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12 Prescriptions for a European Sustainable Mobility Policy

The EPC Task Force on Transport

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GROWTH AND JOBS

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About the authors

The European Policy Centre's **Task Force on Transport** was formed in early February 2004 with the objective of formulating prescriptions on the implementation of the principle of sustainable mobility at the European level. It was composed of the key stakeholders in this area, including representatives from the automotive industry, the air transport sector, NGOs and regional actors. This Working Paper reflects on the debates that took place in the Task Force. However, the positions represented in this paper are not attributable to any of the EPC's member organisations.

12 Prescriptions for a European Sustainable Mobility Policy

Partner for Growth

1. Europe cannot have accelerated economic growth without a corresponding growth in transport. Efficient and competitive transport at European level is a condition for making the Internal Market and the Lisbon Process work. Decision-makers should take this as a starting point for developing a coherent, long-term sustainable European transport policy.

Level Playing Field

2. To create a dynamic and effective European transport policy, a level playing field for competition on market-based terms between different modes of transport must be ensured, including common principles for the pricing of infrastructure. When establishing the cost and benefit of different modes of transport, externalities should be included. Europe wide solutions to financing Europe's transport should be established, bearing in mind that the transport industry already creates substantial revenues for European governments.

Sustainability

3. To ensure long-term sustainability, European transport policy must take into account a wide range of sustainability issues, such as the physical environment, safety and quality, security, social conditions and the financing of well-maintained infrastructure among others. Consumer needs and consumer demand, market-based incentives, and robust financing plans must be guiding principles for investment in transport, but this new generation of investment must seek to progressively facilitate the development of sustainable and less resource demanding alternatives to the current situation.

Financial Commitments

4. The realisation of the enlarged list of TENs will remain wishful thinking unless EU Member States and the Union increase their financial commitments. For this to happen, a rise in EU co-financing limits is urgently needed. It is also important to study the impact of TENs on the urban transport systems that they link.

Better Regulation

5. Harmonisation of the rules and regulations governing European transport and infrastructure interoperability would facilitate the development of a truly pan-European transport system. Any EU regulatory framework for transport should pass robust tests for better regulation, based on intensive stakeholder involvement and a higher level of transparency in the rule-making process.

Best Practices

6. Timely regulation and exchange of good practices should be used as major instruments for adopting high quality solutions to European transport issues. Use of the Open Method of Coordination to promote this should be encouraged.

Urban Area Transport

7. European transport solutions should firstly focus on those areas with the biggest problems, including urban areas. Sound, well-managed and well-planned infrastructure would greatly contribute to the reduction of congestion in densely populated urban areas. It is particularly important to make more efficient use of existing urban space by encouraging personal travel in safer, more energy efficient and environmentally friendly ways.

Multi-Modal

8. Multi-modal facilities are key to sustainable mobility. Without a system of efficient transfer facilities, transport will not be able to bridge the gap from suppliers to consumers and businesses in an efficient way. Better rail, road, sea, and air links are needed, because having real choice is the only way to create efficient and sustainable transport.

Safety and Security

9. Safety and security are key to the future. Each year, thousands of lives and millions of euros in health care costs are lost due to transport accidents. It should be a task of the EU to work for safer modes of transport.

Achieving greater levels of security throughout the transport chain must also be a priority in the fight against terrorism. It is a matter of shared responsibility in which coordination and collaboration between Member State authorities can also play a key role. Security measures should be cost effective throughout the Union and tailored according to the specificities of different modes of transport.

Global Leader

10. EU transport policy must have a strong global dimension. It must connect with major global networks and major flows of goods and people. Furthermore, the EU should use its position in international fora to propose global policies that avoid trade disruptions and which support global competitiveness.

R&D

11. Europe should use its potential to become a global leader in the development of a knowledge-based transport sector. Modern technology can help in creating a safer, more secure, customer-friendly and efficient European transport system. The challenges resulting from climate change call for increased investment in transport-related R&D. The need for increased R&D investment should thus be strongly reflected in the forthcoming 7th Framework Programme for Research and Development. This will further boost the development of a European knowledge-based industry and thus contribute to an important part of the Lisbon process.

Better Cooperation

12. In order to ensure a sustainable European transport policy, relevant parts of the European Commission – and other relevant EU institutions – must cooperate strongly to grasp all the elements that affect transport. A multi-policy approach would also avoid contradictory decisions in areas such as transport, environment, social affairs, consumer protection, trade and research and development.

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Executive Summary

Transport is at the very heart of European integration. It is the means for uniting business and communities in Europe and for connecting Europe to the world. With every step towards greater integration, the need for transport grows. Therefore, if the EU is to meet the expected increase in demand for transport as the Union grows, there needs to be a new understanding of transport from European decision-makers.

The EU Common Transport Policy, as proposed by the European Commission, aims to make substantial improvements to the quality and efficiency of transport in Europe. It outlines goals that we all can support and want to see realised as soon as possible. But this strategy has been designed to gradually break the link between constant transport growth and economic growth, in order to reduce the pressure on the environment and prevent congestion, while maintaining the EU's economic competitiveness. It is doubtful whether this can be done in the real world, and thus politicians are faced with the challenge of dealing with increased pressure from growth in the transport sector while securing sustainability in a broad sense, including for example financing, safety, security, social conditions and the environment.

As the EU adjusts to the largest enlargement to date and tries to meet the objectives set out in the Lisbon Agenda, challenges to create a long-term sustainable European transport policy are increasing. Transport is both a fact and a pre-requisite to achieving Europe's ambitious goals.

The title of the Commission transport policy paper states it clearly: "European transport policy for 2010: time to decide." The EPC Task Force on Transport agrees that it is time to decide and suggests a stock-taking review of which policies are working and whether and how policy makers should shift their thinking.

First of all, it is important to understand that sustainability for transport and for Europe as a whole must extend beyond environmental concerns. For the EPC Task Force this means dealing with wider issues such as safety and security in transport, increased transport options for the average EU citizen, building and financing a solid infrastructure base, and ensuring that social and environmental considerations are designed to carry European transport into a robust future where it can support the EU's enlargement and growth ambitions. The only way to really build sustainable and environmentally

friendly transport is to take a holistic approach and to create a balanced analysis of all costs and benefits of transport projects. Without a fully sustainable transport for both growth and the environment, we cannot build a sustainable Europe.

Such a balanced analysis for the whole of European transport policy and the Lisbon Agenda shows that trying to break the link between transport and economic growth is risky at best. Transport accounts for 4% of the EU's GDP and directly employs more than 6 million people in Europe. Transport growth means economic growth and with it, more jobs. At the same time, as the very basis of the European economy, when Europe's economy grows, transport must grow with it. Otherwise a point will be reached at which European growth will be threatened by the insufficiency of road, rail, sea, and air transport systems. European policy must not be self-defeating. Certainly, in some instances and particularly in urban areas, it makes sense to decouple transport from growth. But any such policy needs to be carefully managed within a broader sustainable transport strategy. Bad regulation and quick fixes often just aggravate the problem. Our proposition is to decouple the negative effects of transport growth, but not economic progress in itself. The Lisbon Agenda goals envisage a sustainable future; transport is the foundation of that sustainable future.

Once we recognise that, as Europe grows, so too will transport, we can start to ensure that growth is sustainable by making transport through Europe as efficient and user-friendly as possible, so that not one drop of fuel is wasted in traffic jams or one euro lost to late trains or planes. The first and central tool for achieving this goal is harmonisation. Only by creating European standards can all of Europe run on time. Too often it is the differences in national regulations, and the inaccuracy or lack of implementation of EU directives in the transport sector that hold Europe back. To counteract this obstruction, the EU must enact clear measures in transport at the European level, and must create benchmarking tools to ensure that every Member State is up to code. We need regulations that lead to open skies, but also to open rails, open seas, and open roads.

When we have created the best system at home, Europe will be able to bring that system to the global stage. We will be able to defend our high standards for sustainability in transport and be a rule-setter for the world. Without a strong and united European voice in organisations like the WTO, our ambition for a sustainable transport will be lost in the race to the bottom by other countries.

