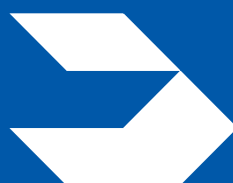
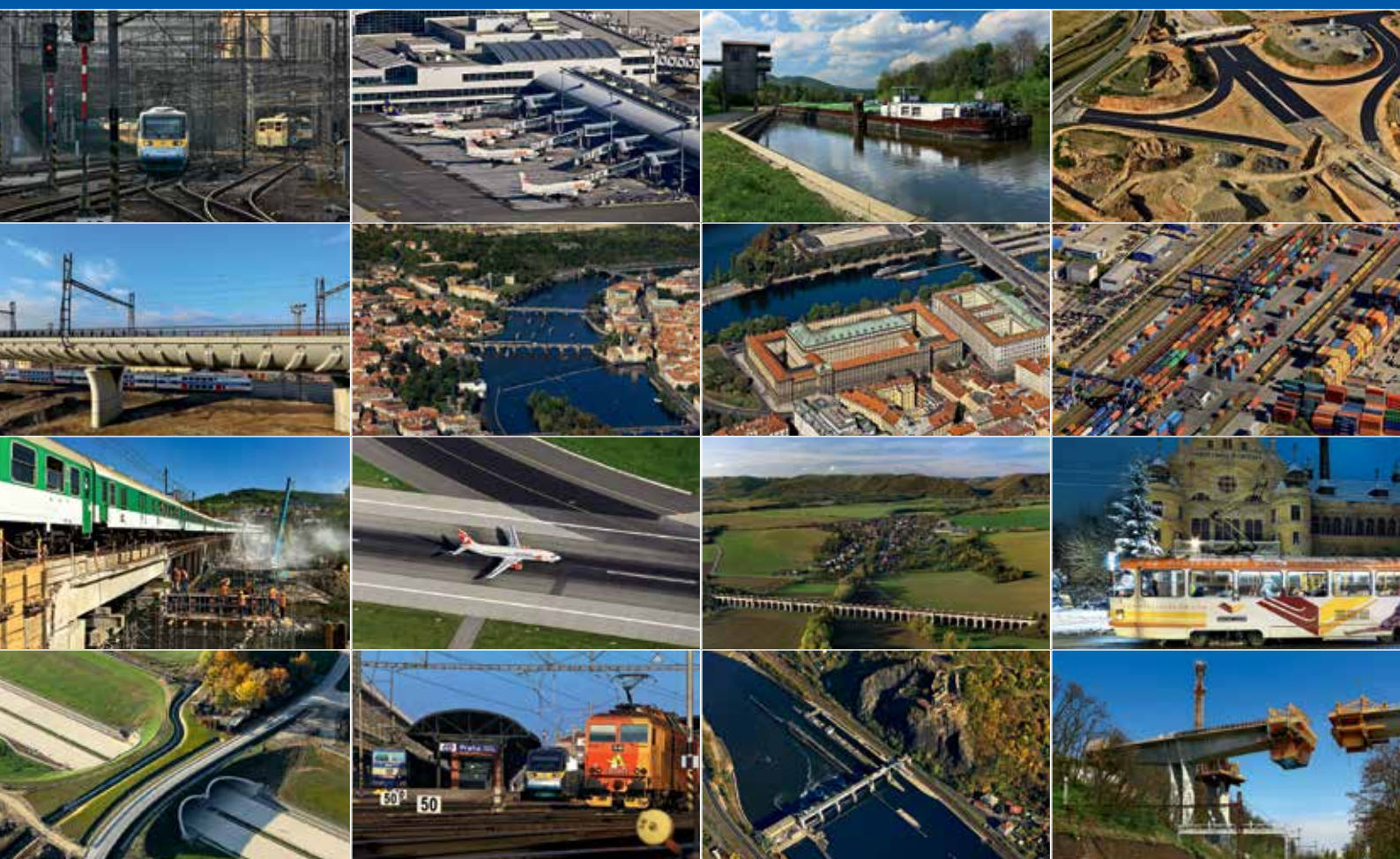


# The Transport Policy of the Czech Republic for 2014–2020 with the Prospect of 2050



Ministry of Transport



# **THE TRANSPORT POLICY OF THE CZECH REPUBLIC FOR 2014 – 2020 WITH THE PROSPECT OF 2050**

June 2013





# GOVERNMENT OF THE CZECH REPUBLIC



## RESOLUTION OF THE GOVERNMENT OF THE CZECH REPUBLIC of 12 June 2013, No. 449

on the Transport Policy of the Czech Republic for 2014 – 2020  
with the Prospect of 2050

### The Government

I. **Approves** the Transport Policy of the Czech Republic for 2014 – 2020 with the Prospect of 2050 included in the part III of the material File No.514/13 with the adjustment according to the Government comment (hereinafter only „Transport Policy“) as a starting strategic document of the transport sector for the next period, this document to be specified on an ongoing basis depending on the evaluation of the Transport Policy and on the public resources;

### II. Requests

1. the Members of the Government and heads of other State administration central bodies to ensure the objectives and principles of the Transport Policy,
2. the Minister of Transport to submit to the Government:
  - a) as of 31 December 2017, the evaluation of efficiency of the Transport policy
  - b) as of 31 December 2018, the Transport Policy update;

III. **Recommends** to the regional administrators and mayors of statutory cities to base own transport policies on the Transport Policy principles.

To be executed by:  
Members of the Government,  
Heads of State administration central bodies

For information of:  
Regional administrators,  
Mayors of the statutory cities

Prime Minister  
RNDr. Petr Nečas

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## THE PROPOSAL PART

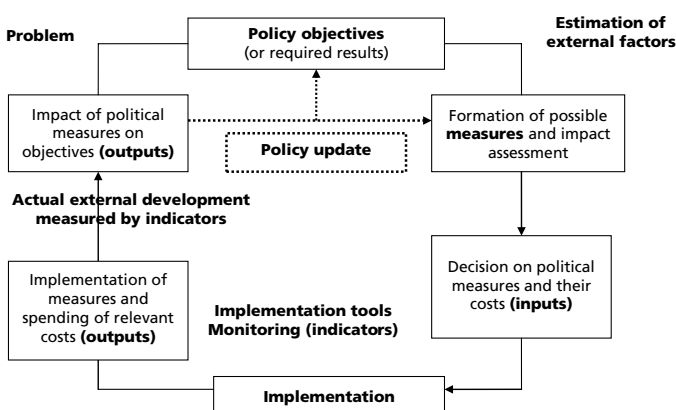


# 1. Medium and Long-Term Vision



The transport sector is one of important areas of national economy, influencing virtually all domains of public and private life as well as the business sphere. It is a financially very demanding sector but on the other hand it also contributes significantly to the income side of public budgets. This sector represents a necessary condition for improving the competitiveness of the Czech Republic. Failure to address transport problems may, therefore, result in large direct and indirect losses for the whole society. At a time of economic recession, strong savings measures apply also to the transport sector. Measures in the transport sector, however, must be perceived with the understanding that all transport segments form a single whole, i.e., the areas requiring support from public funds are indispensable for the functioning of the whole transport system and cannot be separated from sectors appearing to be “net payers” from the perspective of public budgets. Disintegration of the system of public transport services as a result of across-the-board cuts would have negative impact both on the “functioning” transport areas (congestion, accident rates and general increase of externalities) and on other areas of society.

The Transport Policy of the Czech Republic for 2014 – 2020 with prospect of 2050 (hereinafter referred to as the “Transport Policy”) is, just like the Transport Policy for 2005 – 2013, based on a so-called transport-political cycle. It is a never-ending process, which can be illustrated by the following chart:



Thus, the Transport Policy for 2014 – 2020 immediately builds upon the Transport Policy for 2005 – 2013 and is based upon an analysis of its fulfilment so far. Besides it, other adopted strategic documents at national and European level also influence the process (see Chapter 2 – Starting Points).

*The Transport Policy is a top-level strategic document of the Government of the Czech Republic for the transport sector and the Ministry of Transport is the institution responsible for its implementation. The document identifies the main challenges of*

the sector and proposes measures to tackle them. Given the scope of the matter, the proposed solutions cannot be designed in full detail. This is the task of further strategic documents related to the Transport Policy (on the basis of Action Plans), which further elaborate individual areas included in the Transport Policy. They are

listed in the Implementation Part of the Transport Policy. The Transport Policy determines the responsibility and indicative deadlines for the fulfilment of the measures, while financing methods (unless they are measures of clearly organizational nature) are proposed only as a framework, to be concretely laid down in the follow-up strategic documents.

No change has occurred to the fundamental principles of the new Transport Policy in comparison to the previous one. The Transport Policy declares what the Government is to do in the transport sector (international commitments, contracts), what it intends to do (safety, sustainable development, economy, environment, public health) and what it is able to do (financial and spatial aspects). In pursuing its objectives, the Transport Policy deals primarily with the following topics, which remain relevant for the most part also in the upcoming period:

- harmonization of conditions on the transport market,
- modernization, development and revitalization of the rail and waterborne transport,
- improvement of the quality of road transport,
- limitation of the impact of transport on the environment and public health,
- operational and technical interoperability of the European rail system,
- development of the Trans-European Transport Network,
- improvement of transport safety,
- distance-based charging of transport,
- rights and obligations of users of public transport services,
- support of multimodal transport systems,
- development of urban, suburban and regional public transport within the framework of integrated transport systems,
- research focus on transport which is safe, reliable in operation and environmentally friendly,
- use of state-of-the-art available technologies and global navigation satellite systems (GNSS),
- reduction of energy demand of the transport sector, in particular of its dependence on hydrocarbon fuels



# 2. Starting Points



The effects of the accession of the Czech Republic to the EU in May 2004 and the impacts of the global financial crisis after 2008 were the key factors determining the competitiveness of the Czech Republic during the period of validity of the Transport Policy of the Czech Republic for 2005 – 2013. On the one hand, the EU single market has provided better opportunities for our producers to assert themselves; on the other hand it puts much higher stress on the quality, flexibility and productivity in competition with other competitors, already established in the market with stronger capital basis at their disposal. The financial crisis after 2008 caused a reduction of industrial performance and investment rate. At the same time, labour productivity fell, having been below the EU average already before the crisis. The still existing comparative advantage of the Czech Republic consisting of cheap and qualified labour force has been gradually declining, while the competitiveness of low-wage countries has been growing (both within and outside of the EU).

The abolition of customs border controls after the EU accession has enabled improved conditions in particular for the road freight transport. It has improved not only in terms of continuity and speed but, owing to a high proportion of business relations with the neighbouring Member States, also in terms of demand for it. At the same time, as a result of liberalization of international road transport, competitive pressure from hauliers coming from countries with lower costs has grown, including cases of so-called social dumping. Liberalization of the railway transport market in the last years has significantly moved forward into practice, bringing a number of new issues that need to be dealt with. They include, for instance, rectifying market conditions by introducing economically correct charges for the use of the transport route, consumption of electrical power and station services. However, competition from foreign transport companies has been minimal so far. Full liberalization of the air transport market within the EU has resulted on the one hand in a reduction of prices and extension of the range of products for the end consumers, on the other hand it increased competition for air carriers. This notwithstanding, continuation of support of liberal environment even outside of the EU forms the necessary condition for securing the competitiveness of the Czech Republic and the mobility of its citizens. The comparative advantage of waterborne transport and its function on the transport market, where it contributes to reduction of transport costs, has been little used so far.

The Transport Policy as a sectoral document is based on the conclusions of the analytical part, i.e., the document *Evaluation of Efficiency of the Transport Policy of the Czech Republic for 2005 – 2013 in 2012* – submitted for information to the Government of the Czech Republic on 4 July 2012, and the document *Transport Policy of the Czech Republic for 2014 – 2020, Analytical Part, Cross-sectional Documents at National and European Level*.

## 2.1 The Europe 2020 Strategy and the National Reform Programme, European Cohesion Policy

**Europe 2020** is a strategy of the European Union to support sustainable general development. The European Union set ambitious goals in the following five areas, to be reached by 2020:

- Employment - 75 % of the population aged 20 to 64 should be employed.
- Innovation – 3 % of EU GDP should be invested in research and development.
- Climate changes – goals should be reached according to the principle climate / energy “20/20/20” (under favourable conditions, including emission reduction by further 30 per cent).
- Education – the proportion of persons with unfinished education should be under 10 % and at least 40 % of the population aged 30 to 34 should have finished university or comparable education.
- Poverty – alleviation of poverty with the goal of eliminating the risk of poverty or exclusion for at least 20 million inhabitants.

**The National Reform Programme** represents the contribution of the Czech Republic to the fulfilment of the goals of the Europe 2020 Strategy, set by EU Member States beyond the competence of the Union in the area of voluntary coordination of economic policies.

The Cohesion Policy provides the investment frameworks and procedures required to reach the goals of the Europe 2020 Strategy. In order to improve the efficiency of European funds, they will only be used for a limited number of priorities of utmost importance. They will be spent exclusively on the priorities which will contribute to fulfilling the Europe 2020 Strategy. This is why all supported areas are to be included in the *National Reform Programme*. From the perspective of the transport sector, therefore, it is important that Chapter 7 of the National Reform Programme called *Supporting Competitiveness by Improving Transport Infrastructure* focuses on the development of the transport sector.

## 2.2 The White Paper – Roadmap to a Single European Transport Area – Towards a Competitive and Resource Efficient Transport System

The document represents the new European transport policy for the period 2012 – 2020 with prospect of 2050, which is followed by the Trans-European Transport Networks (TEN-T) Policy, the main European instrument for the development of the transport infrastructure for long-distance transport flows, with the objective to support the European single market. The White Paper includes 40 specific initiatives for the establishment of a competitive transport system during the next decade. The main and new objective is to fundamentally reduce Europe’s dependency on oil imports and reduce carbon emissions by 60 % by the year 2050, phasing out conventionally-fuelled cars in the cities, use 40 % of low-carbon fuels in the air transport, reduce emissions in the waterborne transport by 40 %. That should be achieved by the following measures:

- shifting 50 % of medium and long-distance freight transport from the road to the rail and waterborne transport and in case of passenger transport significantly raising the proportion of the rail transport (also moving away from the air transport in distances under 1,000 km, making room to air transport for long-distance flights)
- introducing alternative energy sources for transport
- introducing more efficient engines
- adopting ITS systems in all modes of transport with the view to optimizing transport and traffic processes (elaborated in the EU ITS Policy<sup>1</sup>)

<sup>1</sup> Directive 2010/40/EU of the European Parliament and of the Council of 7 July 2010 on the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other modes of transport; Communication from the Commission: Action Plan for the Deployment of Intelligent Transport Systems in Europe, COM(2008) 886 final; and others.

## 2.3 The Trans-European Transport Networks (TEN-T) Policy (draft)

The policy defines the main principles for the development of the transport infrastructure including measures leading to the provision of high-quality services. It defines a two-layer European transport network for the rail transport (separately for passenger and freight transport), road network, sea and inland waterways, air infrastructure and infrastructure for multimodal freight transport (bimodal and trimodal terminals). The so-called comprehensive TEN-T network should be completed by 2050 and its subset, called the core network (sometimes also referred to as the basic network) should be completed by 2030.

## 2.4 Other Strategies as Starting Points for the Preparation of the Transport Policy

Other documents at the European and national level, which form the starting points for the Transport Policy or which stand in mutual interaction, include the following:

- **At the European level:**
  - **Cohesion Policy**
  - **Common European strategic framework**
  - **European documents and concepts dealing with energy issues in transport** (Clean Energy for Transport, European Strategy for Alternative Energy, Electromobility Manifesto, Smart Cities Concept etc.)
- **At the national level:**
  - **Strategic Framework for Sustainable Development**
  - **International Competitiveness Strategy**
  - **Strategy of Regional Development for 2014 - 2020**
  - **Regional Development Policy of the Czech Republic**
  - **State Policy for the Environment**
  - **State Energy Conception**
  - **Raw Material Policy**
  - **Conception of State Tourism Policy in the Czech Republic for 2014 - 2020**

## 2.5 Other Starting Points for the Transport Policy

- The Competitiveness of the Czech Republic and its regional cohesion require more efficient, reliable and reasonably priced mobility of persons and goods with minimum impact on the environment and global changes, which must be seen in the context of measures taken in other areas (innovation, research, labour market, education, investment support and others).
- Public Transport services are gradually improving but the development of transport is not sustainable – the growth of transport in different modes of transport is not uniform, deepening disproportions in the division of transport work. There should be only limited competition between different forms of transport: the rail and waterborne transport can serve also as a service for operators in road transport. Different forms of transport are to be operated on the basis of cooperation. However, only those segments are capable of cooperation which can offer high-quality, flexible and reliable services.
- Capacity issues (even though less acute now due to economic recession) pose a challenge in a direct or hidden way in the road, rail and to a limited degree in the waterborne transport and potentially also in the air transport. Signalling equipment in the rail transport is of low performance, significantly reducing passage capacity, in particular at railway junctions. The development, deployment and use of intelligent transport systems, like the traffic control systems on motorways and roads, has been insufficient and does not correspond to current needs, even though these systems have a high potential to increase the traffic-carrying capacity of roads, the continuity of traffic, reduce congestion and accident rates. This results in wasteful operation and heavier impact on the environment and public health.

- In spite of temporary fluctuations, it can be noted that the air transport market in our country is still not saturated. Its development potential, therefore, is higher in the Czech Republic than in other European countries.
- Transport in the Czech Republic forms a full and integral part of the European transport area, which necessitates the creation of conditions for the maintaining of the competitiveness of Czech transport operators and other providers of transport and logistics services.
- Public transport is operated on the basis of separate transport systems, with integrated transport systems (i.e., systems connected in terms of traffic, tariffs and information) being organized with limited functionalities only, without more significant connections among regions. In some regions an integrated transport system still forms only a superstructure to the public transport system (making the use of urban and suburban transport easier), rather than a principle connecting all modes of transport in the whole territory of the region. In many cases differences persist in the opinion on how to organize public transport between the region and the core city, which complicates the creation of integrated transport systems.
- Connection of all regions to high-quality road and motorway network, modernized railway network and international airports has not been completed; connection of the Czech Republic to European inland waterway network has not been completed.
- Airports serve as important economic catalysts. They are able to accumulate business activities in their vicinity and stimulate their further development.
- The development of particular transport markets is not uniform, transport operators are burdened with too much paperwork and the railway market is influenced by the fact that the railway network is not fully technically compatible with certain modern vehicles; the securing of international interoperability has been advancing slowly.
- As a result of insufficient harmonization of conditions on the transport market, the railway and inland waterway transport is not capable of full integration into the logistics chains, thus contributing to the growth of road transport and congestions. The system of freight transport organization is not optimal. Contemporary logistics solutions should satisfy the parameters of efficient transport chain management in the form of optimization of transport of goods and costs.
- Externalities exert negative influence on the transport market. It is, therefore, necessary to gradually internalize them, building on the relevant steps at the European level.
- There has been no systemic solution for the transport in cities and measures leading to low-traffic city centres are not applied sufficiently, including the creation of conditions for cycling and pedestrian traffic.
- The current transport infrastructure is not up to the required technical condition due to long-term lack of funds for maintenance and in particular reconstruction; adaptations leading to removal of deficiencies in safety, capacity and environmental burden are not carried out in sufficient scope. Many important road transport routes still pass through urban areas, the railway network (in particular the regional one) inadequately responds to the needs for public transport services, the inland waterway network has long-term point deficiencies and is incomplete.
- The system of funding of the transport infrastructure is still not perfect. Wasteful funding of construction is caused, inter alia, by fluctuations, year-on-year, of the financial



framework and uncertain planning of investment on a short-term basis of three years.

- Insufficiently developed are computer and information support of all transport branches, investment in ICT infrastructure, electronization of transport documentation, process automation etc.
- Transport is still a major source of noise, emissions of pollutants hazardous to health and emissions impacting the global climate. Conditions must be created for their reduction in full compliance with European laws and regulations, including the support of the development of alternative energy sources for transport and when taking into account impact of alternative fuels on the society as a whole. Another important way consists in creating conditions for increased use of railway or, where appropriate, waterborne transport, in keeping with the European transport policy.
- Each measure proposed in the Transport Policy will be implemented with regard to minimizing the impact on public health and the environment and respecting the protection of the national network of specially protected areas and the European Natura 2000 network.



