowadays, many European countries already have a form of road pricing for heavy goods vehicles in the form of (electronic) toll collection or a vignette. The reasons behind this measure differ per country: funding of new infrastructure, tackling the negative effects of traffic, improving accessibility. In the Netherlands and Denmark road pricing will also be implemented, which will differentiate between time and place, as well as the type of vehicle. LDFT is expected to be relatively “insensitive” for the “time and place” element.

Legislation

On both national and European level a number of short- to medium-term actions have been launched in order to improve efficiency, to remove barriers for LDFT and to promote the use of the most efficient transport mode (co-modality). On EU-level this includes the use of information and communication technologies in freight transport, paperless information flows, the simplification of administrative processes, uniform load standards and rules on weight and dimensions of commercial vehicles. Through the Second Marco Polo programme the EC is supporting projects shifting freight from road to alternative modes. Finally, in order to meet the environmental targets, measures have been taken to make all modes of transport safer, more efficient and environmental friendly, including the use of biofuels.

One important aspect is the approach towards mega-liners. Sweden, Denmark, the Netherlands and Belgium have a positive attitude for these long and heavy vehicles, while other Member States are less enthusiastic.

Safety measures

The Commission and the Member States have set itself the target to half the number of road fatalities in the EU by 2010. Based on current figures, this target will not be achieved. Additional measures thus are needed. Since road transport is responsible for the majority of the fatalities, the focus is on this mode.

One of explanations for not achieving the target is the different approaches chosen by the Member States: infrastructure enhancement, significant marking and signalling, introduction of modern telematic equipment, road user education, daytime running lights and police enforcement. There is no common approach. Only a few countries (Austria, Denmark, the Netherlands and the UK) have specific measures aimed at road freight transport.

3.2 Consequences for WP5

The goal of the FREIGHTVISION project is to develop a vision of LDFT and action plans. The vision and action plans will be developed in a step-by-step approach. The first step is developing do-nothing forecasts in WP5. In the context of this project, forecasts are defined as projections of future freight transport - under the assumption that no additional actions are taken. The different forecasts thus depend on the assumptions with respect to external factors and on the assumptions of the already decided policy actions.

The following table provides an overview of the measures that –from a policy point of view- should be part of the do-nothing forecasts.

	Part of do-noting?	Comments
Infrastructure - TEN-T programme - Green Corridors - Rail freight networks - Motorways of the sea	yes yes yes yes	Due for 2020 To be included in Ten-T and Marco Polo programmes by 2010 Relation Ten-T and ERTMS By 2010 a fully-fledged network should be established
User charging - road transport - rail transport - inland waterway transport	yes yes yes	From 2012 HGV >3.5 tonnes, individual member stated to decide New proposals for rail freight and infrastructure charging set for 2010 To be assessed within NAIADES, legislation framework set for 2013
Legislation - alternative fuels - tyre pressure - mega-trucks - road telematics (ITS) - loading units - rail noise measures - river information system - engines (all modes) - Marco Polo II - single transport document - e-Freight - European maritime space - European single sky - Alpine convention	yes yes no yes yes yes yes yes yes yes yes yes yes yes yes	Targets set for 2010-2020 Minimum requirements to take effect in 2012 Impacts are currently discussed, various member states are against Relation with EU research agenda and demonstration projects In 2010 new directive for EU high-speed rail system Low noise brakes in 2015 RIS implementation is in progress From 2014 onwards cleaner engines in IWT & road (Euro VI) Second programme 2007-2013 In 2009 study and legislative proposal by EC In 2009 development of roadmap for implementation by EC An interoperable e-customs system by 2013 Towards a truly single sky by 2012 Ongoing, objectives set for 2010
Safety measures - road transport - rail transport - inland waterway transport - maritime transport - air transport	yes yes yes yes yes	As part of European Road Safety Action Plan (2003-2010) Via safety certification, safety authorities and investigations Via technical certifications for vessels As part of Erika I and II packages, IMO regulations As part of Single European Sky II (2009-2012)

Annexes

The following three annexes are detailed in separate documents being part of this deliverable.

Annex I – report on relevant European policies

Annex II – report on relevant national policies

Annex III – report on key demonstration projects

- End of document -