If we can make the current system work better, we are halfway to a sustainable future. The rest of the way will come through innovation and investments in a cleaner and safer transport for the future. Today, too little funding is given to the search for better technologies and better ways to make transport more energy efficient and 'greener.' When funding is given to research, it is too locked away in universities and is unable to make it to the industries and communities where it is needed most. The only answer to this is increased transport R&D funding that allows ideas to be translated into the transport vehicles of tomorrow.

At the same time, we must invest in better infrastructure projects. Without better connections and links between people and places, businesses and consumers, we cannot reach the goal of sustainability. Today, infrastructure projects stand unfinished and every European loses due to the lack of 'good' infrastructure investment. This is because the best investments are often the longest and most expensive ones to complete. Local and regional governments do not have the money to undertake these projects, and often it is just easier to rely on limited solutions, like congestion charges, which do not solve the problem of sustainability. In the past, the EU's answer to this was to ask for funding from private sources. But as of yet, infrastructure investment has not reached a sufficient level, as private firms only invest when they can see a profit for themselves alone. 'Good' investments are goods that are of benefit to all Europeans, not just one firm.

So what makes a 'good' investment? A good investment is one that takes into account all the costs and benefits to European society of a given project and prioritises projects not by costs in euros, but according to what is better for Europe's future. On the basis of good investment, the first goal of European funding must be inter-modal facilities. Without rail links to airports and seaports, we are left with only one solution. Without a system of efficient transfer facilities between rail and road, freight will continue to be shipped by road only. This is because the system often cannot bridge the point from rail to the consumer's home or store. We need better rail, road, sea and air links because the only way to make the sustainable transport choice is to have the choice in the first place.

The EPC Task Force on Transport

1. Setting the goals for European transport: sustainable mobility and economic growth

The future of transport policy – introduction to a sustainable agenda

In the 2001 White Paper entitled "Time to Decide," the Commission laid out one path for the future of transport, and connected this policy to the search for sustainable mobility.

The issue of sustainability is a key concept for the development of policies today – including transport policy. Whereas it is usually linked first-hand to concerns about the environment, it is also an ill-defined concept, which can lead to different interpretations. With regard to the Commission's recent emphasis on the need for a policy fostering sustainable mobility, it is important to understand precisely what this concept entails.

In this context we are working with a rather broad concept of sustainability, and in what follows we define some of the important aspects of sustainable mobility. Our starting point has been a strong recognition of the European economic and social model, which tends to emphasise a broader view on policies, and which also is very strongly behind the Lisbon Agenda, where economic growth is combined with other social needs.

Of course, the concept must include sustainability in terms of the environment. Natural resources are limited and pollution levels must be controlled for our social and economic welfare. Sustainable development must therefore incorporate the search for new innovations and alternative sources of energy.

But it must also include sustainability in terms of safety. Each year on average, 50.000 lives and more than 160 billion euros in health care costs[1] are lost to accidents on roadways. The number of deaths in road accidents in 2001 was 50.500.[2] It is not sustainable for this to continue.

The concept of sustainable mobility must include sustainability in terms of security. With the threat of terrorism and the disruption that it causes, transport costs and individual protection costs will rise. In the US since 2002, the losses for manufacturing firms incurred by increased visa delays alone are estimated at $30 billion.[3] While estimated numbers for Europe are not yet available, there is a similar effect for European firms. We must search

for a way to gain security without limiting the free movement of goods and people through costs and regulations.

Sustainable mobility must also include sustainability in the labour market. The transport sector employs overall 14.3 million people in Europe[4] and is thus a major employer. More importantly, social and labour market conditions are crucial for the sustainable development of transport in Europe.

Sustainability in terms of competition and the harmonisation of regulation also must be featured. Sustainable transport must be able to overcome market failures, which prohibit the spread and acceleration of economic growth. As transport is a backbone of economic growth, it must be designed to serve all European consumers with the lowest prices and highest speed of service, and not be shadowed by national interests.

It must also reflect the consumer's needs. The majority of Europeans live in urban areas, and urbanisation is expected to continue in the coming decades. According to UN projections, urbanisation will increase from 73.5% in 1995 to 81.7% in 2025.[5] It must therefore provide sustainable tools for urban growth and transport between urban areas. It must not punish citizens for congesting and overusing roadways without first giving them sustainable alternatives, including public transport. Investment in transport infrastructure and services should result in an increase in consumer surplus greater than the investment.

It is clear that defining sustainability and its implications for transport policy are vital elements in the design of a European transport policy for the future. But we must understand that true sustainability in this sector means more than environmental sustainability alone. It must be balanced with other key factors. Sustainable mobility has strong links with every sector of society and every policy area of the Commission. Therefore in setting out a pan-European strategy for sustainable mobility, that strategy must be holistic and avoid examining transport policy in isolation.

As shown in this paper, a sustainable transport policy must take into account issues of energy, environment, safety, security, cost and financial efficiency, and the different European social models. The key to a long-term sustainable agenda is proper risk management. Also needed are standards which clearly outlines the benefits of a European transport policy against the costs. Transport sustainability cannot be based on short-term political issues or

panic reactions to transport growth, but on sound planning. This obviously raises important questions on the organisation and management of transport in Europe. By including the issues mentioned above, it becomes apparent that profit considerations for development and management of transport are not sufficient to ensure for example universal service obligations.

The holistic approach to sustainability lays the ground for an extensive cost/benefit analysis preceding each decision and incorporating the spill-over effects of transport in other EU policy areas. Sustainability in a broad sense is also the driving principle of the Lisbon Strategy. For this reason, EU transport policy and the Lisbon Strategy must develop hand in hand. Growth in transport and economic growth cannot be considered separable.

The mutually reinforcing nature of the Lisbon Strategy and EU transport policy

The Lisbon Process aims at turning Europe into one of the world's most competitive economies. For this to happen, the main challenge of the Lisbon Strategy is to bring about a comprehensive agenda of policy reforms that combines and achieves the modernisation of the so-called European social model along with high growth prospects.[6]

The main questions that need to be answered in this regard are: what is the impact of economic growth on transport, and vice versa? More important, what is the role of transport policy in the completion of the Lisbon agenda, and how will Lisbon be able to integrate the challenges of a strategy on sustainable mobility?

The Agenda includes a broad number of measures including the creation of a knowledge-based society, the completion of the internal market and encouraging entrepreneurship in the EU. Each one of these tools is planned to bring together a whole range of policy programmes designed to have a positive impact on economic growth in the Union. Should this programme be agreed, and the Lisbon Agenda be successfully applied, the Commission expects it to result in a 0.5 to 0.75-percentage point increase in the growth potential of the EU in the next 5-10 years.[7]

The Lisbon Agenda was formulated in 2000, and is likely to leave a lasting mark on many future European policies. We can only hope its goals are achieved and probably have some reasons to believe in its success, as growth forecasts have been lately upgraded positively in the newly enlarged

Union. It seems to have contributed to, or at least accompanied, positive changes in major growth determinants, such as domestic demand or demand for exports. Overall, growth in the EU-25 should equal 2.5% or more in 2005[8] and this trend should continue in subsequent years, especially as the enlargement completed in 2004 is expected to have a measurable impact on growth not only in the new Member States but also further west.

The positive impact of Lisbon: the current situation of the transport sector

The first conclusion that can be drawn from the recent economic upturn is that if the Lisbon Process is to deliver on economic growth, it will then have a positive impact on the transport sector. Whereas we cannot assert for sure that both trends are directly correlated, the Lisbon goal of economic growth is currently reflected in the growth of European transport, which seems to have adapted quite well to the new economic trends fostered by the Agenda.

The sector is indeed doing well. Even though transport has shown a steady growth since the 1970s, regardless of the economic fluctuations in Europe,[9] the current economic upturn undoubtedly has had a positive impact on its growth. What is more, the implementation of the measures promoted by the Lisbon Process should also generate an acceleration of growth in transport, which is shown by the table below.

Forecast for transport growth by sector, 2000-2010

	Freight Transport (Gtkm)[10]			Passenger transports[11] (Gpkm)				
Transport sector	Trucks	Rail	Inland Navigation	Public road transport	Private cars and motorcycles	Rail	Aviation	Inland Navigation
Forecasted activity (EU-15)	3.4	0.6	1.4	1.1	1.7	1.2	6	1.5
Forecasted activity (EU-25)	3.4	-1.8	1.4	0.2	1.8	-0.1	5.8	1.6

Source: DG for Energy and Transport, European Commission, 2003.[12]

Examining growth in relation to transport shows that road freight and passenger transport by road will continue to increase steadily. Aviation is likely to be the fastest growing means of transport for passengers in the decade 2000-10. Finally, rail transport will be characterised by diverging trends between the EU-15 and the EU-25. In the EU-25, rail transport will exhibit a marked decline both in passenger and freight transport, whereas it will grow in the EU-15.