# 3. The Main Objective of the Transport Policy and the Priority Structure



The main objective of the Transport Policy is: ***to create conditions for the development of high-quality transport system based on the utilization of technical, economic and technological properties of individual transport modes, on the principles of competition, having regard to its economic and social impact and the impact on the environment and public health.***

Specific sectoral and cross-section priorities build upon this main objective. The end user is the main focus of the Transport Policy – be it the actual transport client, or the whole society at the national or regional level, for whose citizens the transport needs are being fulfilled. This is the subject matter of the priority called ***Users***.

The transport needs of society are met through transport operation. This priority tackles similar issues as the previous one, however seen from the perspective of transport operators and providers of services. In order to reduce huge and needless losses caused by accidents, this framework also includes solutions aiming at higher transport safety. This is why the priority dealing with this area is called ***Transport Operation and Safety***.

The operation itself depends on resources, without which transport cannot be operated. They are in particular financial funds, including user-charging issues, which are closely related to the provision of funds. Energy sources are also of vital importance for transport. All of this is the subject matter of the priority called ***Funds for Transport***.

***The Transport Infrastructure*** is the necessary condition for transport operation and forms the subject matter of another separate priority. The provision of high-quality transport infrastructure is demanding both in terms of investment needs and time demands on the processes of preparation and implementation of construction.

Utilization and deployment of advanced traffic control and regulation systems, information systems, ITS systems and global navigation satellite systems must become an integral part of the transport development. Also research and development in other areas of transport must be taken into account. These tasks are dealt with under the priority ***Advanced Technologies, Research, Development and Innovation, Space Technologies***

Traffic operation has many benefits for the society as a whole but at the same time impacts negatively on the environment and public health. This impact must be minimized to the lowest necessary level. This is a cross-sectional issue bearing on all priorities under consideration. The priority called ***Reduction of Impact on Health and the Environment***, therefore, sums up the main principles of this area.







Transport also depends on good-quality labour force and it is to be accessible to all social groups. These aspects of transport are dealt with in the priority called ***Social Issues, Employment, Education and Qualification.***

The transport-political cycle should not be interrupted even at the time when the validity of a document comes to an end. This is why the priority called ***Further Long-term Visions*** focuses on long-term issues which exceed the time frame of this document, in keeping with the European transport policy up to 2050.

The Transport Policy is a document of the Government of the Czech Republic and has an inseparable impact also on transport issues at the level of regions and municipalities, where they are within independent purview of the regional and local authorities. Many measures involve regions and their nature is that of recommendation to them. However, the linkage of objectives of national and regional policies is very important. This issue is dealt with by the last priority called ***Subsidiarity, Responsibility at Different Levels.***

In the following parts of the Transport Policy the objectives are presented in detail and individual measures are defined for them. The Implementation Part of the Transport Policy then deals with other aspects related to the fulfilment of the above objectives of the Transport Policy. More detailed elaboration of individual important areas of the Transport Policy is then compiled in the follow-up strategic documents.



# 4. Priorities, Specific Targets and Measures



## 4.1 Users

### 4.1.1 Creating Conditions for the Competitiveness of the Czech Republic

- *Responsible for the fulfilment of the specific target: Ministry of Transport and organizations responsible for the administration and development of the transport infrastructure*
- *Elaborated in the follow-up strategy: Transport Sector Strategies*
- *Funding: detailed in Transport Sector Strategies*
- *Deadlines: continuous, check date 2017*

The transport infrastructure and its equipment<sup>2</sup> are among the factors that influence the competitiveness of both the Czech Republic and its individual regions. This impact must be considered in context, since many other conditions need to be fulfilled in order to achieve competitiveness, like other infrastructure, quality and education of the labour force, application of advanced technologies based on the support of research and development, functioning labour market, healthy financial and market environment, good quality of the environment, health care and attractiveness for tourism. All these areas must be developed in a uniform fashion. As far as the development of the transport infrastructure is concerned, the public sector is responsible for the major part of it. It is a “public good” with high financial demands, both in case of construction and operation and maintenance of the transport infrastructure. It is, therefore, an area suitable for European co-financing. There is no region in the Czech Republic which would have no access to transport. The density of the transport network in the Czech Republic is above average. However, this alone is not enough to secure competitiveness. The attractiveness of the area for investors, as far as transport access is concerned, is governed by relative access, i.e., by comparing the quality of access of different states and regions. In this regard, the quality of the transport infrastructure in the Czech Republic, in particular in comparison with its Western neighbours, lags behind significantly. It is not only about building new roads but also improving the current transport infrastructure, increasing speed, improving safety and increasing capacity.

High-quality transport infrastructure, which enables regular deliveries of goods, is important for the reduction of costs in the logistics chain. Logistics technologies based on regular deliveries make it possible to reduce stock, speed up the turnover of goods and so to reduce production costs of companies active in the relevant region. Advanced logistics technologies must also focus on process sustainability, i.e., they have to minimize the impact on the environment and

<sup>2</sup> Equipping the transport infrastructure with advanced technologies is an important condition for the provision of high-quality services to transport end users.

public health. This is why the logistics chains must be able to utilize the benefits of all modes of transport by applying the so-called co-modality principle (see Chapter 4.2.3).

Good access is important in passenger transport as well. It is not only the question of securing the mobility of labour force and public transport services. Also the touristic potential is important. In terms of attractiveness of regions for investors also the kind of access is important which makes it possible to organize business meetings, workshops, congresses and conferences, without much loss of time for the participants of these meetings. This requires easy access of the regions to TEN-T airports, high-speed railway lines and motorway networks.

The Czech Republic lies in the middle of Europe and it may seem to have all the conditions required for good-quality transport access. However, it is illusive since the transit potential is limited by natural conditions. Important routes from Western Europe to Russia lead through more favourable terrain in Polish lowlands and the connection between Western Europe and the Balkans is more favourable through the easier terrain along the Danube River. Thus, only the transit routes of lower importance lead through the Czech Republic (Dresden – Vienna / Bratislava and Vienna – Katowice). Unless sufficient attention is given to the development of the transport infrastructure in the Czech Republic (not only in the area of motorways development, but also as regards the development of high-speed railway transport), the Czech Republic can easily become a periphery in the centre of Europe with the corresponding negative impact on its competitiveness.

The waterborne transport can play a positive role in maintaining the competitiveness of the manufacturing industry in the Czech Republic, as it is able to secure the transport of heavy and bulky articles. Considering high European competition in heavy industry, the connection to inland waterways can become one of the criteria for deciding which facilities will be kept operational in the future.

#### Measures:

- **Modernize and complete the transport infrastructure in international context (the TEN-T network as a priority), having regard to the competitiveness of the Czech Republic and the needs of industry, development of tourism and other sectors of economy. The Czech Republic must not become a periphery in the centre of Europe.**  
Responsible: MoT; deadlines: the comprehensive TEN-T network and other projects of national importance by 2050, the core TEN-T network by 2030; funding detailed in the Transport Sector Strategies
- **Plan the development of technologies based on satellite systems and ITS, having regard to the needs of transport and the competitiveness of the Czech Republic.**  
Responsible: MoT; deadlines: continuous; funding detailed in Action plan for ITS deployment in the Czech Republic and in the Transport Sector Strategies

## 4.1.2 Creating Conditions for the Cohesion of Regions

- *Responsible for the fulfilment of the specific target: Ministry of Transport and organizations responsible for the administration and development of the transport infrastructure*
- *Elaborated in the follow-up strategy: Transport Sector Strategies*
- *Funding: detailed in Transport Sector Strategies*
- *Deadlines: continuous, check date 2017*

It is an important task of the Transport Policy to ensure comparable level of quality of the transport infrastructure in different regions. When assessing the level of regional competitiveness, the positive impact of good-quality infrastructure clearly comes out. Micro-regions through which lines of higher order pass clearly profit from their location. Good transport connection to economic centres is one of the conditions for the development of businesses and the mobility of labour force. Backbone transport infrastructure is of key importance for the growth of competitiveness. Particular attention should be focused on areas where insufficient density and capacity of roads or quality of railway network directly limits the development of economic activity. It will be necessary to take into account the conclusions of the Strategy of Regional Development, which identifies the regions on which State aid is to be concentrated in order to ensure regional cohesion.

In all the regions of the Czech Republic there are major deficiencies in the quality of the transport infrastructure. The following overview shows the regions which are not yet connected to the superior road or rail infrastructure network<sup>3</sup>:

- South Bohemian Region – basic connection by road and rail in the direction Prague – České Budějovice – Linz is not available
- Region Karlovy Vary and western part of Region Ústí – basic road and rail connection in the direction Prague – Karlovy Vary – Marktredwitz and Prague – Chomutov / Most has not been completed
- Region Liberec – good-quality rail connection for both passenger and freight transport (including the adjacent industrial area around Mladá Boleslav) is fundamentally missing
- Region Pilsen – modernization of rail connection in the line Prague – Pilsen – Regensburg has not been completed

Fundamental deficiencies within the framework of the trans-European transport network are as follows:

- The capital city of Prague and Central Bohemian Region – the road connection which would channel transit traffic out of the city has not been completed
- An alternative route to D1 Motorway, which would provide direct connection between the primary nodes of the TEN-T network Prague and Ostrava (section Pardubice – Mohelnice) is not available
- High capacity backbone railway axis in Moravia (Brno – Přerov), including the Brno railway junction is not available
- Direct and high-quality railway connection between the Václav Havel Airport and the centre of Prague and, through long-distance railway transport, with regional centres is not available
- Unreliable Elbe-Vltava inland waterway in the cross-border section on the Elbe River.

Fundamental deficiencies in the connection of large regional cities in the direction to the centre of the region:

- The capital city of Prague and Central Bohemian Region – high-quality railway connection for regional transport from Prague to the three largest cities in the Central Bohemian Region (Kladno, Mladá Boleslav, Příbram) is not available.
- Region Liberec – high-quality infrastructure linking important regional centres (Česká Lípa, Jablonec n/N, Semily) is not available.
- Region Vysočina – high-quality infrastructure linking important regional centres (in particular Třebíč and Žďár n/S) is not available.
- South Moravian Region – high-quality railway infrastructure linking important regional centres (in particular Znojmo, Vyškov) is not available. The current condition of the Brno railway junction is a chronic problem.
- Region Zlín – high-quality infrastructure linking important regional centers (Vsetín, Valašské Meziříčí) is not available.
- Moravian-Silesian Region – suitable connection from Ostrava to Opava and Krnov and from Ostrava to Jablunkov has not been completed, in case of railway infrastructure there is insufficient capacity in the direction Ostrava-Kunčice – Frýdek-Místek – Český Těšín.

#### Measures:

- **Modernize the transport infrastructure, having regard to securing good-quality access for all regions and having regard to the support of regions defined in the Strategy of Regional Development. The condition of the transport infrastructure must not be the cause of growing disparities in regional economic performance.**  
Responsible: MoT; deadline: in accordance with national economic conditions, to be carried out by 2030 at the latest; check by 2020; funding and schedule detailed in the Transport Sector Strategies

<sup>3</sup> This is not the complete overview of all deficiencies in the transport network but only a rough identification of the regions which lack a basic connection to the trans-European transport network. The main principles for the development of the transport infrastructure are given in the priority Transport infrastructure and a detailed binding schedule of project implementation is set out in the Transport Sector Strategies.

### 4.1.3 Freight Transport as Part of the Logistics Process

- *Responsible for the fulfilment of the specific target: Ministry of Transport*
- *Elaborated in the follow-up strategy: Strategy for the support of logistics from public funds and Transport Sector Strategies*
- *Funding: co-financing from European funds through the Operational Programme for the Transport sector and in Transport Sector Strategies*
- *Deadlines: continuous, check date 2017*

Transport is an important part of the logistics process and if the objectives relating to transport sustainability are to be fulfilled, different parts of the logistics chain must be brought into harmony. The existence of externalities in transport means that within the logistics chain, transport is perceived by producers as a relatively inexpensive part compared to the costs of storing and internal stock. In the final analysis, it results in high requirements on transport including lower utilization of the means of transport (more empty rides as a result of low capacity utilization of vehicles and the requirements of just-in-time transport - JIT). Optimized system of logistics is one of the key factors for the competitiveness of companies and, therefore, it must be included among the measures aiming at increasing the competitiveness of regions and implementing regional cohesion policy.



In European countries logistics is gradually moving from a purely commercial sphere to the area of public services, giving rise to logistics centres called Freight Village in English or Güterverkehrszentrum in German. These facilities have a specific task to attend to a territory, which can be defined in different ways: by its size, density of population, consumption and production of large, medium-sized and small enterprises, or even by administrative configuration of states and cross-border cooperation. This trend in the development of logistics in Europe, also in relation to the links to the European transport policy, must be not only taken into account but also developed in a systematic way in the Czech Republic, having regard to the following:

- Modal shift from road to those modes of transport which have less impact on the environment, without the entities operating in road transport losing their business, in the form of a service for road operators<sup>4</sup>,
- Use of multimodal transport systems to reduce the performance of road transport in favour of those modes of transport which have less impact on the environment, minimizing the costs of the change of the mode of transport and optimizing the time of transport, to avoid accumulation of logistics stock during circulation

The servicing of a territory should be understood as an integrated **logistics system**, which includes the transport of goods and materials, the sorting of consignments and the operation of an internal transport system, the operation of the storage and retail network, the servicing of small and middle-sized enterprises as regards both input raw materials and production output. Public logistics is of key importance for the competitiveness of small and middle-sized businesses because these companies cannot build their own sophisticated systems of logistics. A logistics centre can provide for import of materials and components for production in quantities which would often be rejected as a direct consignment by a forwarding agent with a specialized fleet and in a similar way for export of products which exceed the demand in the region or place of production; they assemble complete consignments on behalf of the sender (consisting also of products by different companies) and enable the export of these goods.

<sup>4</sup> Railway transport is offering services for road operators in this sense.

#### Measures:

- **Seek effective and sustainable logistics solutions using the principle of co-modality with the view to supporting multimodal nature of transport, optimize the capacity of the transport infrastructure and use of energy and also make logistics services available to small and middle-sized businesses in industry, trade and agriculture.**  
Responsible: MoT in cooperation with the regional and local authorities; deadline continuous, check date 2017; funding: *co-financing from European funds through Operational Programme for the Transport sector*
- **Create an access to competitive multimodal transport chains for companies, using the railway and possibly waterborne transport with the objectives of:**
  - *improving capacity utilization of the means of transport and reducing empty rides*
  - *reduction of heavy road transport (in the form of a service for road operators)*
  - *better cooperation and coordination among companies in the area of transport*
  - *support of small and middle-sized enterprises*
  - *reduction of negative impacts on the environment, public health and transport safety*Responsible: MoT in cooperation with the regional and local authorities; deadline continuous, check date 2017; funding detailed in the Transport Sector Strategies

#### 4.1.4 Public Service in Passenger Transport

- *Responsibility for the fulfilment of the specific target: Ministry of Transport, recommendation for the regional and local authorities*
- *Elaborated in the follow-up strategy: Public Transport Plans (national and regional)*
- *Funding: State budget and budgets of the regional and local authorities, co-financing from European funds through Operational Programme for the Transport sector*
- *Deadline: continuous, check date 2017*

From the user perspective it is important to create such conditions in the public transport environment that it is perceived as high-quality service, comparably attractive to private transport. Rapid, regular and competitive public transport running at consistent intervals, suitably interconnected to lower transport segments, must exist among all important conurbations in the Czech Republic, in keeping with the actual as well as latent demand and the quality of available infrastructure. An integrated clock-face schedule already forms the basic way of organization of public services, being far more than a pure technical schedule but rather a method of organization which contributes to the creation of efficient and interconnected network of services.

#### Measures:

- **Provide for regular and competitive clock-face public transport among all important conurbations in the Czech Republic.**
- **Based on national and regional economic possibilities, provide for integration of public transport on all the territory of the regions; the integration must include the connecting of timetables in all segments of public transport on the basis of a backbone and distribution system and the integration in terms of tariffs and information.**
- **Provide for interconnection of public passenger transport with non-motorized and private transport (serving sparsely populated areas).**
- **Provide for overlapping of public transport services of different regions – at the horizontal (the citizens have important transport needs leading to neighbouring regions), as well as the vertical level (linking national, regional and communal demand).** For this purpose, a national coordinator will be appointed to methodically guide the individual independent contracting authorities. An important element will be the coordination of the creation of public transport plans, which must be comparable in different regions and at different levels and must serve as one of important foundations for the decision making regarding the scope and modernization of rail infrastructure.

- **Ensure, through authorities contracting public passenger transport services and through public transport plans, that on the backbone lines there is service in appropriate intervals all day long and every day in the week.** The use of different lines during the day depends on this concept. There will always be the negative element that outside peak times, the rate of utilization of services will not be sufficient.
- **Public passenger transport services to be contracted gradually on the basis of a clear schedule in accordance with the principles of the EU White Paper, i.e., in particular in open public tenders.**
- **Ensure appropriate protection of public services in the opening transport market environment in both the rail and road transport.**

Responsible for all the above measures: MoT, the regional and local authorities; deadline: by the end of 2020; check date: 2017. Funding set out in Chapter 4.3.5

## 4.1.5 Safeguarding of the Rights of Passengers

- *Responsibility for the fulfilment of the specific target: Ministry of Transport*
- *Elaborated in the follow-up strategy: European process*
- *Funding: utilizing measures which are organizational in nature*
- *Deadlines: continuous in accordance with the processes defined at EU level; check date 2017*

The White Paper on EU transport policy from 2001 already set out the objective to introduce passenger safeguarding measures for all modes of transport. Although at the EU level there is currently a comprehensive and complete set of basic rules relating to passenger rights in all areas of passenger transport (air, rail, water and bus transport), the new White Paper from 2011 draws attention to the need to focus the European transport policy on users and their mobility. In this context it emphasizes in particular the need to strengthen the application of existing rules. In the opinion of the Commission, the existence of these rules and their uniform interpretation should improve the quality of services and so motivate citizens to shift to a greater extent from private to public transport. Within the context of strengthening of multimodal transport, the Commission has also advised its intention to compile common guiding principles on passenger rights in all modes of transport.



When adapting issues relating to passenger rights to national conditions, certain negative aspects of the process also have to be taken into account; namely higher administrative burden and costs both on the part of transport operators and surveillance bodies. Therefore, attention will be paid to achieving certain elementary balance between the scope of these rights and the impact on business and the competitiveness of transport operators. The Czech Republic will apply this general rule in negotiating any amendments to current European regulations in this area. Currently a case in point seems to be the submission of amendment to the Regulation on passenger rights in air transport<sup>5</sup>, which, according to the intention of the European Commission, should respond inter alia to the volcanic crisis in 2010.

Therefore, attention will be paid to achieving certain elementary balance between the scope of these rights and the impact on business and the competitiveness of transport operators. The Czech Republic will apply this general rule in negotiating any amendments to current European regulations in this area. Currently a case in point seems to be the submission of amendment to the Regulation on passenger rights in air transport<sup>5</sup>, which, according to the intention of the European Commission, should respond inter alia to the volcanic crisis in 2010.

The first concrete initiative of the European Commission in this area since the current White Paper has been published is a document called "A European Vision for Passengers: Communication on Passenger Rights in all Transport Modes" of December 2011. It contains, inter alia, a list of ten basic passenger rights valid in all transport modes and while it is non-binding in nature, the Commission perceives it as "a first step in the EU passenger transport policy moving from a purely modal approach to a more intermodal vision". Notwithstanding the long-term aim of the Commission to "consider adoption of a single EU Framework Regulation relating to passenger rights in all transport modes (EU Code)" contained in the current White Paper it is necessary to insist on individual approach to this issue, reflecting specifics of different modes of transport.

<sup>5</sup> Regulation (EC) No 261/2004, establishing common rules on compensation and assistance to passengers in the event of denied boarding and of cancellation or long delay of flights.

## Measures:

- **When negotiating any amendments to current EU Regulations in the area of passenger rights, as well as during discussions with the European Commission on specific guidelines regarding interpretation of current regulations in this area, it is necessary to adhere to the principle of balance between the scope of passenger rights and the competitiveness of transport operators.**  
Responsible: MoT; deadline: continuous, depending on EU processes
- **Following adopted guidelines by the European Commission regarding interpretation of current EU laws in the area of passenger rights in different modes of transport, it is necessary to carry out checks of compliance with the relevant passenger rights in accordance with these guidelines.**  
Responsible: MoT; deadline: continuous

## 4.1.6 Creating Conditions for the Development of Tourism

- *Responsibility for the fulfilment of the specific target: Ministry of Transport, and organizations responsible for the administration and development of the transport infrastructure*
- *Elaborated in the follow-up strategy: Transport Sector Strategies*
- *Funding: elaborated in Transport Sector Strategies*
- *Deadlines: elaborated in Transport Sector Strategies; check date 2017*

Tourism is an important branch of national economy and its contribution to the GDP is crucial in many regions. Tourism depends on good-quality transport access (e.g., congress and fair tourism depends on high-quality and rapid long-distance transport – i.e., air and high-speed rail), the transport infrastructure is often a direct tourist destination (museum railways, passenger waterborne transport, bike trails).

## Measures:

- **Plan the development of the transport infrastructure with regard to the needs of the development of tourism** (road, rail, air, water and non-motorized transport infrastructure).  
Responsible: MoT in cooperation with the Ministry of Local Development and the regional and local authorities; deadlines and funding elaborated in the Transport Sector Strategies

## 4.2 Transport Operation and Safety

### 4.2.1 Creating Conditions for the Rendering of Quality Services

- *Responsibility for the fulfilment of the specific target: Ministry of Transport, and organizations responsible for the administration and development of the transport infrastructure*
- *Elaborated in the follow-up strategy: Transport Sector Strategies, Innovation technologies, National Space Plan, internalization of externalities (European process)*
- *Funding: elaborated in relevant follow-up strategies*
- *Deadlines: continuous; check date 2017*

Quality services for end users are provided on market basis by entrepreneurs active in transport and in the logistics chain. Besides the transport infrastructure, also the traffic control systems and localization and navigation systems form a significant part of the transport network. The use of navigation systems in daily life, e.g., in passenger cars and trucks, has become a matter of course. As digital communications and technologies develop, new devices and applications have been developed which are beginning to be affordable in the general market.





#### Measures:

- **Build high-quality transport infrastructure (Chapter 4.4) and equip it with advanced ITS technologies in all modes of transport, including the infrastructure for multimodal interconnection of different modes of transport in passenger and freight transport (Chapter 4.4.7)**
- **Ensure fair conditions for business in individual modes of transport including the internalization of externalities and fair taxation and charging (Chapter 4.3.1)**
- **Provide for international interoperability (Chapter 4.4)**

### 4.2.2 Reducing the Impact of Traffic Irregularities

- *Responsibility for the fulfilment of the specific target: Ministry of Transport, and organizations responsible for the administration and development of the transport infrastructure*
- *Elaborated in the follow-up strategy: Transport Sector Strategies, Action Plan for ITS Deployment in the Czech Republic, National Space Plan*
- *Funding: elaborated in relevant follow-up strategies, combination of organizational measures and investment in the transport infrastructure and ITS*
- *Deadlines: continuous; check date 2017*

Traffic irregularities represent a negative phenomenon with impact on national as well as regional economy. They are closely related to external costs and significantly contribute to damaging the environment. They are relevant for all modes of transport:

- As regards the road transport, congestions regularly appear in locations with inadequate capacity. It is very costly and often impossible to ensure sufficient capacity of infrastructure in densely populated areas and historic city centres. Irregular congestions are also caused by accidents or as a result of weather effects. In all cases the appearance and extent of such events can be reduced by the deployment of ITS systems. ITS can also help manage crisis situations by using the possibility to interpret information in a language selected by the user, thus helping remove language barriers in European multi language environment,
- In case of the railway transport, there may be overt and covert congestions. Overt congestions are manifested as train delays. Covert congestions are the cause of rejections of freight trains for transport or rejections to contract services in passenger transport. Such transport is then carried out by road, contributing to congestions in the road infrastructure,
- In the waterborne transport, failure to carry out transport is mainly due to insufficient shipping conditions in the cross-border section of the Elbe -Vltava waterway. The only location on the Elbe -Vltava waterway with evidently insufficient capacity is the lock chamber Staré Město in Prague,
- Regarding the air transport, congestions are a reality around many Western European airports<sup>6</sup>. If a parallel runway is not built similar situations will occur also at the Prague Airport,
- Infrastructure congestions (both road and rail) cause problems with ensuring transfers in public transport, in particular in integrated transport systems with high level of interconnection between railway and bus transport.

#### Measures:

- **Analyse continuously the development of transport load with the view of early prevention of expected congestions. Prevent congestions by removing bottlenecks and road defects; identify such locations already in pre-design stage of construction preparation.**

<sup>6</sup> According to European Commission data, up to 6 % of aviation fuel in Europe is wasted by planes waiting for a free slot before landing.

- In case of the road transport and in accordance with local conditions, consider the possibility of regulating traffic intensity by introducing charges for entry into congestion areas.
- Deploy the ITS systems for all modes of transport to minimize the risk of congestions and to improve the management of emergency situations. Extend the scope of providers of information into the Integrated Traffic Information System by adding the Emergency Medical Service, administrators of utility networks and forwarders of oversize freight.
- Introduce measures aiming at higher use of the rail and waterborne transport; increase, by measures less demanding in terms of investment, regular as well as track possession capacity of rail infrastructure (passing bays, rail crossovers), optimization of the utilization of available inland waterway capacities in the form of the River information services.
- Plan restrictions on the rail and road infrastructure for the purpose of maintenance and repairs preferentially in periods with lower traffic intensity and using ITS systems.
- In order to secure reliable access of the Czech Republic to the European inland waterways network and maritime ports, conclude an international agreement on the Elbe River between the Czech Republic and Germany on the basis of the principles of economic partnership.
- Apply consistently the laws and regulations relating to Single European Sky, expand and improve joint operational procedures for the arrangement of traffic flows not only around airports, as well as expand cooperation within the framework of the functional airspace block Central Europe.
- **Support conditions for the construction of a parallel take-off and landing runway at the Václav Havel Airport in Prague.**  
Responsible for all the above mentioned measures: MoT and administrators of the transport infrastructure; deadlines: continuous; check date 2017; funding: combination of organizational measures and investment in the transport infrastructure – detailed in the Transport Sector Strategies

### 4.2.3 Freight Transport in Line with the Co-modality Principle

- *Responsibility for the fulfilment of the specific target: Ministry of Transport*
- *Elaborated in the follow-up strategy: Strategy for the support of logistics from public funds and Transport Sector Strategies*
- *Funding: co-financing from European funds through Operational Programme for the Transport sector and Transport Sector Strategies*
- *Deadlines: stages 2017, 2020, 2030*

The application of the co-modality principle is one of the instruments of the European transport policy for achieving the objectives of sustainable mobility in the area of freight transport. The proportion of the rail transport in the overall transport volume in the Czech Republic is comparable to the EU-15 Member States. However, there is a difference: while in the Czech Republic the trend has been declining, in the Western countries railway transport already reached the bottom and has been growing. The reason is that railway freight transport in Western Europe is based on progressive technologies of multimodal transport (in particular on regular combined transport lines, not only to maritime ports but also within the continent). The railway transport in the Czech Republic is much more based on classical technologies of single wagon consignments. The problem consists, among other things, in the fact that there is a lack of terminals for multimodal transport with suitable parameters in the Czech Republic<sup>7</sup>. Another issue is the non-public nature of existing terminals (from the point of view of non-discriminatory conditions for service providers and end users), which results in insufficiently competitive environment with impact on the quality and scope of the services provided.

Even if railway freight transport based on the single wagon consignments very likely will not increase its share in the transport market in the future because of market and technological reasons, a quick collapse of this market segment

<sup>7</sup> In particular the length of tracks in the terminals and a connection to a suitable line with enough capacity for regular freight transport

would have negative impact<sup>8</sup>, because it would result in a sharp increase of road freight transport. Therefore, a discount on the charge for the use of railway infrastructure should be applied in particular to this segment of the railway market.

In order to make the system attractive, it is advisable to connect the multimodal transport terminals to logistics centres. They enable the provision of further services to end clients, including optimization of the distribution process. Currently there is a dense network of logistics centres in the Czech Republic, which are mostly connected only to the road network. While the development of new logistics centres connected directly to public multimodal terminals is desirable, it should not be subject of support from public funds because it would constitute a case of illegal public aid<sup>9</sup>, which would be contested by the owners of already existing logistics centres and warehouses. Therefore, it should be financed from private sources only. Terminals for multimodal and combined transport must be designed so as to cooperate not only with any new logistics centres located in their immediate vicinity but also with existing logistics centres and warehouses on the basis of combined transport based on technologies of inexpensive and efficient transshipment of transport units.



On the other hand, the construction of terminals for multimodal transport can be subject of support from public funds and they can even be under public ownership<sup>10</sup>. The European Commission supports the development of a network of terminals which, according to European law, are defined as part of the transport infrastructure<sup>11</sup>.

This measure aims at higher use of the modes of transport alternative to road transport, as well as making road transport as such more efficient. However, these measures are not directed against road transport operators and they do not aim at infringing on market principles. They consist in particular of the support for the following types of undertaking:

- enabling the establishment of services for road operators<sup>12</sup>,
- creating conditions for the provision of services directly to the multimodal transport operator

Subsidies for the operation of multimodal transport lines are only possible during the initial stage of operation (provided notification is made to the European Commission).

Horizontal transshipment technologies are expensive, paying off only in case of shipment to long distances, hence it makes no sense to establish these systems in the Czech Republic separately for inland use; such systems are to be connected to the pan-European lines.

Another important area is the supply solution for larger cities in the form of City Logistics, with connections to public logistics centres. Such solutions can optimize supplies by scheduling service times outside traffic rush hours and making possible the use of low-capacity environmentally friendly vehicles.

<sup>8</sup> The only operator of single wagon consignments is currently ČD Cargo, which is considering discontinuing it because of losses.

<sup>9</sup> Public aid may be granted, if notified to the European Commission. However, in this case the reasons for such a course of action are not sufficient. The aid must be focused on multimodal terminals, while the connected logistics centres should be financed by the private sector.

<sup>10</sup> Complaint by the Metrans Company in Slovakia against the support of public terminals through European funds was not accepted as justified by the European Commission.

<sup>11</sup> There is a separate map layer for them in the Trans-European transport network policy

<sup>12</sup> It is convenient for road transport operators to use the services of rail transport on medium and long distances, because in this way they can reduce their costs (lower wear and tear of road semi-trailers, savings on labour costs for drivers, lower energy consumption, increasing the set weight limit for transported goods).

This area is further elaborated in the follow-up Strategy for the support of logistics from public funds.

#### Measures:

- **In coordination with the adopted Strategy for the support of logistics from public funds and the preparation of the Transport Sector Strategies create a methodological, financial and legal framework for the public support of logistics with clearly defined roles of the national and regional authorities and the private sector incorporated into amendment proposals. Define public terminals as part of the public transport infrastructure and provide for their financing through the State Transport Infrastructure Fund.**  
Responsible: MoT in cooperation with the regional and local authorities and the Economic Chamber; deadline: by the end of 2014
- **In relation to the preparation of the Operational Programme for the Transport sector for 2014 – 2020 with the prospect to 2030, compile a proposal for concrete localisation of public multimodal terminals, possibly with connections to logistics centres.**  
Responsible: MoT in cooperation with the regional and local authorities; deadline: 30 June 2014
- **Build public multimodal terminals in accordance with AGTC parameters, to be included in the TEN-T network and defined as part of Rail Freight Corridors in accordance with Regulation (EU) 913/2010.**  
Responsible: MoT; deadline by the end of 2020; funding – co-financing from the Cohesion Fund in 2014 - 2020
- **Create conditions for the development of rapid rail freight transport between the main points of transshipment and hubs of economic activity, together with the application of the just-in-time principle.**  
Responsible: MoT in cooperation with the operators and Railway Infrastructure Administration; check dates: 31 December 2014, thereafter every two years
- **Initiate work to examine the scope of the current network of railway stations with dispatching authorization, lay down conditions for non-discriminatory access of local road transport operators and entrepreneurs and create conditions for the implementation of suitable logistics solutions (hub + spoke structure).**  
Responsible: MoT in cooperation with the Czech Railways Joint-Stock Company and other operators; deadline: 30 June 2014.
- **Create a programme for the support of an expansion of the fleet of transport units and means for combined transport and for operating subsidies in the initial stage of operation of regular multimodal transport lines.**  
Responsible: MoT; deadline: by 30 June 2014; funding – co-financing from the ERDF in 2014 - 2020
- **Support new concepts of city distribution based on the principles of City Logistics; in case of some cities located on important waterways, use the waterborne transport as an alternative means of supply (e.g., to provide for the supplies of construction materials and disposal of building and communal waste).**  
Responsible: cooperation of regional and local authorities, MoT and MLD; deadline: continuous; funding– co-financing from the ERDF in 2014 – 2020
- **Set lower rates on the charges for the use of the transport route for single wagon consignments and in case of combined transport only for intra-continental lines.**  
Responsible: MoF and MoT; deadline 1 January 2015;
- **Create conditions for the development of air freight transport, which can support the development and creation of jobs, at least by introducing the related ground services, in particular at regional airports, which due to utilization of free capacities can contribute to reducing overload and overcrowding at TEN-T airports and to minimizing the impact on the environment.**  
Responsible: MoT in cooperation with the regional and local authorities; deadline: continuous;

## Specifics of the Railway Transport

The potential of railway freight transport can only be utilized if transport flows are sufficiently strong. With regard to the fact that the railway network usually does not reach the point of origin or destination of the transport need<sup>13</sup>, consignments must be transhipped. Collection, distribution and transshipment make the railway and waterborne transport more expensive so that they pay off only at longer distances. Medium distance transport is only possible when certain technologies of horizontal transshipment are used – in this case, handling of replaceable superstructures or containers can be considered. Such systems can be introduced in practice in the Czech Republic on condition that the number of replaceable superstructures used by freight forwarders can be increased.

The condition for higher utilization of the railway transport is high-quality railway infrastructure with sufficient capacity for freight transport at any time of the day. Currently freight transport is limited by rapid passenger transport (requiring frequent overtaking, which slows down freight and increases its energy demand) as well as by suburban passenger transport (short intervals between trains). It is difficult for long-distance freight to pass through suburban and urban areas of large conurbations. This is why the Regulation (EU) 913/2010<sup>14</sup> defines so-called freight corridors, which should ensure sufficient capacity for freight transport when built. For the same reason the main routes in the TEN-T network are defined separately for passenger and freight transport.

The railway transport has also the potential for express cargo shipment up to a distance of about 1,000 km, which can help free up air space for the intercontinental air transport. It is contingent on the implementation of a network of high-speed rail lines with direct connections to main international airports. The Eurocarex project, focusing on this market segment, has been in trial operation in Western Europe.

## Specifics of the Road Transport

The road transport is indispensable for comprehensive servicing of an area, collection and distribution. However, currently it is also strongly present in those segments of the transport market where other modes of transport are more desirable from the point of view of the whole society<sup>15</sup>.

Discussions are currently under way in Europe on the introduction of so-called modular sets in road transport, referred to as "gigaliners". Such sets present a suitable solution for increasing transport efficiency under certain conditions, where the traffic intensity is not high and at the same time transport distances are long (i.e., in vast, sparsely populated territories). There are no such conditions in the Czech Republic. The operation of modular sets is, therefore, only allowed in the Czech Republic on a very limited scale, on the basis of a permit for a special use of roads. Certain conditions must be fulfilled in order to receive the permit. Under the subsidiarity principle, the process of granting permissions for the operation of gigaliners should at any rate remain under the competence of Member States, since it is necessary to take into account local conditions, in particular the condition of infrastructure (not only the impact on safety and infrastructure is relevant but also the impact on transport). In certain cases it may be justified to introduce such kind of transport but it must be assessed by national bodies of the relevant Member State. With regard to the fact the gigaliners require relatively large consignments it is more suitable to look for solutions focusing on the use of the railway transport.

In the further process it will also be advisable to address the issue of regulation of night freight transport by using differentiated toll rates. Freight transport during the night hours contributes significantly to noise in populated areas, with night time noise having much more severe impact on human health than noise during daytime. What is also to be considered is the fact that in spite of regular rest regime, the driver's biorhythm during night hours is at a minimum, posing a risk factor for the road safety, particularly in case of trucks with high kinetic energy. Any measures, however, should be compensated with the possibility to use regular lines of combined transport with long-distance transport of semi-trailers.

<sup>13</sup> With the exception of railway sidings, which are expensive in operation and suitable only for larger companies with sufficiently strong freight transport

<sup>14</sup> Regulation (EU) of the European Parliament and of the Council No 913/2010 of 22 September 2010 concerning a European rail network for competitive freight

<sup>15</sup> For instance, if all costs are taken into account, i.e., including external costs

## Specifics of the Waterborne Transport

The share of the waterborne transport in the transport volume in the Czech Republic is not high, mainly due to insufficiently reliable infrastructure. If suitable conditions are created, waterborne transport can become part of regular combined transport lines, exerting competitive pressure on a reduction of prices in the rail and road transport.

In 2006 the European Commission announced NAIADES, the Action programme in support of inland waterway transport for the period until the end of 2013. Its objective is, inter alia, to help integrate inland waterway transport into the European transport chain. Its main recommendations focus on efforts to create favourable conditions for the provision of inland waterway transport services and acquisition of new markets, support of ship modernization and innovation, acquisition of new labour and increase of human capital investment, raising awareness on inland waterway transport and improvement of inland waterway transport infrastructure. Currently a follow-up programme called NAIADES II is under preparation, which should be issued for the following period 2014 - 2020.

## Specifics of the Air Transport

Air cargo forms an important segment of the freight market, focusing on long-distance express deliveries. Further development is contingent on good-quality interconnection of selected airports with the road and rail infrastructure, as well as with the network of TEN-T airports and logistics centres, which can contribute to raising the efficiency of transport and reducing the environmental burden. Within the framework of the Air Transport Conception, a network of airports in the Czech Republic will be identified with the potential for air cargo development.

### Measures:

- **Ensure the operation of the Rail Freight Corridors on the territory of the Czech Republic within the meaning of Regulation (EU) 913/2010 and connect Freight Corridor No 7 with Freight Corridor No 8. Provide for sufficient freight capacity in the freight corridors by ensuring sufficient capacity of the relevant track sections. Where the capacity of the transport infrastructure in the freight corridors is insufficient, introduce temporarily appropriate measures not only in freight but also in passenger transport, until it improves.**  
Responsible: MoT; deadline: by the end of 2015;
- **Ensure passage through large railway junctions by segregating passenger and freight transport (in particular the Prague Junction).**  
Responsible: MoT; deadline according to the Transport Sector Strategies (completion of modernization of railway junctions, in particular in Prague, Brno, Ostrava and Pilsen).
- **Create suitable conditions for the utilization of waterborne transport. Permanently create conditions for the possibility to apply support of waterborne transport (modernization of ships for freight and passenger inland waterway transport) within the framework of the NAIADES (Navigation and Inland Waterway Action and Development in Europe) and NAIADES II Programmes as well as follow-up programmes of similar nature.**  
Responsible: MoT; deadline: 2020
- **With the view to reducing the impact of transport on public health, differentiate the rates of distance-based charging during night hours, in accordance with Directive 1999/62 EU, as amended by Directive 2011/76/EU of the European Parliament and the Council of 27 September 2011, and support extension of the network of regular lines of multimodal transport for long-distance freight transport.**  
Responsible: MoT; deadline: 2015
- **Create conditions for the development of air freight transport, which can support the development and creation of jobs, at least by introducing the related ground services, in particular at regional airports, which due to utilization of free capacities can contribute to reducing overload and overcrowding at TEN-T airports and to minimizing the impact on the environment.**  
Responsible: MoT in cooperation with the regional and local authorities; deadline: continuous; check date 2017; funding will be elaborated in the Air Transport Conception

## 4.2.4 Functional Passenger Transport System

- *Responsibility for the fulfilment of the specific target: Ministry of Transport, recommendations for the regional and local authorities*
- *Elaborated in the follow-up strategy: Public Transport Plans (national and regional), Public Transport Conception*
- *Funding: State budget and budgets of the regional and local authorities, co-financing from European funds through the Operational Programme for the Transport sector and the Operational Programme for the Environment (fleet replacement)*
- *Deadline: continuous, check date 2017*

Public transport services are among the fundamental services provided by public administration. The national, regional and local authorities participate in its provision. The creation of mid-term public transport plans forms a fundamental planning instrument, used also to link transport contracts and create synergies at the vertical level (contracting by the national, regional and local authorities) as well as at the horizontal level (connecting contracts from neighbouring regions and eliminating “dead” zones at borders of regions). Public transport planning is very important for the planning of the transport infrastructure networks, in particular the railway networks<sup>16</sup>. Legal regulation of public transport planning is very general, having regard to independent sphere of action of public administration. However, considering the practice that the national level significantly contributes to regional public transport services<sup>17</sup>, it should be possible to provide for a link to a more detailed specification of transport planning in the law.