Together these trends show that even though Lisbon envisions an effective modernisation of the EU towards a knowledge-based economy, in the transport sector, achieving Lisbon will entail transport growth on a European scale. The development of virtual networks, connecting firms or institutions operating in the same field and/or undertaking tasks requiring constant collaboration, could be imagined to slow down growth in transport.[13] The growing role played by services in our modern economies sustains this trend towards the dematerialisation of trade and movement. Nonetheless, it seems that transport will still grow because this trend is compensated for by the current "de-integration" process, meaning the transformation of previously vertically integrated industries into a cluster of independent, related but separate industries. This process is currently under way in a large number of industries. Several carmakers such as GM have delegated the conception and production of spare parts to subsidiary companies (Delphia in the case of GM).[14] This increasing complexity of the organisation of value chains should counterbalance the development of services and virtual networks, as a major driver for growth in transport in the medium-term. Hence it can be inferred from the current industrial trends that transport should not encounter stagnation if economic growth is to pick-up and stay in a 2-3% margin in the coming years.

A win-win situation: the positive impact of transport on European growth

This transport growth, as long as it is directed towards sustainable mobility is not only a product of Lisbon type economic growth, but also a prerequisite for that growth to arise and continue.

The first reason for this is that the transport sector represents a sizeable part of the economy. Transport services account for an estimated 4% of the Union's GNP and employs 6.3 million people. This in addition to the 2 million employed in the transport equipment industry and over 6 million in transport-related industries.[15] Investments in this sector, by driving up employment and wages, automatically result in a marked increase in

domestic demand. This means that a policy favourable to transport growth has potential positive consequences for the whole EU economy, because of the sheer importance of this sector.

But it goes further than that, because of the great number of economic activities relying on transport for their daily functioning. Due to the interconnection of transport and the rest of the European economy, improved transport facilities and networks can play a central part in sustained economic growth. As transport grows, causing reduced transportation costs and lower average costs in the industry, Europe will achieve an even higher final output. This can in turn lead to higher employment and reduced inflationary pressures. Recognising this fact means that fostering economic growth in the EU requires investing in efficient transportation networks, and encouraging this sector as a whole.

This is especially true in the ten new Member States, whose industrial modernisation cannot be carried out efficiently without the necessary financial effort in transport. Unreliable transport networks pose the threat of distributional disruptions and shortages. As a result, newly founded businesses in the CEEC can be seriously endangered despite endowment with a price or product-based competitive advantage. Investment in transport coupled with spatial planning also considerably contributes to the diffusion of growth over the considered territories, while limiting the amount of negative externalities caused by transport (noise, pollution, congestion). This benefit is of primary importance in the rapidly developing ten new Member States' economies.

The improved movement of goods and persons allows for agents to respond appropriately to economic fluctuations. Reduced transportation costs lead to efficiency gains in terms of allocations of resources. In an environment of EU-wide improved transport infrastructures, the manufacturer of the end product searches for the most efficient supplier, which enables him to lower his price and increase his output. Comparative advantages can be fully tapped into, and this reinforced competition renders European firms more competitive at the international level.

A better allocation of resources also implies a process of 'natural' selection, progressively driving out of the market the most inefficient production units, which previously benefited from the 'niche' constituted by their favourable location. On the contrary, competitive businesses, which were previously stagnating because of their remoteness, can fully expand in accordance with

the state of European and international competition. The resulting productivity gains are also beneficial in environmental terms, as the same amount of output requires a lower amount of input than before.

Finally, one could argue that the transport sector has one last contribution to make to the Lisbon objectives. It is a possible tool for fostering labour mobility and fighting unemployment. Market-based mechanisms operate more efficiently in an environment of modernised transport infrastructures. In his theoretical work on the "optimum currency areas," Robert Mundell describes such areas as being characterised by a high degree of labour mobility.[16] Economic downturn in a definite region prompts the agents to move to a booming region, where labour forces are needed. This mobility of the supply factors smoothes out economic fluctuations.

One counter argument could address the differentiation between transport at the local level, and transport at a national and European level. It is often stated that growth in transport and economic growth at the local level should be de-coupled, as excessive growth in transport in urban and suburban areas leads to congestion, negative externalities (noise, pollution) and reduced mobility. This point does not contradict our position, as it is precisely our goal to demonstrate that growth in transport and economic growth can be kept compatible at all levels if the relevant transport policy is guided by the objective of sustainable mobility. At the local level, economic growth and growth in transport can go hand in hand if transport investments are re-directed towards public transport and inter-modal facilities, as will be argued in the course of this paper.

Beyond exclusive economic concerns: how to keep Lisbon and sustainability compatible

Together, it is now understandable that the mutually reinforcing nature of economic growth and growth in transport makes the case for a policy of sensible investment directed towards solutions that do not run counter to the Lisbon objectives on sustainable development. But how do we keep the objectives of Lisbon and sustainable mobility united? The answer is a shift to environmentally friendlier infrastructures driven by market-based incentives, originating from both commonly agreed environmental standards and consumer preferences. This shift should be driven by the following measures:

1. Developing market-based incentives to sustainable development in transport

The current situation calls for market-based incentives, which would pave the way for a more sustainable development of transport in an enlarged EU. These market-based incentives necessitate Member States and the EU authorities to act as regulators and financial supporters of cleaner technologies. The adoption of commonly agreed standards, pollution and security requirements represent an appropriate response, as it creates an EU-wide level-playing field, providing the necessary stimulus for suppliers to offer alternative transport solutions. But this new generation of transport policies must unfold while making sure that demand is properly taken into account.

2. Basing reforms on consumer needs

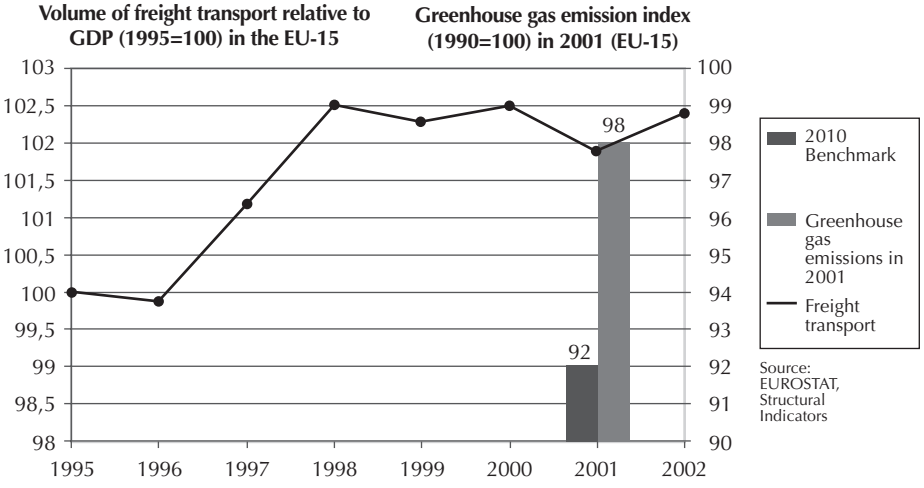
A realistic assessment of consumer needs is a prerequisite for a durable shift towards more sustainable solutions. Any new common standard, transport solution or technology that does not live up to consumer needs is set to fail and will constitute a setback for the general shift towards a more sustainable transport environment.

3. Working on capacity management

Public transport investments are considered an absolutely necessary item for the future. Too often, however, the policy adopted is to force individuals into using public transportation through the introduction of congestion charges and the closing of streets to vehicles. Only after these measures are taken, do local governments turn to investing in public transport. This leads to an overuse of an underdeveloped infrastructure that only aggravates the lack of public support for changes in transport policies. Investment must come first, so that it becomes an individual choice to use public transportation. If, after investment, a metro or rail service is safer and more efficient, there is a higher chance that the choice of this mode of transport will increase consumer welfare. The wise promotion and investment in public transportation may lead to an even greater decline in congestion than penalties alone. This shift in urban transport policy is urgently needed as in some European cities average traffic speeds at peak times are lower than in the days of the horse-drawn carriage.[17]

4. Using environment as a stimulating factor for innovation and economic growth

Environmental considerations are critical, not only because they are necessary in a relatively densely populated area like the EU, but also because in most cases environmentally sound solutions are economically rational solutions – not least in a period of rising energy prices. Thus innovative actions in the area of environmentally sound transport makes sense, and should be promoted as much as possible by the EU – especially in the forthcoming Framework Programme for R&D. No delay can be accepted. As the following graph shows, greenhouse gas emissions, as they stood in the EU-15 in 2001, still had a long way to go to meet their 2010 benchmark. Besides, freight transport started growing again due to the economic recovery following the trough in 2001, making the development of alternatives to road freight even more necessary.



Conclusion

In accordance with the holistic approach on sustainability set out above, growth in transport and economic growth are interdependent. Whereas the ongoing changes in industrial organisations offer divergent indications on growth in transport, the current economic recovery in Europe and the expected impact of the Lisbon Strategy bode well for transport-based activities. However, the correlation between economic growth and growth in transport operates in both directions, meaning that transport is also crucial to the implementation of the Lisbon Strategy. This mutually reinforcing nature of transport and economic growth calls for a new generation of investments. These projects should be guided by the following imperatives: incorporation of market-based incentives and consumer needs, and capacity management in favour of environmental-friendly alternatives.

- Europe cannot have accelerated economic growth without a corresponding growth in transport. Efficient and competitive transport at European level is a condition for making the internal market and the Lisbon Process work. Decision-makers should take this as a starting point for developing a coherent, long-term sustainable European transport policy.

- To create a dynamic and effective European transport policy, a level playing field for competition on market-based terms between different modes of transport must be ensured, including common principles towards the pricing of infrastructure. When establishing the cost and benefit of different modes of transport, externalities should be included. Europe wide solutions to financing Europe's transport should be established, bearing in mind that the transport industry already creates substantial revenues for European governments.

- To ensure long-term sustainability, European transport policy must take into account a wide range of sustainability issues, such as the physical environment, safety and quality, security, social conditions and financing of well-maintained infrastructure among others. Consumer needs and consumer demand, market-based incentives, and robust financing plans must be guiding principles for investment in transport, but this new generation of investment must seek to progressively facilitate the development of sustainable and less resource demanding alternatives to the current state of play.

2. Transport policy and international harmonisation – the EU as a needed player

The EU is needed both internally, because it seems better placed than most Member States to address the challenges highlighted above, and externally to defend European transport in a global context.

Why do we need a European solution? The need for harmonisation

The EU as a facilitator of trans-border traffic

One of the clearest reasons for the establishment of a pan-European transport policy is that transport is by nature both national and cross-border and that cross-border traffic is likely to increase over time, particularly as the centre of gravity for manufacturing in Europe is expected to shift eastwards. This move is mainly induced by lower labour costs in the CEECs.

Transport networks and facilities affect the welfare of the citizens beyond national borders. For this reason, decision-making at a higher level is needed, as it allows for transport-generated externalities to be better taken into account before the adoption of the required measures. The EU can incorporate the cross-national effects of its policy and therefore deliver a comprehensive assessment of the final costs and benefits of any measure put forward. This is especially true with regard to standardisation measures and projects encompassing cross-border networks. According to the principle of subsidiarity, and because transport by definition crosses borders and requires a pan-European response, the EU seems to be the most appropriate level for action for trans-border solutions.

Having not yet played this role to the fullest extent of its mandate, the EU still has far to go. Even today, there are many existing obstacles to cross-border transport in the EU-15, not to mention the EU-25. Since the creation of the European Community, national standards have become an obstacle to the functioning of the internal market. Beyond anecdotal problems such as the disparity of train track width (differing between Spain and France, Poland and Ukraine…), these existing discrepancies have persisted to this day, with little effort made to prevent national governments from repeating past mistakes. Little attention has been paid to the newly created hindrances to mobility and cross-national trade, which resulted in additional costs for all countries concerned.

The damage done by this situation has only become worse as the EU Member States rely heavily on intra-EU trade for their economic growth. The EU is considered a relatively 'closed' economy, highly dependent on external demand from other EU Member States: in 2003, more than 60% of total EU imports originated from other EU countries.[18] Clearly, a harmonisation of transport-related technical standards could have a marked impact on the EU economy and benefit all EU countries, while raising the overall level of safety and sustainability. Technical requirements for inland waterway vessels, social requirements for the crew, or legislation on air traffic are likely to be harmonised soon to the advantage of all Member States. With many barriers still existing due to different legislation in areas such as infrastructure financing, labour market and environmental regulation, or even taxation, it is obvious that the EU will be called upon to harmonise many more technical standards and national requirements. Fully harmonised and integrated transport systems, for example the European Air Traffic Management system (ATM), are essential for accommodating the forecasted strong growth of European transport. Harmonisation and strategic investments are necessary to enhance and enable each transport sector system to cope with the forecast traffic demand.

To prevent free-riding and competition distortions in the internal market

Another reason why EU harmonisation is needed in transport policy is the Commission's potential ability to prevent free-riding by the Member States, which may be tempted to lure business and transport with the help of less stringent safety, social or environmental requirements than in the neighbouring countries. In this case, the decision to relax national legislation is based on a cost/benefit analysis, whereas the neighbouring countries are only exposed to the costs of such a legislative change (increased pollution, risk associated with accidents, etc.).

Using similar logic, decision-making at the EU level is needed to ensure that Member States do not take transport-related measures counter-acting EU achievements in other key policy areas. The coherence of EU policy-making requires it to have a transport policy framework. But having an EU-based transport policy framework is not an end in itself, as this policy must fit into the overall picture of a competitive, socially inclusive and sustainable Europe. Uncoordinated and conflicting EU regulations that are interpreted and implemented differently in the various Member States also constitute one of the main challenges to the competitiveness of the

industry. Therefore, a comprehensive impact assessment prior to the formulation of legislative proposals is essential. In the same manner, an analysis of the regulations already on the books and the way in which they are being implemented across all Member States in the light of enlargement would be a wise route to better cooperation and more coherence in Member States' national policies.

Without a European transport policy, a piece of the EU puzzle would be missing, as this policy framework is indispensable to the attainment of objectives set out in other key areas, such as the Lisbon Process, the internal market or the enlargement process. The interaction between transport and the Lisbon Process has already been discussed above. An EU-defined transport policy framework is a prerequisite for the completion of the internal market, and the pursuit of the enlargement process, which means economic development in the 10 new Member States as well as preparation for the formal accession of Bulgaria, Romania and Turkey. In its latest Internal Market Scoreboard, the Commission pointed out that stagnation in its composite "internal market index" since 2000, was mainly caused by a slowdown in intra-EU trade in goods and intra-EU direct investment. This observation was confirmed by a halt in price convergence, usually interpreted as another indicator of progress towards internal market completion.[19] The economic down turn in 2000-2001 undoubtedly played its part in the down turn affecting intra-EU trade and direct investment. Nevertheless, internal market completion will remain a dead letter if cross-border transport is not facilitated, and if standard harmonisation is not pursued at the EU level.

This necessity relates to the fundamental principles of free movement of goods, services and persons. Attention must also be paid to the full enforcement of the principle of free establishment in relation to transport services. However, it must be noted that harmonisation does not necessarily entail generalisation of the lowest standard existing among the Member States. Standard harmonisation for the purpose of completing the internal market must be conciliated with other objectives such as the observance of minimum social requirements (e.g. harmonisation of the labour code in road freight transport) and the emergence of a more environmental and health-friendly transport sector in the EU.

For a better governance

Finally, a last reason for the Commission to harmonise the transport sector is the problem of inter-country governance, which is connected to this issue.

Standards harmonisation, adoption and transposition of new pieces of EU legislation in the Member States can be time-consuming. Conversely, pollution, health damages and transport-caused accidents are issues requiring an immediate and appropriate response. For this reason, the EU transport policy framework must partly consist in acting as a facilitator of exchanges of good practices. A stronger emphasis on EU harmonisation and implementation could, for example, be encouraged by the use of new benchmarking tools to compare Member States and help those who are lagging behind. A true system of early-warning consultation could be created between Member States, so that national transport changes do not stand in the way of the internal market.