Integration of public transport services in regions<sup>18</sup> and ensuring compatibility at regional borders forms an important task in the area of public transport. The level of integration in different regions is very diverse<sup>19</sup>. Integration must always apply to timetables and, in accordance with the approach of EU law, also to the traffic control and information systems<sup>20</sup>. Tariff integration is necessary at least at the regional and communal level. It is necessary to assess possibilities for a conceptual approach to direct transport also at the national level, which is, however, a long and demanding process. The tariff structure at different levels (regional, local and national) must be connectible and transport operators must have the possibility to participate in its determination (except specific situations in certain types of integrated systems). Tariff integration of nationally-contracted lines into regional systems is suitable in certain cases, but it is not always possible, in particular in case of economic difficulties with integration or problems with the rolling stock capacity caused by the use of national lines in suburban areas. It is important that public transport operators conclude agreements on mutual tariff recognition.

The structure of contracts in public transport planning is to be compatible with the national contracting, because the national contract cannot accommodate the requests of all the regions at once, which results in the current practice of increased travelling times of long-distance transport in relation to regional transport<sup>21</sup>.

The Ministry of Transport or so-called national coordinator has to provide the methodology for the provision of public transport services in the regions and cooperate in solving the issues of the vertical and horizontal interconnection of contracts, under the conditions of independent sphere of action at different levels. In relation to the optimization of the public transport system it will be necessary to re-organize the contracting of bus and rail transport. Within the framework of the *Public Transport Conception*, which builds upon the Transport Policy, a decision will have to be made from among the following alternatives:

- Lay down a systemic solution, in particular sustainable in time, by means of legal instruments, without any principal change of financial flows. Similarly to Germany<sup>22</sup> it is possible to propose a solution where by law the funding of the railway transport lies at the national level, including the resources and the Government determines which part of, e.g., excise duties, should be allocated for public railway transport<sup>23</sup>. Differently

<sup>16</sup> The practice cannot continue when the national authorities make investment in tracks, which are subsequently not used due to absence of regional contracts for transport, making the track unused and frustrating the investment.

<sup>17</sup> In case the support continues to be in place.

<sup>18</sup> In two specific cases, a single system for two regions must be created: a common system is necessary for Prague and the Central Bohemian Region and for the Královéhradecký and Pardubický Regions.

<sup>19</sup> Insufficient integration results in insufficient interconnection between rail and bus transport and does not enable the removal of unjustified parallel operation of both modes of transport, resulting in lower efficiency of the system and poorer service of peripheral areas.

<sup>20</sup> A transfer system based on rapid high-capacity backbone lines (usually operated by rail transport, and where there is insufficient railway infrastructure, also by high-capacity bus transport) and interconnected bus lines servicing the whole area, usually with a smaller fleet capacity, including alternative systems in sparsely populated areas (bus on demand, taxi etc.)

<sup>21</sup> The national authorities make high investment in the modernization of the railway infrastructure with the objective to shorten travelling times and increase the competitiveness of the railway transport, but the effects are often significantly reduced due to the above reasons.

<sup>22</sup> Cf. the German Law “Gesetz zur Regionalisierung des öffentlichen Personennahverkehrs vom 27. Dezember 1993 BGBl. I S. 2395”

<sup>23</sup> While adhering to politically agreed financial framework allocated for the operation of public transport.

from Germany, however, it appears to be absolutely unacceptable to distribute all the funds among regions, because in Germany this resulted in the abolition of many links among regions which were not economically viable; therefore, it appears necessary to keep long-distance transport within the national purview<sup>24</sup>.

- Transfer of the funds and responsibility for the railway transport fully to the MoT. This solution appears successful in Bavaria, which is comparable in size to the Czech Republic. The transfer of responsibility would have to be linked to the transfer of funds, i.e., the full amount of about CZK 12 billion, which is currently allocated by the Government and the regions for the railway transport, would have to be allocated to the budget of the Ministry of Transport. The advantage would be the possibility to use synergies between long-distance and regional transport, for instance by cancelling passenger trains on some tracks and replacing them by long-distance trains servicing important points. The MoT could also directly decide on which “inefficient” tracks it will place the order for public services and where it won’t. There are serious obstacles relating to the fact that the regions concluded ten-year contracts with the Czech Railways up to 2019, some of them have tenders for even longer periods and finally the impact should be assessed, which the change of the contracting authority might have on the vehicles co-financed from Regional Operational Programmes. Last but not least, this alternative would also necessitate an amendment to the Public Services Act.
- Set clear boundaries between the MoT and regions, both in terms of competences and financing – in such a case, however, it is necessary to deal in more detail with the coordination of transport solutions among several contracting authorities, otherwise the vertical coherence of transport services, one of the objectives of this Transport Policy, would be lost.

Replacement of rolling stock has continued to be an important topic as the average age of vehicles used by the dominant Czech operator is still far behind foreign competition. The quality of the rolling stock will be an important criterion in the process of gradual market opening in the railway transport, too. This is why this area will continue to be the subject of support from public budgets, including European funds; however these funds will be gradually diminished.



Issues of market conditions in public transport will constitute another important topic in the new *Public Transport Conception*. Market opening will be carried out mainly by announcing public tenders for the operation of complete public transport lines (competing for a market). Free market in the railway transport (competition in a market) must be introduced with consideration, having regard to the capacity of railway tracks for suburban and freight transport. The advantages and disadvantages of fully open market will have to be carefully assessed. Considering the capacity of the railway infrastructure and the need to ensure public transport services in public interest and at the same time preserve free capacity for freight transport, it appears problematic to operate more

long-distance trains on the same route and with low capacity at peak times, while there is a lack of infrastructure capacity for other trains (regional, freight). The “environmental friendliness” of the railway transport is manifested mainly in larger number of transported passengers in one train. In case of long-distance express services beyond 200 km, the frequency of one train an hour can be considered sufficient, and even more advantageous from the perspective of optimum utilization of the potential of the railway transport, without any significant deterioration of the quality of service. Given the one-hour tact, two different operators may compete for the market (two lines, each in two-hour tact) and for these lucrative services, a surcharge for exclusivity may be set, which the contracting authority may use to fund other, less lucrative routes. The scenario cannot be allowed where the full opening of other lucrative routes would result in an increase of the total required payments by the public sector for contracted public transport, because it is the duty of the public sector to contract transport for all significant routes, both at peak and lull times. A major negative aspect of this open market approach consists in the understandable efforts by transport operators to reduce their services at off-peak times. On the other hand, the advantage of an open market is the motivation for transport operators to provide higher quality of service. At any rate, a more massive use of open market can only be considered after higher capacity of the railway infrastructure has been achieved (increasing the capacity of current tracks or new

<sup>24</sup> Such approach would be in direct contradiction to national Czech legislation; last but not least it may be noted that serious national debate has started in Germany, supported by top transport experts and most Federal States, calling upon the Federal Ministry of Transport to actively play the role of the contracting authority for long-distance and trans-regional links.



construction under the High-Speed Railway Programme); at the same time frustration of private investment made in the public transport system cannot be accepted.

As problematic appears also the servicing of conurbations of national importance (development areas under the Regional Development Policy and Regional Development Strategy) in the direction towards the main national centres (Prague, and possibly Brno), where there is no adequate railway infrastructure enabling the provision of competitive services. Long-distance bus transport is currently operated on a commercial basis there and there are often major fluctuations due to the rise and fall of competition on these commercially attractive routes. In case of a market failure the regional authorities possess only limited ability to regulate such fluctuations, while the national authorities make no intervention either since they also lack suitable regulating instruments. At the same time, in the context of new rules stipulated in particular by European Regulation No 1370/2007, the national authorities are already sharing in the economy of these lines in the form of reimbursing the losses incurred as a result of the application of nationally-imposed discounts, significantly improving profitability of the lines. Therefore, the MoT will examine, within the framework of the *Public Transport Conception*, the possibilities to lay down new decision-making powers, which would enable regulation of such lines in case of a market failure<sup>25</sup>, and primarily their more efficient incorporation into the system of long-distance and trans-regional transport, which has been so far guaranteed by the national authorities in the railway transport only. It is critically important to guarantee the quality of connection by rapid bus lines on these routes, before the long-term solution – sufficiently rapid railway connection – is implemented.

Terminals connecting railway, bus, non-motorized and private transport are of key importance for further development of integrated transport systems. Support from public budgets, especially European funds, is necessary for the development of this area.

#### Measures:

**Change the structure of contracting for public services in passenger transport in accordance with the document *Public Transport Conception* (see above) and ensure the relevant legal framework to that end.**

Responsible: MoT in cooperation with the regional authorities; deadlines: selection of options until 31 December 2014; implementation of measures in accordance with the option selected until 31 December 2016

- **Provide for integrated tariffs at the regional level. The tariff rate at the regional level (and similarly at the national level) to be agreed with regard to the division of revenue risks and in cooperation with transport operators. Support the establishment of agreements on mutual tariff recognition among operators.**  
Responsible: Recommendations for the regional authorities in cooperation with MoT and transport operators; deadline: end of 2014
- **Aim at tariff coherence when concluding contracts for public services, in particular in the area of the railway transport, so as to simplify as much as possible the travel between two points at the Czech railway network with one transport document only.**  
Responsible: MoT in cooperation with the regional authorities and transport operators; deadline: end of 2017
- **As the railway reform continues, aim as much as possible at non-discriminatory access to service facilities. Aim at linking the provisions of the Public Procurement Act with specific procedures within the tenders, relating for instance to the purchase of vehicles.**  
Responsible: MoT in cooperation with the regional authorities and transport operators; deadline: end of 2017
- **Connect regional public transport plans to national transport contracting.**  
Responsible: recommendation for the regional and local authorities; deadline: by the end of 2013

<sup>25</sup> In particular in the case where only one transport operator is active on the route, who tends to limit the transport in off-peak times of the day or week or, on the contrary, fails to offer sufficient capacity at peak times.

- **Gradually introduce traffic preferences for public transport, transport planning<sup>26</sup> including performance and quality criteria, integration of public transport in terms of traffic, operation, information, and tariffs and dispatching, so as to make rail transport the backbone of the system.**  
Responsible: MoT in cooperation with the regional authorities; deadline: 2014
- **Implement necessary solutions for central management of public transport at the regional level.**  
Responsible: recommendation for the regional authorities
- **At the level of the Ministry of Transport of the Czech Republic, in cooperation with regional contracting authorities, continue to aim at integration between long-distance railway transport and regional integrated transport systems (in case of a tariff integration, depending on economic and technical means).**  
Responsible: MoT in cooperation with the regional authorities; deadline: by the end of 2014
- **Cooperate on mutual coordination of regional integrated transport systems.**  
Responsible: MoT and the regional authorities; deadline: end of 2015
- **In the upcoming period pay attention to gradual market opening in public transport in all modes of transport, to the solution of transport planning issues, to issues of public transport funding and to issues of integrated transport systems including electronic ticketing. In transport covered by the public service obligation, in accordance with the Act on Public Passenger Transport Services and Regulation (EC) No 1370/2007 of the European Parliament and of the Council<sup>27</sup>, apply competition between operators. By applying regulated competition in contractual relations between contracting authorities and transport operators in transport covered by the public service obligation, achieve the situation in which the public sector safeguards the interests of passengers and the operators provide public transport services to the satisfaction of their clients, in an efficient and sustainable way.**  
Responsible: MoT in cooperation with the regional authorities; deadline: annually until the new contracting structure for public services enters into force; funding within the framework of the current budget framework (see also Chapter 4.3)
- **Introduce protection of public services provided under the public service obligation, while not allowing frustration of private investment into the public transport system.**  
Responsible: MoT; deadline: continuous
- **Set service standards in public transport for individual parts of public transport by the relevant contracting authority, ensure by means of contracts the fulfilment of these standards and require them in the provision of public service.**  
Responsible: MoT in cooperation with the regional authorities; deadline: continuous, check date by the end of 2016
- **When selecting the operators to provide passenger transport in public interest, take into account the ability of the operator to provide services at the required quality level, from the user perspective, and to invest in the rolling stock to the necessary extent.**  
Responsible: MoT and the regional authorities; deadline: continuous
- **Create conditions for making all kinds of public transport accessible to persons with reduced mobility and orientation.**  
Responsible: MoT and the regional and local authorities; deadline: continuous in accordance with the funding of replacement of the rolling stock; check date: 2017
- **Introduce alternative systems for servicing sparsely populated areas (bus on demand and the like).**  
Responsible: recommendation for the regional and local authorities;
- **Create a national electronic standard for cards used by different integrated transport systems with the objective to provide for nationwide integration of public services.**  
Responsible: MoT and the regional and local authorities; deadline: by the end of 2016
- **Connect public transport planning to the planning of the development of the transport infrastructure, taking into account public transport plans of the regional and national authorities, in particular their highest priorities.**  
Responsible: MoT in cooperation with the regional authorities. Deadline: continuous – (coordination of plans of the transport infrastructure development and public transport plans from 1 January 2014)

<sup>26</sup> A transfer strategy from the perspective of optimum transfer points, guarantees of interconnection and minimization of walking distance in transfers must form an important part of the planning

<sup>27</sup> Regulation (EC) No 1370/2007 of the European Parliament and of the Council of 23 October 2007 on public passenger transport services by rail and by road and repealing Council Regulations (EEC) Nos 1191/69 and 1107/70

## Specifics of the Railway Transport



The railway transport must provide high-quality rapid backbone lines, which are complemented by bus transport servicing the whole area. The railway transport usually (depending on local conditions) is not suitable for the servicing of small municipalities because it is mostly impossible to put a railway stop where it would be most important from the perspective of the municipality (although there are exceptions). In case of weaker transport flows, railway is significantly more expensive than bus transport and its "environmental friendliness" cannot be proved in such a case either<sup>28</sup>. Servicing of small municipalities, therefore, must be ensured in these cases by means of bus transport; this is true not only for municipalities located on secondary and regional tracks but also for many municipalities located on tracks of national or even international importance<sup>29</sup>. If this principle is taken into account, rail transport may become both less expensive and more efficient<sup>30</sup>. It should always be assessed on a case-by-case basis according to local conditions. This intent will be supported by objective analysis of current state of non-corridor and regional tracks with

the view to clearly formulating and utilizing to the maximum the economic (development of industry and tourism) and social-demographic (labour force mobility, reducing the creation and existence of "regional peripheries" and the like) railway network potential. On the contrary, the railway transport in non-efficient local tracks can be replaced by bus transport.

Passenger trains in densely populated areas have high potential, not only as suburban trains, in large cities gradually advancing to the position of the fastest city transport segment.

In terms of offer, there has been a significant improvement in long-distance passenger transport recently. The current system, which needs to be kept and further improved, is comparable in its principles (however, not yet in the quality and level of interconnection) to the systems operated in advanced countries, in spite of much poorer condition of railway infrastructure and its competitiveness against road infrastructure. However, unless a network of high-speed railway lines starts to be built within approximately ten years, the Czech Republic will become an isolated island of poor accessibility in the middle of Europe.

## Specifics of the Public Road Transport

The main and indispensable function of bus transport within the public transport system is to provide area-wide bus services with the capacity required by the nature of the line, linked to backbone lines; this is true not only for municipalities located outside the main routes of the transport infrastructure but also as a complementary service along the main routes. Owing to the insufficient quality of railway network, high-capacity bus lines must also complement the network of backbone lines both in regional, suburban and long-distance transport. The regional line systems must also respond to the transport needs of the population in relation to neighbouring regions – neglecting these needs is one of the reasons for the on-going fall in the competitiveness of areas located along regional borders.

## Specifics of the Waterborne Transport

The waterborne transport may constitute a suitable complement of the public transport system – in particular ferries on large rivers can significantly shorten travel time, as there is relatively low number of bridges in particular on the lower Elbe and middle and lower Vltava Rivers. The waterborne transport can also serve as a certain complement of the public transport in Prague. This mode of transport forms also an attractive tourist destination, an important element of regional economy.

<sup>28</sup> MoT Research and development project No 1F84C/096/520 *Comparison of local and regional rail and road transport in terms of their environmental impact and reduction of energy demands and funding possibilities from public funds*, Bankovní institut VŠ, 2009.

<sup>29</sup> In case of non-corridor tracks, nowadays two transport segments are often operated – passenger trains and rapid trains fulfilling to a large degree regional function or express trains. Cancelled passenger train connections save operating costs, which may be used to shorten the interval of parallel rapid or express trains, making the offer more attractive. This will result in a more efficient use of funds earmarked for servicing, the amount of which is fixed. In case of local tracks with one segment only, it depends mainly on the largest community located on that track whether the servicing by rail is efficient – in this case also, the service may be speeded up by passing through small stops. It must always be assessed on a case-by-case basis.

<sup>30</sup> There is a long-term declining trend of passenger transport in slow passenger trains, while trains of the higher segment, starting with express trains, are more attractive. Funds earmarked for the operation of railway passenger transport must be used as a priority to serve strong transport flows.

### Specifics of the Air Transport

According to the European White Paper, the air transport should focus in particular on long-distance trans-continental transport beyond 1,000 km. It follows that selected airports on the TEN-T core network must be directly connected to long-distance railway transport. As far as the development of regional airports is concerned, any measures have to be proposed in the context of the air-servicing of the wider region. These issues, therefore, will be dealt with in the separate follow-up *Air Transport Conception*. There are free capacities at many regional airports which could be used to reduce overload and overcrowding at the main airports and to minimize the impact on the environment. There is also a growing demand to use these airports by managers travelling by private planes. Also plans for the development of the rail and road networks will take into account the location of airports, which will be included in planned local transport networks, thus contributing to improvement of citizens' mobility and efficiency of the transport of goods.

### Specifics of the Private Car Transport (PCT)

The private car transport works as "door-to-door transport". Due to its high need of space and energy and the impact on the environment, it generates a major share of external costs; on the other hand, it is also subject to significant taxation and charges. Still, direct private transport, in particular in more densely populated areas, causes problems. The private car transport can, however, become part of multimodal transport through the use of public transport terminals and P+R and K+R systems. In this case it is a suitable means for servicing very sparsely populated areas as an area-wide segment connected to the backbone public transport. The P+R and K+R systems, however, should be located already in suburban areas adjacent to the main railway lines, as their location on the very outskirts of cities near urban public transport lines fails to address capacity issues of the road infrastructure at city entrances.

Also alternative concepts of *car sharing* and *car pooling* should be supported. Introducing car sharing makes sense in particular in larger cities with good-quality, accessible public transport where there are problems with excessive private car traffic and occupation of public space at the expense of PCT. Car sharing makes it possible to use a car when needed but without having to own one. The users who do not own a car are much more sensitive to the total costs per kilometre travelled when deciding which mode of transport they want to use for a particular journey, which is why they often choose other modes of transport like public transport or non-motorized transport. Replacement of several private cars with a shared one results in lower need of parking stands. The ideal way is connecting car sharing with public transport and introducing a combined ticket.

Car pooling is suitable mainly for regular travels, like commuting to work. The use of free car capacity to carry other persons results in energy savings and reduction of PCT.

Both systems may be supported at a local level by preferential measures like parking stands reserved for car-sharing, reduced toll tariffs etc.

### Specifics of the Non-motorized Transport

The non-motorized transport forms an important part of public transport in cities and it is important to create conditions for its more widespread use. It includes measures to increase transport safety by building bike trails and other measures in the road infrastructure. However, in order to see higher use mainly of cycling, it is also necessary to create conditions for stationary traffic.<sup>31</sup> Another dimension of the non-motorized transport is its major contribution to tourism and recreation. The topic is elaborated in more detail in the follow-up *National Cycling Strategy*.

### Measures:

- **In the regional transport system, as a priority focus the contracting of railway services on rapid backbone lines, taking into account local conditions.**  
Recommendation for the regional authorities; deadline: continuous, check date: 2017; funding – the measure results in savings of funds earmarked for public transport;
- **Provide for bus servicing of small municipalities using the means of transport with the requisite capacity and supporting replacement of busses operated under the public service obligation with vehicles equipped with environmentally friendly propulsion and access to people with reduced mobility.**  
Recommendation for the regional authorities; deadline: continuous, check date: 2017; funding – the measure results in savings of funds earmarked for public transport; funding of environmentally friendly bus propulsion through the Operational Programme Environment

<sup>31</sup> It shouldn't be underestimated that the use of cycling for commuting to work or school is contingent on the creation of conditions for safe parking of bicycles and other measures related to cycling.

- **Include ferries on larger rivers into the integrated public transport system.**  
Recommendation for the regional authorities; deadline: continuous; funding – the measure results in savings of funds earmarked for public transport
- **Establish P+R, B+R and K+R parking facilities, in particular adjacent to railway stations with interval transport at city suburbs** (earlier than at public transport stops at city outskirts).  
Recommendation for the regional authorities; deadline: continuous; funding – ERDF 2014 – 2020.
- **Create conditions for more widespread use of non-motorized transport within the public transport system.**  
Recommendation for the regional authorities; deadline: continuous, check date: 2017
- **Define regional transport contracts taking into account also the needs of citizens who have to commute across regional borders.**  
Recommendation for the regional authorities; deadline: continuous, to be included in the nearest update of transport plans
- **Support the car sharing and car pooling concepts, develop relevant information systems and propose a methodological support for the assessment of suitability of their implementation in specific areas.**  
Recommendation for the regional authorities; deadline: continuous
- **By developing railway transport services contribute to coordination with the air transport.**  
Responsible: MoT; deadline: by 2030; check date: 2020; funding: laid down in the document Transport Sector Strategies

## 4.2.5 Tackling Challenges with Transport in Cities

- *Responsibility for the fulfilment of the specific target: Ministry of Transport, recommendations for the regional and local authorities*
- *Elaborated in the follow-up strategy: recommendations for city mobility plans to be prepared by the regional and local authorities, Public Transport Conception, National Cycling Strategy*
- *Funding: budgets of the regional and local authorities, co-financing from European funds through Operational Programme for the Transport sector and Integrated Regional Operational Programme, partially STIF*
- *Deadline: continuous, check date 2017*



Traffic challenges are most intense in larger cities and their suburbs: negative impact of noise, emissions and traffic accidents are felt more strongly in urban space. In historical city centres there is a specific situation as there is no space for the construction of high-capacity infrastructure. Therefore, the national law should make it possible for municipalities to introduce charges for entry into city centres<sup>32</sup>. Then municipal public transport and non-motorized transport is to play an important role there. Also the restriction of parking opportunities in historic city centres serves as a tool for regulating city traffic.

Another challenge is the supplying of the city centres. It is to be carried out by smaller vehicles with clean engines (electromobility, alternative energies). Distribution of supplies must be organized with regard to the peak traffic in the city. City logistics systems must find hinterland in public logistics centres, from which the services will be organized.

Traffic solutions between the core city and suburbs is an important challenge, which usually depends on private transport as the servicing of sparsely populated areas by public transport is inefficient. Therefore, P+R, B+R and K+R facilities located near high-capacity railway tracks in suburban areas must be emphasized. Also the alternative transport

<sup>32</sup> Administrative bans and limitations tend to be not efficient enough, while economic regulation is more suitable, according to foreign experience, enabling high flexibility of the degree of regulation.

systems like tram-train can contribute to making the public transport much more attractive. The efforts to introduce these in Czech cities have so far been unsuccessful, inter alia due to insufficient support by the Government.<sup>33</sup>

Traffic challenges are strongly present also in the cities sized between 15 – 40 thousand inhabitants. These cities are too large for walking, yet not large enough to generate a demand justifying a system of public transport in intervals which would be perceived as uninterrupted service (at most 15 minutes). The cities falling in this category, therefore, are strongly burdened by the private car transport.

#### Measures:

- In cooperation between public administration and the regional and local authorities, continuously aim at improving the interconnection of public transport by offering services jointly, coordinate the contracting of long-distance, regional and municipal transport. Use a contractual organizer for public transport systems in regions (a professional body established by all authorities contracting public transport within a region) with a suitable distribution of revenue risks between contracting authorities and transport operators.
- Reduce negative impacts of suburbanization on the landscape by introducing attractive and reliable suburban public transport as an alternative to the private car transport, which causes overload of the road network, with the view to maximizing the division of transport performance in favour of public transport, including its internal differentiation according to capacity needs and including an outlook.
- Within the EU, cooperate on the implementation of measures contained in the *Action Plan on Urban Mobility*<sup>34</sup> and utilize the positive experience and procedures gained in this area to improve sustainability and safety of urban mobility in the Czech Republic.
- Deploy efficient urban road traffic control systems and traffic participant information systems.
- Channel heavy-duty freight transport by local road traffic measures, create a system for protection of city centres from non-essential car traffic by establishing zones and limited-access roads and by setting speed limits to car traffic, adapt city streets to the needs of pedestrians and city life, develop bike trails and pedestrian zones in cities, built P+R and K+R parking facilities for private car transport on city outskirts with interconnection to public transport.
- Further develop the current network of non-motorized routes, which provide for relatively fast and primarily safe connection between important destinations, not only for recreational use but mainly for commuting between home and work or school.
- At the level of local authorities elaborate or update where suitable cycling concepts, within the framework of which it might be necessary, based on local conditions in the urban area, to rethink the current use of sidewalks for cycling, allocating space for bike traffic according to local conditions also at the roadway level.
- When dealing with the issues of cycling, the responsible bodies shall use the *National Strategy for the Development of Cycling in the Czech Republic*, which has been discussed with the public.
- Create solutions to the transport space having regard to the requirements of physically handicapped persons (safety, barrier-free access).
- Include integrated suburban transport into the servicing of mid-size cities (approximately 15 – 40 thousands inhabitants), in the combination with public transport (in order to reach an interval at the level of “uninterrupted service”), or independently (full substitution of public transport).  
The above measures represent recommendations for the regional and local authorities in cooperation with the MoT

<sup>33</sup> Introduction of these systems by the regional and local authorities without state aid is too difficult, as the systems need to be developed also in terms of technology and legislation, which is beyond the resources of the regional and local authorities.

<sup>34</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Action Plan on Urban Mobility - COM(2009) 490 final

- **Support in an efficient way the development of systems enabling the railway transport to pass through major conurbations, and for this purpose modernize, expand and electrify the infrastructure of tracks hitherto considered lines of regional importance only.**

Responsible: MoT in cooperation with RIA, the regional and local authorities; deadline: continuous, check date: 2016, thereafter every two years

## 4.2.6 Improving Transport Safety

- *Responsibility for the fulfilment of the specific target: Ministry of Transport, transport infrastructure administrations, Ministry of the Interior, recommendations for the regional and local authorities*
- *Elaborated in the follow-up strategy: National Strategy for Road Traffic Safety*
- *Funding: detailed in Transport Sector Strategies; implementation through measures of organizational nature*
- *Deadline: continuous, check date 2017*

Safety in transport includes traffic safety and security of transport systems against societal pathological influences (crime, terror) and natural phenomena (disasters).

### Transport security:

The area of security is elaborated in the Strategy of the Czech Republic for combating terrorism and in the document Security strategy under the responsibility of the Ministry of the Interior.

### Measures:

- **In case of crises, including adverse dispersion conditions and exceeding of hygienic noise limits, reduce non-essential traffic, use prepared regulatory measures changing the method of traffic control and organization and the conditions for restriction or ban of traffic in the Czech Republic.**
- **Improve the set of measures against theft of essential components of rail infrastructure signalling equipment, in particular that made of non-ferrous metals, the theft of which can strongly endanger rail transport safety.**
- **Carry out safety assessments and protective measures to protect public passenger transport from terror attacks, while searching for new designs and materials, equipment and facilities as well as procedures, which could alleviate the impact of terror attacks.**
- **Pay attention to ensuring function and improving protection of the transport infrastructure<sup>35</sup>, in particular having regard to the on-going climate change and threat of terror attacks.**
- **Create conditions for the strengthening of security in public (in particular passenger) transport, focusing mainly on theft and other criminal activities.**
- **Implement requirements concerning air security in consistent manner, as set out in the relevant European law, and deal with questions related to this (e. g., gradual introduction of detection devices for fluid control, possible deployment of security scanners, strengthening of the institute of reliability checking and the like). On the basis of risk analysis or conclusions evaluating an exercise in the area of civil aviation protection against unlawful acts, aim at further minimization of security threats in civil aviation.**  
Responsible for all the above measures: MoT and Mol in cooperation with the regional and local authorities; deadline: continuous, check date: 2017
- **Support the development of new types of universal temporary bridges usable for a speedy recovery of damaged or destroyed transport infrastructure. When creating and using emergency provisions for the transport sector, provide for temporary road bridges up to 3 % of the length of road bridges, temporary rail bridges up to 3 % of the length of railway bridges and permanent railway up to 0.5 % of the construction length of tracks in the Czech Republic.**

<sup>35</sup> Council Directive 2008/114/EC of 8 December 2008 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection

- Set up a system for monitoring the location and integrity of consignments; issue a mandate to work on standard data sets describing goods in transport, including requirements for regulations (having regard to current requirements relating to the transport of hazardous goods, live animals and the like) and technologies like radio-frequency identification (RFID).
- Develop systems for the provision of information and reservation services for safe and protected parking stands for trucks.
- Develop systems for the monitoring of security of the transport infrastructure (e.g., introducing monitoring of the transport infrastructure based on advanced technologies, including space technologies, for instance through remote Earth sensing) and subsequently integrate the acquired information in geographic information systems.

Responsible for all the above measures: MoT in cooperation with the regional authorities;  
deadline: continuous; check date: 2017



Transport safety is the most acute issue in road transport, although other modes of transport cannot be neglected either. Therefore, road safety is elaborated in detail in the follow-up *National Road Safety Strategy*. The main objective to be followed during the upcoming period is to reduce the number of fatalities in road transport to the level of the European average (under the conditions of the Czech Republic it means a 60 % reduction against 2009) and reduce the number of seriously wounded by 40 % against 2009. This objective is in line with the objectives of the current European transport policy.

There are three elements to transport safety:

- the human factor
- roadworthiness of vehicles
- technical condition of the transport infrastructure including the level of technical traffic management (introduction of signalling equipment at different levels)



Measures related to transport safety:

- On the basis of the development of accident rates in road traffic, update the *National Road Safety Strategy*, which takes into account the objectives contained in the Communication from the European Commission setting out EU policy orientations on road safety for 2011–2020<sup>36</sup>. For the *National Road Safety Strategy* specify insurmountable and clearly defined indicators for improving road safety within the deadlines set out in the *National Road Safety Strategy* up to 2050. Link the indicators not only to the number of inhabitants or vehicles but also to transport performance.

Responsible: MoT and the regional authorities; deadline: continuous; check date: 2020

- Consistently implement and review on an annual basis the fulfilment of measures defined in the *National Road Safety Strategy*.

Responsible: MoT, Ministries, the regional and local authorities, NGOs and private entities;  
deadline: annually

<sup>36</sup> Communication from the Commission: Towards a European road safety area: policy orientations on road safety 2011-2020, COM (2010) 389 final



## Measures related to the human factor

- **Ensure continuous awareness of road traffic participants about risk behaviour in road transport, using current and to-be-built public administration information systems.**
- **Ensure more efficient enforcement of adherence to road traffic rules, including the respect of prohibitions to drive and park pursuant to Act No 289/1995 Coll. (the Forest Act; Sec 20 (1g)); pay special attention to adherence by motorcycle drivers.**
- **Provide for systematic operation of road controls against traffic offences by using special monitoring vehicles with the requisite technological equipment by control bodies who will immediately respond to traffic offences.**  
Responsible for all the above measures: MoT in cooperation with Czech Police and the regional and local authorities; deadline: continuous; check date: 2020
- **Newly define control powers to check the level of teaching and training in driving schools and make their national supervision more efficient. Lay down new requirements for the applicants applying for a driving instructor professional certificate in the law on driving schools. Introduce a training obligation for driving instructors. In case of withdrawal of registration for the operation of a driving school due to violation of law, enable the withdrawal of all other related registrations.**
- **Build a feedback system to monitor the effectiveness of teaching and training of new drivers and continuous learning of drivers in order to be able to evaluate the quality of driving schools or other professional drivers' education centres.**  
Responsible for all the above measures: MoT; deadline: continuous; check date: 2020
- **In the context of completing new sections of motorways and dual carriageway roads, ensure that the numbers of Police officers and other members of the Integrated Rescue System are adequately raised, including the appropriate technical background.**  
Responsible: MoI in cooperation with MoT; funding: MoI in cooperation with the Czech Government (approval of systematic job positions); MoI (earmarking funds for these systematic job positions)

## Measures related to technical road safety

- **Support the implementation of intelligent transport systems, increasing safety and continuity of transport:**
  - Gradually equip the network of motorways and dual carriageways roads with functional warning, information and cooperation systems. Deploy speed control systems in sections with high traffic intensity and risk of congestions
  - Establish sectional speed measurement at highly exposed road sections
  - At selected points of the road network establish dynamic weighing systems for trucks
  - Support diagnostics of vehicles in motion and data sharing between infrastructure administrators and transport operators
- **Pay attention to consistent implementation of Directive 2008/96/EC on road infrastructure safety management in the TEN-T network, in particular as regards safety audits and inspections. Gradually apply instruments of the EU Directive on road infrastructure safety management to the whole road network. Introduce systematic removal of black spots, set out a uniform information basis enabling the interconnection of mutually separate systems and sharing of data on traffic accidents and their consequences.**
- **In urban areas, depending on traffic intensity, separate the non-motorized transport (bike lanes and trails, physically separated sidewalks), amend national law regulating the use of common trails by the relevant road traffic participants.**
- **Gradually modify identified black spots, flexibly implement low-cost measures (timely removal of grown-up greenery from view, repairs of pot holes etc.).**

- Build through roads in municipalities in accordance with the valid principles and implement measures for road traffic calming, implement measures changing the way of driving at entry way to municipalities, calm traffic in municipalities and implement safety elements on infrastructure in populated areas.
- Ensure suitable use of traffic signs (variable traffic signs, renewal of horizontal traffic signs).
- Within the framework of the construction of new motorways and dual carriageway roads implement as their integral part buildings and places immediately serving safety and continuity of traffic.
- Support the construction of truck parking bays.
- Utilize the possibilities of satellite navigation systems to localize points of accidents and alert drivers.
- Introduce an automated system for the detection and prosecution of road safety violations, using the planned National Register of Traffic Offences, and make vehicle register available to administrative authorities to the required extent.
- Establish check points when building road infrastructure.
- Improve safety parameters at railroad crossings.  
Responsible for all the above measures: MoT in cooperation with the Czech Police, the regional and local authorities, RMD and RIA; deadline: continuous; check date: 2017

#### Measures related to roadworthiness

- Increase emphasis on national supervision of testing centres and improve the legal framework for national supervision of testing centres (TC).
- Strengthen the role of national technical supervision in the area of roadworthiness tests.
- Prepare conditions for the introduction of systems which make it possible for a vehicle to communicate and connect with the transport infrastructure.<sup>37</sup>  
Responsible for all the above measures: MoT in cooperation with the Czech Police, the regional and local authorities; deadline: continuous; check date: 2020

#### Measures related to the transport of hazardous goods

- Continue inspecting transports of hazardous goods and introduce effective measures for clearing away accidents on transport routes, including more efficient coordination of the rescue systems in European context.
- Systematically create conditions for shifting hazardous load transports to a larger extent to safer modes of transport.  
Responsible for all the above measures: MoT in cooperation with Mol and the regional and local authorities; deadline: continuous; check date: 2020

## 4.2.7 Completing the Restructuring of the Railway Transport System

- *Responsibility for the fulfilment of the specific target: MoT*
- *Funding: organizational measure*
- *Deadlines: 2020; check date: 2017*

The transformation of the Czech railway sector, which started by the closure of the state organization Czech Railways, with its legal successors Czech Railways, a.s. (joint-stock company), and Railway Infrastructure

<sup>37</sup> ITS Action Plan: Action plan for ITS deployment in Europe: Action Area 4: "Integration of the vehicle into the transport infrastructure"

Administration, s.o. (state organization), in 2003, has still not been completed, despite all current measures (transfer of dead and live transport routes). In relation to this fact, there is a potential for negative phenomena related to the position of Czech Railways a.s., as the dominant operator in the market of the railway transport services. These negative phenomena do not have to be directly connected to actual competitive activities of Czech Railways, a.s., but rather to the increased tendency of other competitors to question, by exercising specific rights<sup>38</sup>, such activities by Czech Railways, a.s., or its sole shareholder, the Czech Republic.

Czech Railways, a.s., as a transport operator, currently owns property in infrastructure (lands under the railway routes in case of some railway stations, buildings necessary for the railway operation, station buildings), such property being for the most part necessary for railway operation – i.e., the primary activity of a transport operator. The objective of the completion of the restructuring of the Czech railway sector is such an arrangement of relations among different railway entities which will exclude any possibility of discriminatory or non-transparent competitive environment in the market of the railway transport services. Measures aiming at this objective are both of legislative<sup>39</sup> and non-legislative<sup>40</sup> nature.

Completion of the transformation of the Czech railway sector is connected also to the completion of transformation of the largest Czech railway operator, which will be carried out by creating a holding structure, including companies for passenger transport, freight transport and other companies for selected downstream activities, which will ensure effective independence of the infrastructure operator from the transport operator and enable non-discriminatory competition of operators integrated into a holding within a fully liberalized railway transport market.

#### Measure:

- **Complete the transformation of the Czech railway sector. This process aims at effective implementation of non-discriminatory and transparent competitive environment in the market of the railway transport services.**  
Responsible: MoT; check date: by the end of 2015
- **In the context of Directive of the European Parliament and of the Council 2012/34/EU of 21 November 2012 establishing a single European railway area prepare legal and organizational measures for the establishment of an independent railway regulatory office in the Czech Republic.**  
Responsible: MoT; deadline: 1 January 2014
- **Compile a conception of further ownership development of business segments of the joint-stock company Czech Railway, a.s.**  
Responsible: MoT; deadline: 30 June 2015
- **Create a holding structure in the railway sector excluding the owner and operator of the transport infrastructure.**  
Responsible: MoT; deadline: 31 December 2020, check date 2017

## 4.3 Funds for Transport

- *Responsibility for the fulfilment of specific targets 4.3.1 – 4.3.4: Ministry of Transport in cooperation with MoF and MIT*
- *Elaborated in the follow-up strategy: Transport Sector Strategies, Long-term Funding Model for Transport Infrastructure*
- *Funding: detailed in Transport Sector Strategies; STIF budgets*
- *Deadline: continuous, check date 2015*

The area of funding is elaborated in more detail in the project *Long-term Funding Model for the Transport Infrastructure*.

Operation, maintenance and development of the transport infrastructure demands stable financing at the level of 2.5 % GDP.



<sup>38</sup> For instance, complaints sent to the relevant bodies authorized to act in the sphere of competition protection: Office for the Protection of Competition, European Commission

<sup>39</sup> Adoption of a new legal regulation for railway operation and railway transport services, pursuant to Directive of the European Parliament and of the Council 2012/34/EU establishing a single European railway area and other EU laws and regulations

<sup>40</sup> Transfer of ownership to necessary infrastructure from Czech Railways, a.s., to the state

### 4.3.1 Ensuring Funds by Classical Financing

The transport sector depends to a large extent on funding from public budgets. On the other hand, it is the only sector burdened with an additional excise duty, which is so high that - if transferred back to the transport sector – it would satisfactorily solve not only the issues related to the construction of the transport infrastructure but also the funding of public transport services. In this sense the transport sector can be self-financed. Transferring the full amount of the mineral oil excise duty back to the transport sector would cause major problems with the funding of other national needs. However, it is the public sector that is responsible for the maintenance and development of the transport infrastructure and it is its duty to secure efficient funding. Unpredictable changes of budget frameworks year-on-year (it takes 10 to 15 years to prepare and build the transport infrastructure) are the biggest source of inefficiency. It is extremely important to stabilize the income for the financing of the transport infrastructure, with the minimum annual amount required for efficient implementation of this Transport Policy amounting to CZK 43 billion. Out of it, about CZK 3.8 billion should be allocated for the key area of construction preparation. Any subsidies earmarked from the national budget for the development of the transport infrastructure after an increase of the share in excise duties in favour of the STIF would be possible on the basis of a political decision by the Czech Government (e.g., in order to comply with European obligations to complete the TEN-T network and secure national co-financing for Operational Programme Transport in 2014 - 2020).