Regional and local benchmarking on all types of transport-related pollution and on transport accidents must be generalised and made publicly available, while resources must be allocated to the promotion of the best local solutions found to these issues. "Soft" policy making (coordination, public information) can pay off without delays. The EU seems perfectly positioned to play this role.

The need for more and better investment in transport projects

In the new Member States

A European solution to transport is extremely important with respect to the new Member States. Managing enlargement through transport policy implies the attainment of two distinct objectives. The first objective is related to the needed investments in infrastructure, as the new Member States suffer from bottlenecks inherited from the past planned economy. The convergence process with the EU-15 in transport requires tremendous financial efforts, which the budgets of these economies cannot make alone. Structural and cohesion funding are meant to help the new Member States face this financial challenge. This catch-up is vital not only for the new EU-10 but also for the entire EU economy, as the centre of gravity for manufacturing in Europe is expected to shift eastwards due to differences of labour costs. Hence the rapid modernisation of the transport infrastructure in the CEECs is a prerequisite to avoid disruptions and shortages in the value chain and distribution process of the EU industry.

The second objective is related to the negative impact of enlargement on the sustainability of transport policy in the EU. The new Member States are still in the process of adjusting their functioning and lifestyles to mass consumption and market-based mechanisms. This adjustment implies a drastic increase in the level of car ownership and a move away from previously favoured rail haulage. Between 1990 and 1998, road haulage increased by 19.4% while, during the same period, rail haulage decreased by 43.5%.[20] An alternative to road freight and road passenger transport must rapidly be offered in these countries, so that the attainment of the Lisbon objectives on air pollution does not become wishful thinking by 2010. Accordingly, capitalising on the still important role played by rail passenger transport and rail haulage through massive modernisation and investment, so as to make rail connections faster and more secure, seems to be an appropriate response to the challenges posed by enlargement in the transport sector. This reconciliation of economic growth objectives and sustainability considerations is likely to cost more than the new Member States can afford without aid. It is an obvious field open to EU action and encouragement.

Investments to serve an EU strategy instead of national

Cross-border networks and infrastructure also generate positive externalities. Theoretically, such projects facilitate trade and mobility not only in the countries undertaking such a project, but also in neighbouring countries. This can be verified in the Alps, where cross-border tunnels in France, Italy, Switzerland and Austria are also of benefit to businesses based in Spain, Germany or Denmark. Countries directly involved in such projects may shy away from these undertakings due to the initial costs. However, these Member States tend to underestimate the full benefits, overlooking the increase in trade also occurring in the other EU countries. It follows from this incomplete cost/benefit analysis that profitable projects for the EU will not be launched because of the unsuitability of the decision-making level. The EU must step in, and it does so rightly by planning to amend the funding rules to allow the Community to make a maximum contribution (up to 20% of the total cost) to cross-border railway projects crossing natural barriers and offering an undeniable trans-European added value. The Lyon-Turin line can be regarded as a good example of such sensible, EU-supported investments.

Finally, some additional remarks must be made regarding EU funding of cross-border projects. Contributions of up to 20% of the total cost should also be made possible for other modes of transport that do not run counter to the Lisbon objectives on sustainable development. 'Sea motorways' could be co-financed on such a basis. Moreover, it is doubtful that the 20% limit for EU contributions is high enough in the case of the new Member States. Not raising the co-financing limit for projects involving new Member States creates the risk of a prolonged two-speed Europe in transport, which is precisely what an EU policy framework should seek to avoid in the medium-term.

Infrastructure funding: prospects for the next EU budget

In the EU Budget for 2000-2006, 64% of structural funding went to roadways alone.[21] In cohesion funding, one can find similar numbers. While we must keep the European road network up-to-date, it is clear that if our goal is long-term sustainability, more funding must be used in other transport areas like rail and shipping as well.

The total amount of investments for realising the trans-European transport network (TEN-T) in the enlarged Union, as was approved by the Council and the Parliament on 29 April 2004, amounts to more than 600 billion euros until 2020. The list of priority projects initially agreed in 1996 has been enlarged from 14 to 30 projects, in accordance with the conclusions of the high level group chaired by Karel Van Miert in 2003. In its proposal (2004) for a regulation on the general rules for the granting of Community financial aid in the field of TEN in energy and transport, the Commission notes, however, that less than a quarter of the funding for the cross-border sections of these projects has been found. More than 20 years will be needed to complete the trans-European transport network as revised in 2004, if the current rhythm of investment remains unchanged. This predictable under investment represents a continuation of the trend already affecting the current budget, for the period 2000-2006. The Commission judges the sum of 600 million euros per year up to 2006 as inadequate, as set out by the Regulation 1655/99. Of course, the realisation of the projects composing the trans-European networks does not only rely on the TEN-T budget. Cohesion and structural funds, as well as pre-enlargement aid (ISPA) were also mobilised for that purpose, as the following table illustrates:

€ billion	1993-99	2000-06 (EU-15)	2000-06 (EU-25)
TEN budget	2.2	4.2	4.4
Cohesion funds	7.6	9	12.8
ERDF	5	6	6
ISPA		2.1	n.a.
Total	14.8	21.3	23.2

Source: Commission (2004)

Despite this diversity of EU funding, the future budget projections can be deemed insufficient with regard to the recent enlargement of the list of TEN-T projects. The financial envelope (average) over the period 2007-2013 amounts to 2.9 billion euros a year against hardly more than 600 million euros for the current period, which undoubtedly marks an improvement. However, all in all, the EU contribution proposed for the period 2007-2013 amounts to slightly more than 20 billion euros, which compares poorly to the 600 billion euros needed for the completion of the trans-European networks by 2020. There is a need for an increased EU contribution to the financing of trans-European networks. This remark is sustained by the decreasing involvement of Member States: their investment, which equalled 1.5% of the national GDP on average in the nineties, is now down to 1% of the national GDP.[22]

The financial challenges raised by the increase in the number of TEN-T projects demand more from the EU and Member States. A positive signal was sent by the EIB (European Investment Bank). Since 1993, the EIB has approved loans for TEN-T projects with a total amount of 80 billion euros and has financed some 40 billion euros in public private partnerships. This financial institution has recently put forward a new scheme named "EIB TENs Investment Facility (TIF)," which allows the granting of long-term loans (35 years) covering up to 75% of the costs of TEN-T projects, up to a volume of 50 billion euros for the period 2004-2010. However, loans granted only by the EIB will not suffice to complete the 30 projects listed now in the new TEN-T guidelines. The EU co-financing limit of 10% of the total investment cost may arise as a major obstacle to the completion of these projects in due time. This limit has been raised to 20% for cross-border projects and those crossing natural obstacles (Regulation 807/2004), however the Commission dubs the change insufficient so far[23] to guarantee a sound financing of the TEN-T projects by 2020.

As was shown in the impact analysis of the TEN-T programme undertaken in 2003, these infrastructures can foster the objectives of sustainable development defined in Gothenburg. CO2 emissions should be down by 4%, whereas road congestion should decrease by 14%. In economic terms, it was estimated that 1 million jobs should be retained or created, due to an increase in growth of 0.2-0.3% GDP. For these objectives to be met, an increase in funding is needed. But as this is true for every Union, funding will always be limited. In transport policy, concentration and prioritisation of investment is a key element: the 14 projects initially selected in Essen in 1996 received only 40% of the budget devoted to the trans-European network for the period 2000-2006 and slightly less than half of the budget available during the previous period. This rather puzzling allocation of funds illustrates the necessity of combining higher and better investment in transport.

The difficulty of attracting private investment into the Trans-European Networks illustrates the fact that a long-term strategy in transport cannot rely on private funding. Public financing must emerge as the first and indispensable pillar of a sustainable transport policy in Europe. While private funding will remain an option, the reasons for the lack of private funding in the TEN-initiative must be further analysed in order to single out the major 'carrots' guaranteeing a durable private contribution and, as a result, successful EU and government-initiated transport projects. But when no private funding is granted, it is the role of public funding to push forward sustainable transport projects and not to wait for private funding which may or may not be forthcoming in the future.

The global agenda

From all that has been said before, and because most of the trans-national issues related to the definition of a unified European transport policy reach beyond the actual borders of the Union, it now seems clear that a proper regulatory framework for European transport would not be well defined without fitting it into the global agenda.