Charging the road users is another classical, already established source of finances. The scope of the road network as well as the range of categories subject to charging will be extended in the future. The measures must be in line with the development of collection technologies since the collection overhead must not exceed 30 % of the amount collected<sup>41</sup>. On roads of lower classes, several measures should be introduced in this context, in order to protect the infrastructure from the result of bypassing the sections subject to charging by heavy traffic – either by charging for use (if there is a suitable technology), or by constraining the traffic, for instance by legislative arrangements limiting the use of certain infrastructure by heavy duty trucks.

Harmonization of charging for the railway transport will continue but the situation must be prevented where too sharp reduction of charges would have a strong negative impact on the income of RIA, which is used to cover operation and serviceability of railway infrastructure.

The regional authorities could assume part of the responsibility for development of the transport infrastructure otherwise their requirements are often unreasonable and result in inefficient construction.

The transport sector will be an important beneficiary of European funds also in the period 2014 - 2020. While the overall amount of funds will be lower than during 2007 – 2013, there will also be a reduction of the number of funded priorities. Since the transport infrastructure is perceived as a priority of high importance, a higher proportion of European funds earmarked for the Czech Republic is justifiable. However, national co-financing will have to be provided, which is another reason to improve the stability of funding of the transport infrastructure.

It will be necessary to ensure the availability of sufficient funds for the co-financing and pre-financing of EU funds. Besides the above, these funds could be secured for instance also through a special-purpose bond programme earmarked solely for the co-financing of EU funded construction. Tranches of this bond programme would fall under the responsibility of the MoT so as to secure sufficient level of certainty for the co-financing or pre-financing, as the case may be.

#### Measures:

- **Stabilize income for the financing of the transport infrastructure in relation to STIF** (proportion of national funds without European contribution) **at least at the level of CZK 43 billion, of which about CZK 3.8 billion should be earmarked for construction preparation, with the view to:**
  - limiting fluctuations, year-on-year, of the expenditure framework for maintenance, repairs and development of the transport infrastructure,
  - ensuring national co-financing for projects financed from European funds,  
Responsible: MoF in cooperation with MoT; deadline: by the end of 2014

<sup>41</sup> Within the meaning of the provisions of Directive of the European Parliament and of the Council 1999/62/EC of 17 June 1999 on the charging of heavy goods vehicles for the use of certain infrastructures, Article 7(2) (c)(ii), as amended.

- **Gradually aim at harmonized pricing of the use of the transport infrastructure in the road and rail transport so that different modes of transport would carry the costs of the transport infrastructure to equal extent without distorting competition between different modes of transport having also regard to international transport** (taking into account situation in neighbouring countries) and at the same time solve the question of covering the resulting increase of costs for authorities contracting public transport.  
Responsible: MoT in cooperation with MoF; deadline: by the end of 2014; thereafter check every two years
- **Extend distance-based charging on roads of Class I. The definition of the extent of charging on roads of Class I and possibly the charging on selected roads of Class II and III and local roads in large cities is contingent on the introduction of such tolling technology where the total system overhead would not exceed 30 % of the amount collected. In case of charging of lower class roads, coordination with national charging system would have to be ensured.**  
Responsible: MoT in cooperation with regional authorities; deadline: from 1 January 2017
- **Analyse economic efficiency of the extension of the distance-based charging system for other vehicle categories. It should only be introduced if economically more efficient than the current system of time-based charging.**  
Responsible: MoT; deadline: 2015
- **Prepare to ensure interoperability of electronic tolling systems within the EU.**  
Responsible: MoT; deadline: according to development at EU level
- **Adapt toll rates with the view to differentiating as much as possible by vehicle emission classes** (update with regard to the development of Euro emission standards), **number of axles, pressure category and duration of travel** (higher rates during peak traffic, e.g., on Friday afternoons, or at times which have higher impact on public health). **Make the adaptations having regard to the rate of revenue from the tolling system.**  
Responsible: MoT; deadline: continuous process; check date 2017
- **Enable through national law and gradually introduce charging for entry/ restriction of entry / access of vehicles to city centres as a regulatory tool for traffic restriction, while taking into account emission limits laid down by the EU.**  
Responsible: Ministry of the Environment in cooperation with MoT and the regional and local authorities; deadline: pilot cities by the end of 2014, then based on evaluation
- **Revise and update legislative measures for the support of faster fleet replacement in the area of road tax and propose appropriate measures so that the amount of the tax collected does not fall**  
Responsible: MoF in cooperation with MoT; deadline: continuous process; check date 2015
- **Regulate by national law the use of lower class roads by freight transport with the view to confining heavy freight transport to motorways and express roads as much as possible.**  
Responsible: MoT; check date: by the end of 2014

### 4.3.2 Ensuring Funds by Alternative Financing

Having regard to the above mentioned legitimate need to stabilize funds, it is desirable to achieve this stabilization through an optimum mix of measures on the income side. These options are elaborated in more detail in the document *Transport Sector Strategies*. The most efficient tool is the stabilization of the transport infrastructure funding from public sources. Also the alternative financing sources can, however, serve as an additional tool for stabilizing the income side (returnable funds of private investors). These alternative financing sources can be used, if involved, only for this stabilizing purpose, or possibly to secure sufficient funds for co-financing and pre-financing of EU projects. It is more suitable to search for such ways of alternative financing which would not encumber the balance of government debt and deficit according to ESA95 methodology; however even the use of a tool which does not satisfy these parameters cannot be totally rejected due to demonstrably higher efficiency of the transport sector under stabilized budget.

The PPP projects, should they become applicable and efficient in the long run in the conditions of the Czech Republic, must be based on the mechanism of payment for availability (see document on the pilot PPP project

for D3, which the Government took note of by its resolution No 469 of 26 June 2012). For this reason the PPP projects cannot be considered as a tool which would sufficiently raise the total amount of funds earmarked for the transport infrastructure. The increase of funds is naturally visible in the short term when private funds are invested in new construction. After the completion of construction, also additional income from charging will come in. However, the total payments to concessioners responsible for the PPP project will always be higher in total than the additional income generated by the project. Nonetheless, at the time of a strong decline of public investment it is desirable to increase investment by implementing the PPP projects, even though it will be reflected in future payments for availability, which will have to be covered from the income mix of the STIF. For this reason, solely very important sections of our transport network should be selected for the PPP projects. The topic of the PPP projects is elaborated in more detail in the document *Transport Sector Strategies*.

#### Measures:

- **Harmonize legal framework aiming at facilitating investment preparation of transport construction projects in order to create conditions for faster preparation of the PPP projects as well as projects financed regularly.**  
Responsible: MoT in cooperation with MLD; deadline: continuous process; check date 2017
- **Aim at using alternative financial instruments, including debt instruments, in order to stabilize the income side earmarked for the financing of the transport infrastructure.**  
Responsible: MoT in cooperation with MoF; deadline: by the end of 2015

### 4.3.3 Internalization of External Costs as an Innovative Source of Financing

According to the available estimates, the most common external costs (costs of congestions, traffic accidents, air pollution, noise and global warming) amount to 2.6 % of the GDP. These costs are borne generally by all inhabitants, which means that the “user pays” and “polluter pays” principles are not fully applied. Already in 2008 the European Commission submitted a proposal for a strategy of gradual internalization of external costs in all modes of transport.<sup>42</sup> There has been lively debate in the recent years about the income from the charging for external costs as a possible new “sustainable” source of financing of the transport infrastructure.<sup>43</sup>

The amendment of the Eurovignette Directive adopted in 2011<sup>44</sup> makes room for the Czech Republic to charge not only for the actual road traffic (tolling) but also for selected external costs (noise and air pollution). In order to tackle congestion issues, this EU law provides also for a more flexible approach to the setting of toll rates varying according to the time of day. The use of such instruments appears to be desirable not only in view of acquiring additional financial funds, but also with regard to the geographic position of the Czech Republic (transit country) and expected introduction of the system in some neighbouring countries (at least in Austria). Otherwise the Czech Republic might struggle with undesirable increase of international transit transport as a result of lower transit costs through its territory in comparison with the neighbouring countries. Also the benefits of this measure for the creation of comparable conditions for different modes of transport cannot be overlooked.

In the context of discussions on an amendment of EU law in the area of railway transport (revision of the First Railway Package) it is desirable to also introduce modification of the charges for the use of railway infrastructure according to the level of noise effect caused by rolling stock. This measure will provide railway operators with an appropriate incentive to replace their rolling stock, further strengthening the competitiveness of this mode of transport.

In the long-term it will be necessary to respond to the specific content of future European Commission initiatives in this field, as forewarned in the current White Paper, which should bring about further harmonization in this area.

<sup>42</sup> Communication from the Commission “Strategy for the internalization of external costs” COM(2008) 435

<sup>43</sup> E.g., see the Communication from the Commission “Sustainable future for transport: Towards an integrated, technology-led and user friendly system” of 2009

<sup>44</sup> Directive 2011/76/EU of the European Parliament and of the Council of 27 September 2011 amending Directive 1999/62/EC on the charging of heavy goods vehicles for the use of certain infrastructures

#### Measures:

- **In accordance with the amendment of the Eurovignette Directive in the area of road freight transport, start charging for selected external costs (noise, accidents and air pollution).**  
Responsible: MoT; deadline: by the end of 2015
- **Following the adoption of the revision of the First Railway Package analyse the method of and possibilities for the introduction of modification of charges for the use of railway infrastructure according to the noise effect of rolling stock.**  
Responsible: MoT; deadline: by the end of 2020
- **On the basis of relevant legislative as well as non-legislative initiatives considered by the European Commission in this field, continue to gradually objectify the principle that each user of the transport infrastructure shall pay for the costs arising from its activity (including externalities).**  
Responsible: MoT; deadline: continuous, depending on the progress at the EU level; check date: 2017

### 4.3.4 Distribution of Funds

Ensuring repairs, maintenance and operation is to be the priority in the financing of the transport infrastructure. Neglecting this approach would result in debasement of the sources already invested while the neglected transport infrastructure would keep coming back to the list of investment needs. The issues of the distribution of funds between maintenance and development and among the infrastructure for individual modes of transport are dealt with in the follow-up strategic document *Transport Sector Strategies*.

#### Measures:

- **In case of lack of funds it is necessary to prefer maintenance and repairs of the transport infrastructure over new construction.**  
Responsible: MoT; deadline: continuous process
- **Distribute funds for development of the transport infrastructure among individual modes of transport having regard to balanced development of these modes of transport on the basis of results of the follow-up document *Transport Sector Strategies*.**  
Responsible: MoT; deadline: continuous process from 1 January 2014

### 4.3.5 Ensuring Funds for the Financing of Public Transport Services

- *Responsibility for the fulfilment of the specific target: Ministry of Transport and recommendations for the regional and local authorities*
- *Elaborated in the follow-up strategy: Public Transport Conception and Public Transport plans (national and regional)*
- *Funding: national budget (Chapter 327), budgets of the regional and local authorities*
- *Deadline: continuous process, check date 2017*

The fleet and rolling stock used to operate public transport in the Czech Republic are obsolete. For the period 2014 – 2020, therefore, some involvement of European funds to a lesser extent has to be considered. However, European co-financing does not provide a systemic solution to this problem. This must be tackled by selecting public transport operators in public tenders not only on the basis of price but also according to the criteria of the quality of services and fleet or rolling stock. Owing to the high cost of fleets and rolling stock, public tenders must be announced for the period of at least 10 – 15 years<sup>45</sup> and the issue of depreciation of required vehicles must be sufficiently dealt with in the tenders published. Long-term contractual relations call for stable financing. This is why it is necessary to link the funding of public transport to a specific tax income (e.g., a proportion of excise duties). Otherwise any reduction of public transport budgets by political decisions would affect those lines for which contracts terminate in the given year (other lines being bound by contracts and consequently representing mandatory expenditures). This would result in serious restriction of lines not according to the needs but according to current contractual status.

<sup>45</sup> See Regulation No 1370/2007/EU.

In case of public transport the mutual interconnection among individual lines represent another factor. Therefore, even a slight reduction of the budgetary framework can result, after reaching a certain threshold, in a collapse of the whole public transport system. Savings thus must be based on mutually linked and optimized public transport plans (having regard to local specifics of limiting the servicing of small municipalities by rail transport, strengthening of backbone lines by a transfer system, exclusivity charges for profit-making lines).

**Measures:**

- **Optimize the scope of the public transport and create conditions for its stabilization through systemic, organizational, legal, technical and financial measures; in order to achieve higher financial efficiency, prefer commercial public transport in those cases where it creates comprehensive and stable service offer (the scope of line operation during the day and week, sufficient offered capacity at peak times, regard to capacity of railway infrastructure for other passenger transport and freight transport etc.).**  
Responsible: MoT (to be elaborated in the document *Public Transport Conception*); deadline: 2020; check date: 2017

### 4.3.6 Ensuring Energy for Transport

- *Responsibility for the fulfilment of the specific target: MoT, MIT, recommendations for the regional and local authorities*
- *Elaborated in the follow-up strategy: State Energy Conception, State Environmental Policy, documents dealing with charging of road users*
- *Funding: elaborated in the document Transport Sector Strategies; fulfilling by means of organizational measures*
- *Deadline: continuous, check date 2017*

The EU perceives the transport sector as an important strategic element, including its relation to the stability of the energy networks (emphasis on smart grids and electromobility) and diversification of risks related to energy and raw materials demand. This is why a separate part of the Transport Policy deals besides financial funds also with the issues of energy. The Transport Policy in this sense builds on the State Energy Conception (SEC), introducing other aspects which are not dealt with in the SEC (other chapters focusing on making the operation more efficient, introducing ITS or creating conditions for higher use of the modes of transport with lower energy demand also indirectly relate to energy).



Energy consumption in transport has been growing both in absolute (in units of energy) and relative terms (as a share in total energy consumption in all sectors) in all major global regions. Road transport has the most significant share in the consumption of energy in transport. This share keeps growing. The air transport is the most quickly growing mode of transport, but while it is growing with a faster pace than road transport, it does so from a much lower basis, so that its performance is by far not comparable to road transport yet. The reasons for reducing the dependence on classical fossil fuels lie not only in the expected limitation of resources (even though the sources of fossil fuels will likely still be available for an economic price up to 2030), but mainly within the context of European objectives of reducing emissions of greenhouse gasses from transport and diversifying energy sources for transport in terms of the priorities of their forms of utilization.<sup>46</sup>

<sup>46</sup> Communication from the Commission "A Roadmap for moving to a competitive low carbon economy in 2050", COM (2011)112; The White Paper – "Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system", COM(2011) 144 final – It is the objective to reduce greenhouse gas emissions in the transport sector approximately to 20 % below the 2008 level by 2030 and to reduce greenhouse gas emissions at least by 70 % compared to the same year by 2050, namely by developing new fuels for transport from domestic sources or from politically less instable regions (in particular natural gas in the form of CNG and LNG) as well as from renewable sources.



There are in principle three ways to reduce dependence on oil products. The first is development of new fuels for transport from domestic sources or from politically less instable regions (coal, natural gas) as well as from renewable sources. The second way is improving energy efficiency (technical adjustment of engines, hybrid engines etc.) and the third one is higher use of those modes of transport which are more energy efficient. Savings on fuel consumption achieved by reducing the number of journeys or replacing shorter journeys in passenger transport with non-motorized modes of transport should also make a positive contribution towards reducing energy dependency and transport emissions. Energy issues in transport will be approached in conformity with the State Energy Conception.

#### Measures:

- **Focus support mainly on the building of publicly accessible refuelling points for public transport in larger cities.**  
Responsible: MoT in cooperation with MIT, MLD and MoE, recommendations for municipalities; deadline: continuous, check date: 2017; funding: budgets of the regional and local authorities with the support of European funds
- **Continue introducing ever stricter legislative limits for vehicle emissions.**  
Responsible: MoT in cooperation with MoE; deadline: continuous, check date: 2017
- **Increase the proportion of energy efficient public transport (with lower energy consumption and higher share of alternative energies) at the national, regional and local levels. In case of freight transport, consequently apply the co-modality principle.**  
Responsible: MoT and the regional and local authorities
- **Through public investment in infrastructure complete the basic transport infrastructure network as soon as possible.**  
Responsible: MoT
- **Within the system of distance-based charging for the use of infrastructure prefer the means of transport with lower specific energy consumption and lower level of emissions. Elaborate and implement a variation of tariffs for the use of infrastructure for different categories of vehicles and according to their specific consumption.**  
Responsible: MoT, recommendations for municipalities; deadline: continuous, check date 2017;
- **Within the framework of the development of the motorway network and selected Class I road network extend the application of ITS systems to optimize transport processes with the view to achieving lower specific energy consumption.**  
Responsible: MoT
- **Create conditions for equipping the transport infrastructure with recharging and refuelling points for alternative energies, in accordance with the processes at European level.**  
Responsible: MoT in cooperation with MIT and MoE; deadline: continuous, check date 2017; funding: co-financing from European funds
- **Aim towards increasing the share of renewable sources on total energy consumption in transport to 10 % according to EU5 agreements by 2020.**  
Responsible: MIT in cooperation with MoT; deadline: 2020, check date 2017
- **Reduce the consumption of gasoline and diesel in transport and replace them with alternative fuels. Having regard to the refining process, through suitable fiscal policy support a balance of gasoline and diesel consumption, also in relation to expected EU measures. Increase the share of alternative fuels.**  
Responsible: MIT in cooperation with MoT and MoF; deadline: continuous, check date 2017
- **Reduce NO<sub>x</sub>, VOC and PM 2.5 emissions from road transport by fleet replacement in the Czech Republic and by increasing the share of alternative propulsion.**  
Responsible: MoE in cooperation with MoT, MoF and MIT; deadline: 2020; funding: co-financing from European funds

- **Reduce losses in the operation of recharging systems and electrical traction facilities.**  
Responsible: MoT in cooperation with MIT and the regional and local authorities; deadline: 2020; funding: co-financing from European funds
- **When replacing the rolling stock in the rail transport, increase conversion efficiency of the rail tractive vehicles.**  
Responsible: MoT in cooperation with MIT; deadline: continuous, check date 2017; co-financing from European funds
- **Provide for the utilization of energy recuperation on electrified RIA tracks.**  
Responsible: MoT; deadline: 2020, check date 2017; funding: STIF budget and co-financing from European funds
- **Continue electrification of railway and urban transport; reduce the share of the passenger and freight transport which is using energy derived from crude oil and gradually shift to transport systems based on higher share of energies derived from renewable sources.**  
Responsible: MoT and the regional and local authorities; deadline: continuous; funding: elaborated in the Transport Sector Strategies
- **Examine possibilities for safe LNG transport from inshore terminals on inland waterways.**  
Responsible: MoT in cooperation with Mol and MIT, deadline: 2016.

## 4.4 Transport Infrastructure

### 4.4.1 High-quality Maintenance and Operation of the Transport Infrastructure

- *Responsibility for the fulfilment of the specific target: MoT and organizations responsible for the administration and development of the transport infrastructure*
- *Elaborated in the follow-up strategy: Transport Sector Strategies*
- *Funding: elaborated in the document Transport Sector Strategies*
- *Deadline: continuous process, check date 2017*

The guarantees of operability, high-quality maintenance and repairs of the transport infrastructure are of key importance and must be financially secured as a priority. Without the fulfilment of this requirement, investment already made in the transport infrastructure will be gradually debased. The funding of repairs and maintenance must be in such amount as to prevent further growth of the internal debt. The funding of this area must be as little dependent as possible on subsidies from public budgets and it must be as much as possible derived from traffic charges.