The stakes of making EU transport global

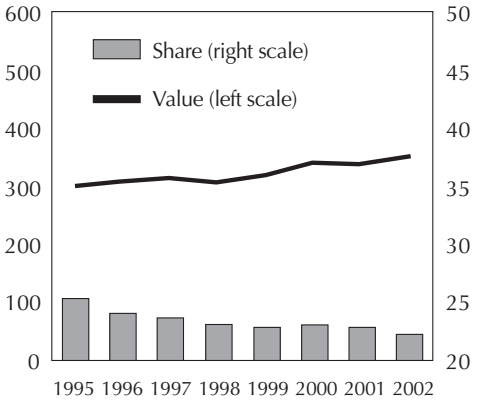
Creating a global agenda that fits with a unified European transport policy will be a key to European economic growth. In physical terms, it is important to remember that transport is not just internal. European passengers and goods circulate around the world. From June 2003 to June

2004, total annual exports to the rest of the world approximately amounted to 1094 billion euros, which is slightly more than the sum of Spain and Greece's annual GDP in 2003. Furthermore, 130 million Europeans went abroad (outside of the European Union) in 2003 for business and leisure.[24] Both these figures highlight the importance of international transport to the EU economy, and to the functioning of the whole transport sector. European transport operates in a global competitive market. To operate safe, effective and efficient transport management systems (like the ATM for aviation) requires global standardisation and harmonisation.

In the area of maritime shipbuilding, which has an annual turnover of 34 billion euros and employs 350,000 people, more than 50% of the products are exported. In trade, 41% of the value of all goods exchanged between the EU and the rest of world is transported by ship, more than 2 billion tonnes each year.[25] Together, transport of goods and persons by sea is too great to not be taken into account.

Consequently, while we must first create a sustainable system in Europe, this system must also be able to work efficiently in connection to global transport. The key blocking points to this inter-connection are trade barriers and differing international transport standards. While there have been massive increases in global trade, and in transport services, we have seen a steady decline in the transport share of total world exports. If the world's markets were liberalised, this would not be logical. The internal market in Europe has led to economic growth, but a similar effect will only be seen globally if a liberalisation agenda in transport is created. As it is the European Commission who holds the mandate of European external trade, the solution must be Europe-wide.

World exports of transportation services and share in total commercial services, 1995-2002
(Billion dollars and percentage) Source: WTO/OMC



For the same reasons, as we seek to create the most technically efficient system at home, we cannot let our standards be second to other countries' standards in all terms, including regulatory rules. It is not sound for Europe to unite in single transport standards if those standards then do not match those on the global market. This means that the EU must work with other countries and organisations to build international standards. But more importantly, if Europe is to create the highest unified standards, it must also defend these standards abroad. Europe must be a global 'rule maker' not a follower of the US or Japan. The EU can offer the necessary leverage to promote European social, environmental and technical standards at the international level. The leading role of Europe in transport needs to be further improved by creating and supporting the necessary conditions for strong European co-operation and collaboration between all stakeholders in all transport sectors (air, sea, and land).

The stakes of this global transport policy are high, especially in the domain of fossil and renewable energies. This issue becomes more and more pressing as natural resources become more limited and costs rise. This will also call for enhanced European influence on a global scale and the coordination of European efforts on environmental issues. Whereas the Union is internally promoting the principle of sustainable mobility, it must

also use its voice for global change internationally. Already, DG Trade uses Sustainability Impact Assessments when discussing trade agreement negotiations.

Transport policy and global security

EU transport policy must also give rise to a secure environment in which transport, both domestically and internationally, is not the target of terrorism. This will mean global standards of port and airport security, international cargo container inspection rules, legal standards, and many other measures at the global level with Europeans united in a single front. There is a need for further international R&D cooperation efforts in the field of transport security because we face the same threats and the transportation systems in the EU, the US, Japan or Australia each must have the same security standards.

At the same time, Europe will have to be a leader in the fight against corruption in third nations and at the EU borders. Europe may build up security, but as long as freight and persons are subject to bribery, the borders will never be secure nor will transport be without corruption costs. A European transport policy must understand that there are more transport costs than custom charges alone at the international borders.

The keys to European global action: WTO and preparing for change

Each of these points has given the Commission, and more exactly DG Transport, cause to take action at the global level and prepare for the changes ahead. As trade talks continue, European transport must have a voice in the WTO negotiations. DG Transport should actively work with DG Trade to fight for trade liberalisation in the transport sector. Without this liberalisation, European standards and the sustainability goal will be lost to tariffs and trade barriers. It has also given DG Transport a role in the fight against crime and corruption, which it must voice.

The participation of the EU in international negotiations ensures that the strategies followed, and the final outcomes, do not become counterproductive with regard to EU transport policy and other EU policy areas. What is more, negotiation under only EU authority considerably strengthens the leverage of the European position, permitting common values and standards to be more efficiently carried through in the final outcome.

Aside from taking action to defend trade liberalisation and global (de-) regulation, DG transport and the rest of the Commission must also plan and invest wisely for the future. Trade patterns for European international trade are shifting, as more trade increases capital investments and transport between the EU and Asia thus making trade less uniquely transatlantic. Since 1990 to 2003, European imports from the ASEM nations have increased by 156 billion euros, an increase of 275%. Exports increased by 80 billion euros, more than 100%.[26] This trend looks bound to continue or accelerate. While today, the US still accounts for a 1/3 of all EU external trade, it is not hard to see that the current shifting towards the Asian tiger economies will turn this region into a major source of Europe's growth. This will transform the future of transport. The European Commission must prepare for this shift by increasing trade talks with economies in Asia. To complete this mission, it must be granted as much authority as possible, and must correlate this external concern for international transport policy with a real influence over European transport internally.

Conclusion

Two major needs justify the presence of the EU as an actor in the transport sector. First, there is a need for a Europe-wide harmonisation of transport infrastructure and standards. Moreover, other instruments such as benchmarking and the exchange of good practices can be activated, making better governance the driving principle of this harmonisation process. Second, there is a need for a marked increase in public investment in transport. A more ambitious transport policy framework defined at EU level will constitute a decisive accelerator for enlargement. The enhanced involvement of the EU in transport should also be reflected at the international level. The EU must act as a global player, in order to face up to the challenges associated with global competition, but also to add leverage to the European position in international negotiations. This necessity most notably applies to the WTO negotiations, where DG Transport and DG Trade should actively collaborate to promote the globalisation of a European strategy of sustainable mobility.

- The realisation of the enlarged list of TENs will remain wishful thinking unless EU Member States and the EU increase their financial commitments. For this to happen, a raise in EU co-financing limits is urgently needed. It is also important to study the impact of TENs on the urban transport systems that they link.

- Harmonisation of the rules and regulations governing European transport and infrastructure interoperability would facilitate the development of a truly pan-European transport. Any EU transport regulatory framework for transport should pass robust tests for better regulation, based on intensive stakeholder involvement and a higher level of transparency in the rule-making process.

- Regulation and exchange of good practices should be used as major instruments for adopting high quality solutions to European transport issues. Use of the Open Method of Coordination to promote this should be encouraged.

- European transport solutions should firstly focus on areas with the biggest problems, including urban areas. Sound, well-managed and well-planned infrastructure would greatly contribute to the alleviation of congestion in densely populated urban areas. It is particularly important to make more efficient use of existing urban space by encouraging personal travel in safer, more energy efficient and environmentally friendly modes.

- In order to ensure a sustainable European transport policy, relevant parts of the European Commission – and other relevant EU institutions – must cooperate strongly to grasp all the elements that affect transport. A multi-policy approach would also avoid contradictory decisions in areas such as transport, environment, social affairs, consumer protection, trade, as well as research and development.

3. European transport policy – the challenges ahead

Transport is dependent on energy and restricted by environmental considerations. It is also challenged by a wide variety of issues that cannot be ignored such as safety, security, congestion, etc. In formulating a long-term strategy for Europe's transport, possible restrictions caused by all of these issues must be taken into account. These key issues must also be addressed by the transport-related research financed by the EU. Another crucial issue is that of inter-modality, as the creation of connections between the different modes of transport will greatly facilitate the emergence of a more sustainable EU transport policy, defined in holistic terms.

The starting point: a certain number of challenges/threats for European transports

A global framework: the Commission's strategies for the environment

The most crucial environmental challenge for transport and the EU-25 at large is energy dependency. From 1990 to 2000, energy consumption in the transport sector grew by 2%, or 95% of the total increase of energy consumption in EU. Transport has become the largest demand side sector and will need 1/3 of the EU 25 energy consumption by 2003.[27] Knowing that transport growth is a necessity, there is a need to find alternative energy sources, and more efficient ways to use current resources. As transport is dependent on foreign oil sources (78% of EU oil use was from foreign sources in 2001)[28] and as global consumption is also on the rise, this challenge must be addressed.

The second challenge, directly related to the first, is how we can meet the needs of transport growth and the needs of the environment. The Commission has set out its goal of a reduction to 8% of 1990 levels for greenhouse emissions by 2008-2012 (but this does not apply to transport) and has set out stricter emission limits for pollution from vehicles, especially private automobiles.[29] The transport sector has tackled these new constraints by making changes as required and, in some cases, going beyond requirements. Together this has led to a continuing decline in emissions of toxic gases such as the NOx, VOC, PM-diesel levels since 1991. Sadly, current technologies have not been able to do the same in the area of CO2. In 2001, transportation produced 979. 490 thousand tonnes of CO2 (24.4% of all CO2 emissions), second only to emissions from electricity and heat

sources.[30] These emissions have continued to grow with transport growth. Road transport is the major emission source in this area; emissions increased continuously due to high growth in both passenger and freight transport by road. The increase in carbon dioxide emissions from international aviation and navigation was even higher (an 82% increase from 1990 to 2001 of emissions from international aviation).[31] To solve the problem of CO2, it will take more than future directives alone that would weigh on the transport sector, but a new Europe-wide search for better technologies and alternative fuels. There are a number of fuels that are being discussed as possible future vehicle fuels. From these, it is necessary to identify those with the potential for large-scale production, which have a limited impact on the environment and offer high efficiency throughout its use. If Europe is to deliver on long-term and effective reductions in greenhouse gas emissions, while growing economically, we must invest in the future.

European Union emission standards applying to passenger cars of serial production (g/km)

Petrol Engine					
Standard	**Directive**	**as from**	**CO**	**Nox**	**VOC**
EURO-I	91/441/EEC	01/07/1992	4.05	0.49	0.66
EURO-II	94/12/EEC	01/01/1996	3.28	0.25	0.34
EURO-III	98/69/EC	01/01/2000	2.30	0.15	0.20
EURO-IV	98/69/EC	01/01/2005	1.00	0.08	0.10

Emission Standards for Diesel and Gas Engines, ETC Test, g/kWh							
Tier	**Date & Category**	**Test Cycle**	**CO**	**NMHC**	**CH4[a]**	**NOx**	**PM[b]**
Euro III	1999.10, EEVs only	ETC	3.0	0.40	0.65	2.0	0.02
	2000.10	ETC	5.45	0.78	1.6	5.0	0.16 0.21c
Euro IV	2005.10		4.0	0.55	1.1	3.5	0.03
Euro V	2008.10		4.0	0.55	1.1	2.0	0.03

a - for natural gas engines only
b - not applicable for gas fueled engines at the year 2000 and 2005 stages
c - for engines of less than 0.75 dm^3 swept volume per cylinder and a rated power speed of more than 3000 min^{-1}

Safety and security in transport

Outside the threats of energy supply and the external pollution control, the biggest challenge is to create a transport system that is safe and secure. Over the years, there has been an increase in transport safety with the invention of lighter and stronger plastics and air-bags, but still too many people die on European roads each day. The global picture is even more disturbing with 1.2 million people worldwide killed each year on the roads or over 3,000 people every day.[32] Different rules and regulations are one of the many factors that have led to these high numbers. In other areas, there has been a small, but significant number of train accidents and ships lost at sea. The loss of the Prestige oil tanker, and the huge costs to humans serves as a prime example.

Security is also a challenge. Since the 11 March Madrid train bombing and 11 September attacks, security controls have increased and with it time and money have been lost to longer lines and more regulation. But still most cargo ships go unchecked, only 2% of the containers in the US were physically examined prior to 11 September, and external borders are not totally sealed.[33] As the Commission itself pointed out, the various actors in surface transport implement different measures in different ways and there

are no minimum-security standards for many international transport service providers. The access of service providers to land transport infrastructures is not checked, regardless of the security threat they may pose to the infrastructure or other users.[34] A search for a balanced way to security and technologies to limit the impact on the free movement of goods and persons is needed.

R&D: investing for the future

To meet these challenges, we must have the most advanced and environmentally friendly technology in the world. This will only be possible if we direct the proper investment to research and development in the search for a cleaner and safer transport. For the last ten years, gross domestic expenditure on all R&D in the EU-15 has been stagnating at less than 2%, growing by only 0.02 percentage points (as a percentage of GDP) from 1992 to 2002, and standing at only 1.99% of GDP in 2002 (1.93% for the whole EU-25).[35] Transport R&D is just a small percentage of this total. While industry has increased its expenditures, on the whole, R&D spending has not been sufficient for a sustainable future or for achieving the Lisbon goal of 3% of Union GDP spending on R&D. It will take additional EU funding to meet these goals, especially in the important area of transport research.

Today, Europe is still a leader in fundamental research and innovations. Technologies, nevertheless, are often trapped in the ivory tower of academia for too long, only to be developed by firms outside Europe. To meet the goal of sustainability, along side increased funding, research projects must be developed in a way that allows new technologies to translate into new products, which are safer and cleaner. To change this will require EU R&D priorities and structures to change. It is through a partnership between business and academia that transport innovations will be created and the Lisbon goals met. Therefore, transport and these points must be taken into account when the Commission sets out the 7th Framework Programme (FP). The sixth FP budget of 610 million euros for sustainable surface transport is insufficient and it does not take into account the needs for sustainable air or sea transport. This amount compares poorly to the funds allocated to other R&D priorities such as IT technologies (3625 million euros) or the EURATOM programme (1230 million euros).[36] Sustainable answers need to be found to increasing environmental and societal constraints. R&D in combination with good co-operation and legislation is necessary to develop and timely implement matching solutions.

The transport industry has been working hard on developing new technologies. Hybrid-electric combustion engines and fuel cells are just two of the new technologies entering into use. Each of these has the possibility to greatly reduce CO2 levels and other emission, but neither technology has the ability yet to create a 'zero-emission' vehicle. For this reason, the transport industry has also been researching new fuel blends and bio-fuels. Bio-fuels and the hydrogen combustion engine give hope for the future. Sadly, even as the transport sector itself works to solve the problem of greenhouse gas emissions, it cannot do it alone. Each of these new engine-types have greater costs today than traditional engines, with increases ranging between 142 euros per year for a fuel hybrid engine and 89 cents per kilometre to 368 euros per year and 2.31 euros per kilometre for bio-fuel engine.[37] Without help from the EU, consumers and the transport sector will not easily absorb these costs.

European transport will benefit greatly from the existence of the GALILEO system, a high-profile example of scientific and technical cooperation among the EU Member States, along side the European Space Agency. GALILEO provides an answer to current mobility and transport problems throughout the world and will facilitate improvements in sustainable mobility, safety, and security. Navigation systems connected to this network of satellites (30 satellites in optimised orbit) can substantially increase efficiency in transport by helping to remove the cost of time and fuel lost to traffic congestion without punishing users. It can also help logistics services by improving vehicle fleet management, meaning less wasted energy and better allotments of transport vehicles. For air and sea transport, GALILEO has the potential to improve traffic control and safety. For rail, GALILEO makes it possible to reduce distances between trains and therefore increase train frequency. In addition, it generates an easier way to locate the entire rail fleet. For all these reasons, GALILEO is an example of what can be done to intensify transport while increasing its sustainability. But it is also an example of the number of projects, which could not be realised by industry or national governments alone.

Europe must now invest and research new ways to use GALILEO to increase sustainable transport to an even greater extent. Transport growth can be absorbed by making better use of existing transport systems: vehicle technologies, intelligent transport systems (ITS) like GALILEO, and infrastructure. Intelligent transport systems can be leveraged in traffic planning to eliminate certain bottlenecks and maximise load capacity. Pricing strategies can encourage the use of certain infrastructure during off peak periods, and efficient inter-modal connections can make transport systems more efficient.