Repairs and maintenance of the transport infrastructure must be carried out with the transport traffic in mind. Thus, also losses incurred by transport operators must be incorporated in the costs.

#### Measures:

- **Provide sufficient funds for the maintenance and repairs of the transport infrastructure, including their continuous allocation throughout the year.**  
Responsible: MoT, the regional authorities; deadline: continuous process; funding: indicated in the document Transport Sector Strategies, depends on annual STIF budgets
- **Provide sufficient funds for the maintenance and repairs of the transport infrastructure, including their continuous allocation throughout the year.**  
Responsible: MoT, the regional authorities; deadline: continuous process; funding: indicated in the document Transport Sector Strategies, depends on annual STIF budgets

- **Plan track possession and closures of traffic for the maintenance of the transport infrastructure with regard to minimizing the impact on traffic, if possible outside peak hours; coordinate concurrence of construction work (track possessions, closures of traffic etc.) on rail and road. The plan of track possessions and closures of traffic must be published well in advance so that the operators can prepare appropriate measures.**  
Responsible: administrators of the transport infrastructure; deadline: continuous process
- **Aim at systematic maintenance and repairs of infrastructure, adhering to a schedule set in advance according to the importance for transport safety (as a priority deal with road defects, remove black spots, repair sections and bridges in disrepair, provide for through roads in municipalities).**  
Responsible: MoT, administrators of the transport infrastructure, the regional authorities; deadline: continuous process

## 4.4.2 Development of the Transport Infrastructure

- *Responsibility for the fulfilment of the specific target: MoT and organizations responsible for the administration and development of the transport infrastructure*
- *Elaborated in the follow-up strategy: Transport Sector Strategies*
- *Funding: elaborated in Transport Sector Strategies*
- *Deadline: continuous process, check date 2017*

The transport infrastructure has to provide for continuous international long-distance, trans-regional, regional and local transport. All these segments are important for the functioning of European economy. The European Commission is focusing on the support of the transport infrastructure which is important in particular for long-distance transport, using its Trans-European Transport Network (TEN-T) Policy as a tool towards fulfilling this objective. The implementation of this policy is closely tied to the new EU financial instrument to support the development of transport, energy and telecommunications infrastructure called Connecting Europe Facility (CEF). The European Commission is at the same time aware that there are major differences in quality between the transport infrastructure of the old and the new Member States, so that it makes it possible, within the framework of its Cohesion Policy, to use European co-financing also for other categories of the transport network, even if its trans-European perspective dominates. However, a national Transport Policy must consider all segments of the transport market equivalent. Within the framework of project evaluation in the strategic document Transport Sector Strategies, which builds on the Transport Policy, all functions played by individual projects within the transport system are assessed, so that TEN-T projects are not automatically preferred, even if the document is in conformity with the European network. When allocating investment funds, it is necessary to respect the financing rules valid for different European funds, taking into account funds available for national co-financing.

Besides the obligations arising from the European laws relating to the transport infrastructure, the Transport Policy must also respect other international agreements acceded to by the Czech Republic. They include in particular the AGR, AGC, AGTC and AGN agreements. The main issue with these agreements is the fact that they have not been ratified by all European countries and no fixed deadline is set for the fulfilment of the relevant obligations. Their content is only rarely updated, too. The draft of TEN-T Regulation or any other EU laws (e.g., Regulation No. 913/2010 on Rail Freight Corridors) does not respect these agreements.

### Measure:

- **Update in regular five-year intervals the follow-up document Transport Sector Strategies, including a multimodal transport model.**  
Responsible: MoT; deadline: continuous process
- **Through the Regional Development Policy of the Czech Republic and territorial planning documents ensure territorial protection of corridors and sites earmarked for the transport infrastructure development.**  
Responsible: MoT in cooperation with MLD and the regional and local authorities; deadline: continuous process, check date: 2014



### 4.4.2.1 The Railway Infrastructure

The main principles of the railway network development:

- Completion of the building of the transit railway corridors, including railway junctions by 2018 (except the Prague and Brno junctions<sup>47</sup>, for which separate timetables will be laid down in the Transport Sector Strategies)
- Modernization of tracks on the TEN-T core network for passenger and freight transport and of tracks included in the Rail Freight Corridors pursuant to Regulation (EU) No 913/2010 by 2030
- Modernization of railway tracks on the TEN-T comprehensive network by 2050 at the latest
- Linking all regional capitals to high-quality railway network in the direction to the main economic centres of the country (Prague in Bohemia, Prague and Brno in Moravia) by 2030
- Providing for sufficient capacity for freight transport in order to connect industrial zones of strategic importance by 2020
- Providing for sufficient capacity and speed parameters for suburban transport, in particular for cities with more than approx. 40 thousand inhabitants and for urban transport in particular for cities with more than 250 thousand inhabitants (based on the schedule laid down in the Transport Sector Strategies)
- Prepare the national law and standards for commencement of project preparation of high-speed railway lines within the framework of Rapid Connections and start the process of preparation and implementation in accordance with the outputs of the Transport Sector Strategies so as to make the sections of the TEN-T core network operational by 2030 at the latest and the sections of the TEN-T comprehensive network by 2050 at the latest
- Prepare the legal framework and standards, where there is interest on the part of the regional and local authorities, to start projects of tram-train systems
- Gradually optimize other railway lines important for public transport services or freight transport in accordance with schedules laid down in the Transport Sector Strategies
- Carry out electrification of new sections having regard to the needs of public transport lines and to the fulfilment of objectives of shifting to sustainable energy forms (in accordance with schedules laid down in the Transport Sector Strategies)
- With regard to the needs of public transport lines implement measures of small extent on railway infrastructure
- Remove bottlenecks in the railway infrastructure based on experience from operation, justified requests from operators and competent authorities
- Pursuant to obligations arising from European laws, equip defined railway network and vehicles with the ERTMS system; the interlocking equipment must enable the headway of 2 minutes at exits from railway junctions
- Rationalize operation of selected regional lines in relation to binding transport services contracts from the regional authorities
- Support the development of cross-border railway projects
- Develop and maintain the railway network with regard to the application of TSI
- Reduce the railway network by closing lines which are not usable for regular public transport services (to be assessed on the basis of national and regional public transport plans). Redundant tracks offer for sale without entitlement to any future national subsidies. Closed tracks will not lose their transport function – they will be used for non-motorized transport or other transport activities in tourism (continually).



### 4.4.2.2 The Road Infrastructure

The main principles of the road network development:

- By 2030 build missing sections on the TEN-T core network with parameters conforming to the forecasted traffic intensity (forecasts from the traffic model in the document Transport Sector Strategies)
- By 2050 build missing sections on the TEN-T comprehensive network with parameters conforming to the forecasted traffic intensity (forecasts from the traffic model in the document Transport Sector Strategies)

<sup>47</sup> There are also other problematic sections: Praha-Radotín – Beroun and Nemanice – Ševětín, where it will likely be impossible to comply with the date of 2018; however no decision has been reached yet concerning the method and deadlines of solution for these sections.

- Improve the connection of all regional capitals to the backbone high-capacity road network in direction to the main economic centres of the country (Prague, in Moravia also Brno) by 2030
- Ensure the requisite transport connection of industrial zones to road infrastructure in accordance with the respective Government resolutions
- Ensure the connection of important development investments to road infrastructure at least at the level of Class I roads
- On the main motorway routes install intelligent transport systems for the traffic control and regulation, improvement of transport safety and efficiency and provision of infomobility (ITS applications will enable, inter alia, better capacity utilization of road infrastructure)
- Build through roads in municipalities located on routes with high traffic intensity, in particular by building bypass roads (including so-called service roads to motorway-type roads), in accordance with schedules laid down in the Transport Sector Strategies
- Deploy stationary as well as mobile systems for weighting in motion in order to eliminate the operation of overloaded trucks which disproportionately damage the road infrastructure.

#### 4.4.2.3 The Inland Waterway Transport Infrastructure

The main principles of the development of inland waterways:

The inland waterways fulfil also other functions than those related to transport. The planning of their development, therefore, is closely tied to other concepts (including the funding), which are under the purview of the MoA (water management) and MIT (connecting manufacturing industry).

- Deal with issues of navigability and reliability of important waterways used for transport and of other waterways, where the development and modernization is efficient (in accordance with schedules laid down in the Transport Sector Strategies)
- Continue implementing the objectives of the NAIADES, NAIADES II and similar follow-up programmes
- Continue developing the River information services
- Prepare projects completing the infrastructure for recreation navigation on waterways important for transport pursuant to Act No 114/95 Coll., on inland navigation (in accordance with schedules laid down in the Transport Sector Strategies)
- Provide for equipping the waterways and ports with anti-flood protection elements
- Address the issue of bridge clearance on the Vltava River between Mělník and Prague and capacity issues on the waterway in Prague
- Deal with preparation of the Danube-Oder-Elbe canal, depending on the results of a feasibility study. Continue international cooperation with Poland and Germany (connecting the Ostrava conurbation to the Oder waterway), Slovakia and Austria.  
Deadline: by the end of 2015, including the SEA; responsible: MoT in cooperation with MoA and MIT
- In the follow-up to the results of examination of the Danube-Oder-Elbe canal, submit a document to the Czech Government on further territorial protection of the project  
Deadline: end of 2016, responsible: MLD in cooperation with MoT and MoE.

#### 4.4.2.4 The Air Transport Infrastructure

The potential of regional airports in the Czech Republic will be assessed in a follow-up document to the Transport Policy, the *Air Transport Conception* for 2014 - 2020.

The main principles of the development of the air transport infrastructure:

- Create conditions for modernization of the technical airport infrastructure aiming at improving the capacity, quality and safety of the air transport
- Create conditions for a functional system of protection, preservation, development and modernization of current airport infrastructure in the public interest to provide services to air carriers and other airport users
- Organize the development of regional airports so as to prevent building of unused or inefficiently used



current airport infrastructure which could become an economic burden (recommendation for the regional authorities, further elaborated in the *Air Transport Conception* for 2014 - 2020)

- Support gradual shift from conventional navigation systems to global navigation satellite systems (GNSS)
- With regard to fulfilling the EIA requirements, continue preparing the building of the parallel take-off and landing runway at the Václav Havel Airport in Prague
- Connect the Václav Havel Airport in Prague to railway transport, both for direct connection of long-distance lines and for the connection to the city centre. Continue preparing projects connecting TEN-T airports to railway infrastructure also for the Brno and Ostrava airports.

#### 4.4.2.5 The Multimodal Transport Infrastructure

Multimodal terminals in passenger and freight transport are an inseparable part of the transport infrastructure and a separate layer is defined for them in the TEN-T network. The Czech legislative framework is also in need of updating in this respect. It must be possible to finance multimodal transport infrastructure through the STIF. The main principles of multimodal infrastructure development:

- Build public multimodal freight transport terminals included into the TEN-T network with parameters according to AGTC by 2030 and create conditions for the private sector to build logistics centres with connection to them
- Support the establishment of public terminals with possible links to logistics centres also in other locations where economically justifiable. Public terminals are not to compete with each other (application of the regional principle), there is to be the competition among service providers in the form of direct competition in a market of competitions for a market
- Support the equipping of terminals with progressive transshipment technologies with the view to connecting the Czech Republic to the network of regular intermodal lines in Europe
- Enable the financing of multimodal freight transport terminals under RIA ownership
- Support regions and municipalities in building multimodal terminals for passenger transport including equipping them with information dispatching systems.

#### 4.4.2.6 Specifics of the Non-motorized Transport Infrastructure

These issues are elaborated in more detail in the follow-up document National Cycling Strategy. The main principles of development of the non-motorized transport infrastructure are:

- Gradually develop the cycling infrastructure with the view to increasing the inclusion of cycling into the short-distance passenger transport system
- By segregating cycling from other modes of transport on heavy-traffic roads in rural areas achieve a reduction of the number of accidents with bikers. In densely populated areas a suitable solution consists, depending on local conditions, in integration of cycling in the form of an appropriate road arrangement and in connection with installation of elements for traffic calming
- Support the development of pedestrian traffic by introducing measures for segregation and safety of pedestrian traffic
- Provide financial support for personal navigation systems for the persons with reduced orientation and for implementation of measures destined for the persons with reduced mobility.

#### 4.4.3 Accelerating Construction Projects Preparation

- *Responsibility for the fulfilment of the specific target: MoT, MLD and organizations responsible for the administration and development of the transport infrastructure*
- *Funding: fulfilment with measures of organizational nature*
- *Deadline: continuous process, check date 2017*

The Government is aware of the importance of public involvement in the approval process for the transport infrastructure projects, since the transport infrastructure projects, while bringing benefits to the citizens, can be in theory implemented in several alternatives, differing by costs, length of project preparation, territorial passage and negative impact on the environment, in particular on the living conditions of citizens living in the vicinity of the new infrastructure. On the other hand, proposed projects may make living conditions easier for citizens in another location. The transport infrastructure is a costly long-term investment, therefore the evaluation of alternatives, including their environmental impact assessment, must be thorough and the public must be involved. The whole process is quite demanding and can only be

realized when all stakeholders adopt a constructive approach. The actual EIA and SEA procedures should not be viewed as an instrument to block preparation and implementation of projects, but rather as an optimization tool from the perspective of other aspects, i.e., a tool for objective assessment of the impact of the proposal or concept on the environment and the population and for the selection of an environmentally friendly alternative. The cheapest solution is not always the best one.

From the perspective of public involvement the most important stages are territorial planning, SEA and EIA procedures. The public must be given sufficient room to bring their requests to notice also in the zoning procedure, but it should only concern requests which could not have been taken into account in the previous stages of the process. The procedures have to be defined so as to prevent a process, once approved and closed, from re-opening and returning to the beginning, which causes major losses for the whole society as well as time delays in project preparation. Periods for judicial review of issued decisions should be limited to a certain time after the decision has obtained legal force.

#### Measures:

- **Amend laws with the view to facilitating and accelerating the process of construction project preparation** (Act No 13/1997 Coll., on Roads, Act No 416/2009 Coll., on Acceleration of Construction of Transport, Water and Energy Infrastructure, Act No 104/2000 Coll. on the State Transport Infrastructure Fund, Act No 184/2006 Coll., the Expropriation Act).<sup>48</sup>  
Responsible: MoT in cooperation with MLD; deadline: continuous adaptation of national laws
- **Analyse possibilities of streamlining and accelerating the procedures related to construction project preparation and on the basis of this analysis amend laws and regulations which are in the purview of other line ministries than the Ministry of Transport** (e.g., Act No 183/2006 Coll., the Building Act, Act No 100/2001 Coll., on Environmental Impact Assessment, Act No 114/1992 Coll., on the Conservation of Nature and Landscape and others), **review again the rationality of the laws governing public involvement in construction project preparation in accordance with the above principles.**  
Responsible: MoT in cooperation with MLD, MoE, MIT; deadline: 2020; check date: 2017

### 4.4.4 Achieving Savings in Preparation and Implementation of Construction Projects

- *Responsibility for the fulfilment of the specific target: MoT and organizations responsible for the administration and development of the transport infrastructure*
- *Elaborated in the follow-up strategy: Transport Sector Strategies*
- *Funding: fulfilment with measures of organizational nature*
- *Deadline: continuous process, check date 2017*

The preparation and implementation of construction projects is demanding and there is always room for optimization and savings in the process. Design of appropriate parameters of the transport infrastructure is an important area for savings since the extension of the network of superior roads will in the future concern also sections with lower forecasted traffic intensity (up to 10 thousand vehicles per day) and it will be difficult for projects proposed as full-scale dual-carriageway roads to fulfil the economic efficiency requirements. Therefore, the parameters must be in line with the traffic forecasts. In case of road infrastructure, more consideration should be given to parameters which have not been used sufficiently so far (e.g., alternating three-lane roads, narrowed four-lane roads, possibly with territorial reserves for road extension, should the forecast model indicate an increase of traffic intensity). Also draft standards and law amendments must correspond with this (e.g., setting speed limits for new road categories). When considering the application of these parameters, however, the issues of transport safety and continuity must be taken into account as a priority.

As far as the railway infrastructure is concerned, the traffic-carrying capacity of the tracks has to correspond to the forecasted volumes; at the same time the criteria stipulated by European law must be fulfilled.<sup>49</sup> These regulations do not allow, for instance, reducing maximum speed in short sections by reason of various obstacles, which results in costly solutions. However, short speed drops cause major increase of energy consumption during operation, which is contrary to the objective of reducing emissions of greenhouse gasses.

<sup>48</sup> Amendment of Act No 184/2006 Coll. and a related amendment of Act No 416/2009 Coll. were approved and published in the Collection of Laws as Act No 405/2012 Coll. in November 2012. In the upcoming period it will be necessary to evaluate the benefits of these amendments for the course of the investment process, before further amendments are considered.

<sup>49</sup> TSI, Regulation on TEN-T, Regulation on Freight Corridors etc.

Another factor which raises the price of construction is the scope of so-called induced investment, which the regional and local authorities, as a non-excludable participant to zoning and building permit procedures, uses to make their consent contingent on other investment with no or only marginal relation to the construction project in question. The contracting authority for the transport infrastructure must consequently utilize the new legal options in this area effective from 1 February 2013 pursuant to the Section 2a of amended Act No. 416/2009 Coll. (financial participation agreement or agreement on performance in kind with a zoning permit procedure participant, as the case may be).

Another possible room for savings is in the pre-design and design stage of construction preparation. Savings can be achieved both in terms of time and finances by improving coordination, logical sequence of stages and consequent adherence to prescribed procedures. During economic boom the price of construction tends to rise, while during recession it tends to fall, which is a normal market environment phenomenon.

The economic recession in 2008 necessitated the search for savings in the budgets of individual construction projects. One of the topics was also higher transparency of conditions for selecting building contractors, which aimed at efficient public tendering and, therefore, lower price of works. Generally speaking, this approach is clearly desirable, but in certain cases the way some rules were laid down was rather counterproductive. One of the issues is the question of operative changes to the technical solution, induced by unpredictable circumstances during construction, for instance by geological conditions. Linear construction projects often pass through difficult geological environment and it is very difficult to estimate how the rock will behave during earthworks. The more detailed the surveying, the more expensive it gets. With regard to the amount of costs, optimum surveying level is chosen, which, however, can never fully guarantee the behaviour of the rock during construction. Tunnels and projects with large cuttings are the most complex in this regard. If the need to change the technical solution arises during construction (for instance better stabilization of rock with sustaining walls), a very complicated process ensues, which extends the time of construction and raises the price of works. The contractor for these additional works must be selected in accordance with the Public Procurement Act and other complicated administrative procedures must be carried out. Thus, attention should be paid to such changes of the rules which in theory should make construction less expensive but in practice fail to bring this effect about and sometimes even make construction more expensive and longer. It cannot be accepted that savings are achieved through extraordinarily low tender price at the expense of the resulting quality of the works, a situation which would incur more costs in the future. It has to be carefully evaluated if the resulting tender price poses too much risk for the performance of complete and good-quality work.

The selection of contractors and designers of construction projects is of key importance for achieving optimum price-benefit ratios. Selection on the basis of the lowest price only is not always the best solution; first and foremost it is important to properly lay down qualification and assessment criteria.