A balanced approach – multi-modal solutions

Europe is utilising many different forms of transport. Each, therefore, must play a role in creating a unified and sustainable transport network. On average today in the EU-25, however, 76% of freight inland transport in tonne-km is performed by road. In most countries, road transport is the dominant mode, except in the Baltic States. For all the other EU-25 countries, the share of road transport in total inland transport is greater than 60%.[38] Today, Europe is far from being the level-playing field which is needed. But what these numbers do not show are the reasons behind this imbalance.

One of the primary reasons for the imbalance in freight is that there is a lack of multi-modality infrastructure and facilitation in Europe today. It is not possible to quickly and efficiently transfer goods from one mode to another. While there is limited facilitation between ships to road, outside of harbour infrastructure, inter-modal facilities are severely lacking around most urban areas. As a result, traffic congestion and noise remain of primary concern: it is estimated by the European Environment Agency (EEA) that 120 million people in the EU (more than 30% of the total population) are exposed to road traffic noise levels above 55 LdnB. The EEA observes that noise levels above 40 LdnB can psychologically and physiologically affect the welfare of the people directly exposed.[39]

'Supply on demand' commerce is now central to the future of the service sector. Without a system of urban freight yards, it is not yet economically feasible to transfer a good from road to rail and back again to road for final delivery. Today, it is far quicker to use the road network to ship the goods from starting point to final destination. This is not sustainable in the long-term, however, until inter-modality transfer points with harmonised regulations and standards are created. It is clear that if such a system was created, the need for long-haul lorry routes would be greatly reduced, lowering the levels of transport CO2 production, congestion on the roadways, and the number of road deaths involving lorry accidents.

The Commission program, Marco Polo, and it future expansion in Marco Polo II, have been created to solve this problem, but these programmes must centre on the idea of creating true inter-modal facilities, alongside increases in funding of existing freight networks. In the past, under the PACT programmes (which pre-dated Marco Polo), funding went primarily to rail alone or sea to rail exchange. In the case of sea to rail, most projects were

unsuccessful or only partially successful.[40] The lack of rail to road and rail to air facilities is striking. Without these links, a trans-European freight network cannot function, as the connection from start to finish of production and consumption is not there.

On the passenger's side too, there is a need for focusing on the creation of better systems of inter-modality as well. Today, a number of major airports have rail connections, one example being Charles De Gaulle Airport on the North-South TGV line in France, but on the whole, most regional and cargo airports still lack these facilities. Without rail links, once again individuals are obliged to use road transport and, in most cases, private vehicles.

Together, it becomes apparent that the creation of a system of inter-modal exchange is critical to sustainable mobility. The European transport system needs to be considered and developed from a multi-mode transport perspective. The integration of complementary modes of transport including the interaction between the various traffic management systems requires R&D and new initiatives. It will also need to have the highest priority when looking at 'good' investment, if the goal of Europe is to decrease its dependency on road transport alone and to maintain economic growth. In an honest sustainability ranking system of priorities, the benefits (internal and external) far outweigh the costs of such projects.

The creation of inter-modality facilitation will require a pan-European effort based on a European transport policy. For such a system to work, European norms and harmonisation must be created or transport will never be a functioning tool and will not be able to connect the different transport networks across Europe (urban, regional, pan-European). In freight, technical harmonisation for items such as cargo containers will be required. For passengers, without a European standard, differentiating national requirements for each transport sector would make inter-modality unfeasible.

Conclusion

Innovation defines the European transport sector of tomorrow. Innovation and investment must be prioritised in order to tackle the most urgent concerns: pollution, urban congestion, safety and security. R&D spending is crucial in that regard, and the 7th Framework Programme must acknowledge this by allocating more funds to transport-directed research. A sustainable EU policy in transport is best exemplified today by multi-modal facilitation.

These infrastructures would facilitate the shift to alternative modes of transport and strengthen the interoperability of the European transport network. This holds especially true for densely populated urban areas and those affected by traffic congestion. Correspondingly, the Commission's Marco Polo programme, must concentrate on inter-modal facilities, thereby creating the needed bridges between the different types of European transport networks

- Safety and security are key to the future. Each year, thousands of lives and millions of euros in health care costs are lost to transport accidents. It should be a task for the EU to work for safer modes of transport. Achieving greater levels of security throughout the transport chain is an unavoidable priority in the fight against terrorism. It is also a matter of shared responsibility where Member State authorities' coordination and collaboration also play a key role. Security measures should be cost effective throughout the Union and tailored according to the specificities of different modes of transport.

- European transport solutions should firstly focus on areas with the biggest problems, including urban areas. Sound, well-managed and well-planned infrastructure would greatly contribute to the alleviation of congestion in densely populated urban areas. It is particularly important to make more efficient use of existing urban space by encouraging personal travel in safer, more energy efficient and environmentally friendly modes.

- Europe should use its potential to become a global leader in developing a knowledge-based transport sector. Modern technology can help in creating safer, more secure, customer-friendly and efficient European transport. Climate change challenges call for increased investment in transport-related R&D. Thus the needs for increased R&D investment should be strongly reflected in the forthcoming new 7th Framework Programme for Research and Development. This will further boost the development of a European knowledge-based industry and thus contribute to an important part of the Lisbon Process.

- Multi-modal facilities are key to sustainable mobility. Without a system of efficient transfer facilities, transport will not be able to bridge the gap between supply and consumers and business in an efficient way. Better rail, road, sea, and air links are needed, because having real choice is the only way to create efficient and sustainable transport.

Overall Conclusion

Sustainable mobility does not only mean environmentally friendly transport policy. The environmental aspect of this concept is crucial, as it preconditions the durability of the solutions adopted in this framework. However, sustainable mobility is more diverse than ecology alone. A sustainable mobility policy at the EU level should be defined in the long-run. This policy should integrate the constraints of today and anticipate the pitfalls of tomorrow, in areas as diverse as the environment, social policies, labour market, safety, and public finances. Adopting a holistic view on sustainable mobility guarantees that this policy will not need to be constantly redefined and adjusted, because issues initially ignored have come to the fore, as it is often the case at EU and national level. In other terms, adopting a holistic view on sustainable mobility will make EU transport policy time consistent, to the advantage of the EU citizens of today and the generations to come.

EU transport policy must be envisioned in the long-term, and in this context of time consistency, economic growth and growth in transport can be thought of in tight correlation. The Lisbon Strategy and EU transport policy are complementary. As a result, growth in transport in the long-term will markedly improve the environment for long-lasting economic growth in Europe. For this dynamic to continue over time, EU transport policy must be driven by market-based incentives, integrating consumer needs in the first place and keeping them in line with the objective of minimal environmental damages.

There is undoubtedly value added created by the intervention of the EU in transport. The completion of the internal market and its associated economic benefits will be substantially accelerated by the harmonisation and adoption of common standards. The enlargement and development of the ten new Member States will equally gain momentum for the same reasons. Finally, the presence of the EU as a key negotiator in international transport forums will also reinforce the coherence of EU policy-making as a whole.

Reforming funding for transport must be placed on the top of the agenda on sustainable mobility. This means more financial assistance for the completion of the TENs and for transport-related R&D under the 7th Framework Programme. However, simply augmenting the amounts allocated to transport is not enough. A change in the budgetary priorities is

also needed, especially in the Marco Polo programme, so that the key instrument of inter-modal facilities is given the precedence it deserves.

Time is running out. Economic growth is failing to reduce unemployment, completion of the TENs and of the internal market is lagging behind, and climate change becomes less and less questionable. However, in addition to this feeling of urgency, there is a great window of opportunity arising for the full transformation of EU transport into EU sustainable mobility. The Lisbon Strategy is set to undergo significant redefinition in the course of its mid-term review in the first half of 2005. The list of Lisbon instruments and objectives are likely to be narrowed down to the key policy areas, as was proposed in the Kok Report. Replacing EU transport policy with the agenda laid down in this paper will ensure that this policy belongs to the pillars of the Lisbon Strategy. The scope of the beneficiaries of EU sustainable mobility will reach beyond the users of transport infrastructures to include all EU citizens and all those living in economies cooperating to become more competitive, environmentally friendly, socially inclusive and knowledge-based. The challenge is worth the effort.

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Mission Statement

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