#### Measures:

- **Within the framework of the document Transport Sector Strategies, on the basis of a multimodal transport model, review proposed parameters of prepared construction projects with regard to project efficiency.**
- **Minimize the scope of so-called induced investment** (do not accept accompanying investment, which has no relation to the project itself, or use the possibility to conclude agreements with participants to the zoning procedure pursuant to the amended Expropriation Act, as the case may be) **and extra work.**
- **In the medium term, unify the process of pre-design and design preparation of building projects for road/rail/waterway transport infrastructure.**
- **Complete industrial classification of transport construction works and compile a catalogue of unit reference prices for different stages of design preparation.**
- **Update the price standards on a regular basis.**
- **Continuously process and update the set of aggregated items of the transport infrastructure works.**
- **Set out rules for the compilation of tender documentation.**



- **Set out rules for the expert assessment of the transport infrastructure construction works.**
- **Introduce minimum standards of readiness of construction before opening the tender for the building contractor.**
- **Continuously analyse the possibility of using new technologies and materials including materials from secondary raw materials with the view to reducing costs and extending the useful life of construction.**
- **Set out professional requirements and define the set of obligations and authorizations for the construction administrator, investor's technical supervision and supervisor.**
- **Select supplier of services in the area of architecture and engineering strictly on the basis of the best quality/price ratio (dominant role to be played by factors like life cycle costs and principles of "green public procurement").**

Responsible for the above measures: MoT and investors; deadline: continuous process; check date: 2017

#### 4.4.5 Improving Construction Quality in Transport

- *Responsibility for the fulfilment of the specific target: MEYS in cooperation with The Czech Grant Agency, The Czech Technological Agency, MoT and organizations responsible for the administration and development of the transport infrastructure*
- *Elaborated in the follow-up strategy: Transport Sector Strategies*
- *Funding: fulfilment with measures of organizational nature*
- *Deadline: continuous process, check date 2017*

The quality of construction is insufficient in many cases, which subsequently translates into higher maintenance costs. This is why efficient control mechanisms have to be set and clear and specific responsibility of concrete entities and persons is to be laid down. Inter alia, it is important to introduce in practice a binding standard for the scope and professional level of the technical supervision of the contracting authority in transport construction projects.

National quality policy, which through its priorities is also present in the transport sector, was defined as a collection of plans, objectives, methods and tools to influence the quality of products, services and activities within national economy and public administration in order to achieve and maintain competitiveness in European and global markets.

Use of the PPP principle for selected projects, in particular ones of utmost importance, can become an important tool for quality improvement in transport construction. The possibility to bring strict contractual conditions to bear on a private concessioner makes it possible to obtain projects in the required quality, within the budget and often in a much shorter period than usual in conventional contracting.

##### Measures:

- **Improve the efficiency of control mechanisms in building construction.**  
Responsible: MoT and investors; deadline: continuous process; check date: 2017
- **Compile a set of criteria for standard maintenance of the transport infrastructure.**  
Responsible: MoT and administrators of the transport infrastructure; deadline: end of 2016
- **Support MoT programmes for quality improvement of the transport infrastructure.**  
Responsible: MoT; deadline: continuous process; check date: 2017
- **Improve the support of knowledge of expert systems and their application in practice.**  
Responsible: MoT; Deadline: continuous process; check date: 2017

## 4.5 Advanced Technologies, Research, Development and Innovation, Space Technologies

### 4.5.1 Advanced Technologies, Research, Development and Innovation

- *Responsibility for the fulfilment of the specific target: MEYS, The Czech Grant Agency, The Czech Technological Agency, MoT and organizations responsible for the administration and development of the transport infrastructure*
- *elaborated in the follow-up strategy: Action Plan for ITS Deployment in the Czech Republic, Research Conception of the Technological Agency, National Priorities of Oriented Research, Experimental Development and Innovations*
- *Funding: elaborated in Action Plan for ITS Deployment in the Czech Republic*
- *Deadline: continuous process, check date 2017*

The objective of research, development and innovation (RDI) in the transport sector is to build a framework for the implementation of measures aiming at the development of knowledge society, which will result in further growth of the competitiveness of the Czech economy and improvement of life of its citizens. These issues have recently become highly topical also within the EU so that certain initiatives can be expected also at that level. Research, development and innovation in the transport sector must focus in particular on the following problem areas:

- From the perspective of the principle of sustainable development in transport it is necessary to deal with alternative energy sources in transport and the related new propulsion, distribution and storage systems for alternative fuels. Important is also research on possible support methods for the introduction of new energy sources in transport, including the development of means of transport, as well as introduction of new technologies, materials (including materials from secondary raw materials) and diagnostic methods for environmentally friendly construction and restoration of the transport infrastructure.
- The contribution of transport to lasting prosperity of the country must go hand in hand with higher interconnection of transport systems across Europe and regions, to which their interoperability, multimodality and use of interoperable ITS systems can contribute.
- eCall is one of the so-called eSafety applications, which aim at alleviating the consequences of a traffic accident caused by late professional technical intervention and late medical assistance. The eCall system as it is defined has not yet been massively deployed in real operation. The market for eCall is yet to be created by making the eCall system operational from 1 January 2015. Within the EU programme for information and communication technologies an international pilot project "Harmonized eCall European Pilot" was set up. The Czech Republic participates in the European HeERO Project through the Ministry of Transport and in cooperation with the MoI – Directorate General of the Fire Rescue Service of the Czech Republic, mainly in order to be able to participate in the drafting of the relevant concepts, legal and technical regulations related to the development of the eCall system.

By 31 December 2014, each EU Member State is to ensure, on the basis of the EU document "Commission Recommendation of 8 September 2011 on support for an EU-wide eCall service in electronic communication networks for the transmission of in-vehicle emergency calls based on 112 ('eCalls') C(2011) 6269 final", that there is an 112 emergency call centre appointed in each EU Member State receiving the eCalls, that eCalls are given the same priority as the 112 calls and that the eCall be distinguished from the 112 call through so-called eCall discriminator. Another important milestone for the establishment of the eCall system was the publication of technical specifications for 112 emergency call centres which will be able to receive eCalls. These specifications are included in the Commission Delegated Regulation No 305/2013.

- On 3 April 2013 the Commission Delegated Regulation No 305/2013 was published in the Official Journal of the EU, containing specifications for 112 emergency call centres which will be able to receive eCalls.
- The quality of transport processes is to a large extent influenced by the transport safety factor. The current state is not good and it is the objective of research to arrive at higher safety standards both for the transport infrastructure and the means of transport, namely by improving current technologies and introducing systems which utilize new principles of intelligent transport systems.
- Investments in construction and restoration of the transport infrastructure represent important items of public budgets. Optimization of the funds invested in construction and also maintenance is a clear priority. Optimization of decision-making processes, seeking technical standards of structures, materials etc. leading to a reduction of construction costs and a parallel setting of a maintenance level of infrastructure supported by good-quality legislation which enables proper timing of maintenance, repair or renovation – these are

the conditions for sustainable development of the transport infrastructure under limited sources of funding. Another area is the search for stable financing sources for repairs, maintenance and development of the transport infrastructure and public transport services. Another important area consists in seeking possibilities for low-cost measures on the transport infrastructure with the view to optimizing transport services.

- Severe limitation of funds that can be used for the construction of new road infrastructure, transport terminals and development of multimodal and intermodal systems increasingly necessitates the creation of conditions for public-private partnerships (PPP projects). There is a need to look for new approaches in this area and create appropriate frameworks, in line with relevant European initiatives.
- MoT will ensure the meeting of the objectives of the *State Policy on Electronic Communications – the Digital Czech Republic*, in particular those parts that relate to the coverage of railway corridors, motorways and dual carriageway roads so as to provide the passengers with high-speed internet access.
- The new navigation system Galileo creates potential for the emergence of new applications and other advanced technologies.



#### Measures:

- **Create conditions for easier cooperation between different modes of transport (support of research and deployment of efficient transshipment facilities, including multimodal terminals).**  
Responsible: MEYS, The Czech Grant Agency, The Czech Technological Agency, MoT; deadline: continuous process; check date: 2017
- **Support the deployment and development of ITS systems for freight transport in public logistics, including optimization of city distribution (city logistics).**  
Responsible: MoT, regional and local authorities; deadline: continuous process; check date: 2017; funding: European funds, STIF and funding from the budgets of regional and local authorities
- **Create conditions for the continuation of ITS services on trans-European transport networks, in the area of traffic control and freight transport on European transport corridors and in conurbations.**  
Responsible: MoT; deadline: continuous process; check date: 2017; funding: European funds and STIF
- **Support the deployment and development of ITS systems in public passenger transport, including electronic ticketing.**  
Responsible: MoT and the regional and local authorities; deadline: continuous process; check date: 2017; funding: European funds, STIF and funding from the budgets of the regional and local authorities
- **Introduce advanced technologies in the rail transport (e.g., rationalization of track control, modern barrier-free vehicles, fast and barrier-free clearance in stations and stops, combination of light rail systems with classical railway). Gradually deploy ERTMS systems in accordance with the approved timetable and install remote control systems of rail transport on tracks outside the TEN-T network, including rail radio connection, deploy interlocking equipment on tracks where it has not been installed yet.**  
Responsible: MoT; deadline: continuous process; check date: 2017; funding: European funds, STIF
- **Pursue introduction of advanced technologies for intelligent parking of vehicles and introduction of advanced technologies for facilitating the process of planning and approval of transport of consignments requiring special attention or supervision.**  
Responsible: MoT and the regional and local authorities; deadline: continuous process; check date: 2017; funding: European funds, STIF and funding from the budgets of the regional and local authorities

- **Deploy advanced control, information and diagnostic systems in the current infrastructure, including vehicle weighting systems where there is a need to improve transport safety and continuity and minimize negative impact of transport on health, the environment and the infrastructure.**  
Responsible: MoT; deadline: continuous process; check date: 2017; funding: European funds, STIF
- **Ensure interoperability and remote traffic control as a form of development of technologies for safe control of train transport in line with Europe-wide trends on selected national railway lines, with links to EU and neighbouring regions.**  
Responsible: MoT; deadline: continuous process; check date: 2017; funding: European funds, STIF
- **On the main motorway routes install intelligent transport systems for traffic control and regulation, improvement of transport safety and efficiency and ensuring infomobility.**  
Responsible: MoT; deadline: continuous process; check date: 2017; funding: European funds, STIF
- **Continue introducing the River Information System.**  
Responsible: MoT; Deadline: continuous process; check date: 2017; funding: European funds, STIF
- **Support research and development of alternative propulsion vehicles.**  
Responsible: MIT; deadline: continuous, check date: 2017; funding: MIT with the support of European funds
- **Make more efficient and further develop the process of strategic research and development in transport with the focus on sustainable development of transport and support the transfer of knowledge and technologies at international level, in particular in the context of the Horizon 2020 Programme.**  
Responsible: MEYS, the Czech Grant Agency and the Czech Technological Agency; deadline: continuous process; check date: 2017; funding: MEYS, The Czech Grant Agency and The Czech Technological Agency
- **Provide support through the programmes announced by the Czech Technological Agency:**
  - applied research and experimental development in the area of the transport infrastructure, including ITS
  - research and development of new fuels and propulsion
  - research, experimental development and innovations in the area of space activities
  - research of transport which is intermodal, safe and friendly in terms of energy, materials and the environment and of technical measures for alleviating negative impact of transport on the environment and public health,

**Ensure the application of the outputs of research and development in practice and more efficient use of funds to support RDI ((stricter quality control (audits), more efficient assessment of achieved results in terms of their applicability, usability and benefits for the competitiveness)).**

Responsible: MEYS, the Czech Grant Agency and the Czech Technological Agency; deadline: continuous process; check date: 2017; funding: budgets of MEYS, the Czech Grant Agency and the Czech Technological Agency

- **Ensure the selection of more efficient projects and prevent duplicate solutions.**  
Responsible: MEYS, the Czech Grant Agency and the Czech Technological Agency; deadline: continuous process; check date: 2017
- **Improve the integration of transport research into international cooperation in RDI, provide for better quality of human resources both on the side of support providers (organizers) and beneficiaries (researchers).**  
Responsible: MEYS; deadline: continuous process; check date: 2017

**Ensure the application of the outputs of research and development in practice and more efficient use of funds to support RDI ((stricter quality control (audits), more efficient assessment of achieved results in terms of their applicability, usability and benefits for the competitiveness)).**

Responsible: MEYS, the Czech Grant Agency and the Czech Technological Agency; deadline: continuous process; check date: 2017; funding: budgets of MEYS, the Czech Grant Agency and the Czech Technological Agency

- **Ensure the selection of more efficient projects and prevent duplicate solutions.**  
Responsible: MEYS, the Czech Grant Agency and the Czech Technological Agency; deadline: continuous process; check date: 2017
- **Improve the integration of transport research into international cooperation in RDI, provide for better quality of human resources both on the side of support providers (organizers) and beneficiaries (researchers).**  
Responsible: MEYS; deadline: continuous process; check date: 2017

## 4.5.2 Use of Space Technologies in the Transport Sector

- *Responsibility for the fulfilment of the specific target: MoT*
- *elaborated in the follow-up strategy: National Space Plan*
- *Funding: elaborated in National Space Plan*
- *Deadline: continuous process, check date 2017*

The development of the Czech space sector is closely related to the European Space Policy and strategies of the European Space Agency (ESA) and the European Union (EU). At the conference "The Ambitions of Europe in Space", which took place in Brussels in October 2009, and at the First EU-ESA International Conference on Human Space Exploration in Prague in October 2009, top representatives of the EU and ESA underlined the changes which the space sector went through. The space sector and space activities are no longer just a matter of science. The sector has enormous economic, strategic and security potential influencing all aspects of our lives.



With the accession of the Czech Republic to the ESA a major shift in the approach to space activities had to occur in the Czech Republic. The accession was significantly influenced and accelerated by the decision of the Czech Government to forward the candidacy of the Czech Republic for the seat of the European Global Navigation Satellite Systems Supervisory Authority (GSA) and made possible by very successful cooperation with ESA (Plan for European Cooperating States - PECS), which prepared the Czech Republic for membership. The ESA activities and space activities in general exceed the competences of just one department. Technologies based on the use of space activities create conditions for the improvement of the competitiveness of Czech economy. For these reasons the National Space Agency should be established, which would be responsible for the performance of space activities. The area of space activities is a political and economic challenge for the EU; tackling it represents one possible solution of the current economic crisis and opportunity for strengthening the EU position in global economy.

- **Gradually deploy applications using global navigation satellite systems (GNSS) and intelligent transport systems to improve transport safety and efficiency by authorities organizing public transport services and for ensuring infomobility of passengers in public passenger transport.**  
Responsible: MoT; deadline: continuous process; check date: 2017; funding: European funds, public budgets
- **Support deployment of the ITS systems in transport, including the tracking of consignments and ensuring safe sharing of database content of these systems with the databases of the ITIS project, use innovative technologies (EGNOS, GALILEO).**  
Responsible: MoT; deadline: continuous process; check date: 2017; funding: European funds, public budgets

- **Support the use and deployment of innovative technologies in the process of hazardous goods transport (RFID), implementation of the relevant ITS systems for freight transport logistics or global navigation satellite systems (EGNOS, GALILEO, GPS).**  
Responsible: MoT; deadline: continuous process; check date: 2017; funding: European funds, public budgets
- **Actively create conditions for development of international cooperation in the area of space activities in developing technologies which can be used in the transport sector.**  
Responsible: MoT; deadline: continuous process; check date: 2017
- **Ensure support for the information services in the area of space activities in developing technologies which can be used in the transport sector.**  
Responsible: MoT; deadline: continuous process; check date: 2017

## 4.6 Reducing the Impact on Public Health and the Environment

- *Responsibility for the fulfilment of the specific target: MoT, MoE and organizations responsible for the administration and development of the transport infrastructure*
- *Deadline: continuous*

This represents a cross-sectional objective and concerns all other objectives of the Transport Policy. It is a summary of the main measures.

In the Czech Republic, similarly to other advanced countries, transport is one of the main anthropogenic factors the development of which has a negative impact on the quality of the environment. The Transport Policy of the Czech Republic formulates a number of measures leading to reduction of the impact of transport on public health, global climate change and the environment.

First and foremost, the increasing traffic burden (mainly by private car traffic) in urban catchment areas and the traffic in cities themselves are negative consequences of suburbanization. This is linked to the specific problem of the Czech Republic, namely the insufficient connection of regional centres and the concentric layout of the transport network. Hand in hand with the provision of good-quality and advanced infrastructure, which stimulates development in the outlying and less developed areas<sup>50</sup>, should go an improvement of the quality of life and reduction of the negative impact of settlements on their (and surrounding) environment and, therefore, on the quality of life of their inhabitants.

In the context of the global climate change the main measure in the transport sector is the reduction of greenhouse gas emissions arising from the fossil fuels (for instance, improvement of emission parameters of the means of transport, support of low-emission or zero-emission modes of transport, increase of the continuity of transport, development of the use of alternative energy sources, optimization of transport output required to secure the needed mobility of persons and goods). The principles of prevention and precaution are the fundamental general principles for adaptation measures in the transport sector. The main specific principle for adaptation measures in the transport sector is the ensuring of sustainable mobility. On the basis of these principles, specific principles can be defined for the formulation of direct and indirect adaptation measures responding to the global climate change.

Fragmentation of free landscape by the transport infrastructure is a problem in all Europe with its dense transport network. Owing to the barrier effect of transport networks, passage through them at selected spots needs to be secured by suitable measures within available resources. The specific locations and type of measures must be based on expert monitoring submitted by the relevant environmental bodies. The necessity to deal with this issue has been recently increasing, in particular in the context of sharp increase of transport performance and rapid development of the transport infrastructure.

<sup>50</sup> The relevant analysis is included in the Regional Development Strategy.

Traffic noise has a significant impact on public health and the environment in wide areas. In the area of the reduction of noise exposure caused by transport it is necessary to propose such measures which reduce noise either directly at source (active) or along its propagation path (passive). The proposed measures should enable an improvement of unfavourable acoustic situation in terms of exposure of inhabitants and territory to noise.

Reduction of emissions from transport in the air directly depends on the intensity, composition and continuity of the traffic flow. The measures proposed should focus mainly on the reduction of the intensity of road passenger and freight transport through closer cooperation between transport operators in different modes of transport and also focus on an increase of the share of vehicles using alternative fuels. Responsibility for national measures for a reduction of the impact of transport on air pollution rests mainly with the MoT (responsible for limits on car exhaust pollutants within the EU) and the MIT (alternative fuels), or, as the case may be, they are automatically implemented within the framework of harmonization of the Czech laws with the EU laws. Measures at the regional and local level include in particular the construction of city ring roads, development of integrated transport systems, parking policy, restriction of traffic in city centres, support of public and non-motorized transport, restriction of entry into certain parts of cities, establishment of reduced speed zones in cities, charges for entry into selected parts of cities, support and quality improvement of urban public transport, laying down regulations for smog situations, support of the "Park and Ride", "Kiss and Ride" and "Bike and Ride" systems.

#### Measures:

- **Minimize the negative impact of noise and emissions originating from transport by suitable measures in the transport infrastructure.**
- **Support measures leading to an increase of the share of low-emission freight transport.**
- **Gradually eliminate environmental pollution caused by the current infrastructure, implement measures in the current infrastructure towards protection against noise and vibrations, primarily in densely populated areas where hygienic noise limits are exceeded.**
- **Minimize the negative impact of transport on public health, stability of landscape ecosystems, their structures, relations and functions.**
- **Gradually increase the passage capacity through the transport infrastructure for wildlife organisms and humans. When building or renovating transport structures use technical and other solutions which secure functioning passage for wildlife and secure passage through current transport structures in sections where the fragmentation effect has been demonstrated.**
- **Take into account traffic challenges in transport development plans of regions and municipalities in order to attain local concentration limits, e.g., by building bypass roads and establishing low-emission zones.**
- **Prefer capacity enhancing of the current transport corridors over building parallel roads with similar traffic capacity and serving the same territory. Transport corridors and structures should be planned, designed and implemented with regard to the requirement to secure connectivity for wildlife populations and secure their sufficient migration passage.**
- **Reduce dependence of transport on energy based on fossil fuels.**
- **When designing and implementing the transport infrastructure development projects, minimize their impact on various aspects of the environment and on public health.**
- **Introduce measures to minimize collisions with wild animals (passage capacity through the transport infrastructure, odour fencing etc.).**
- **Introduce measures aiming at adherence to speed limits on motorways and dual carriageway roads (higher speed results in higher energy consumption and higher production of pollutants).**

Responsible for all the above measures: MoT, MoE, administrators of the transport infrastructure, MLD; deadline: continuous process; check date: 2017; funding: measures for passage through current transport infrastructure: SEF, other measures through STIF. In case of noise protection measures of newly built settlements the costs will be covered by the investor of the new settlement (according to the principle that the entity pays which entered the territory second)

## 4.7 Social Issues, Employment, Education, Qualification

- *Responsibility for the fulfilment of the specific target: MoT, universities and secondary schools with the focus on transport*
- *Elaborated in the follow-up strategy: -*
- *Funding: -*
- *Deadline: continuous*



Market opening has to be better adapted to the quality of jobs and working conditions, since human resources form the decisive element for any high-quality transport system. Lack of qualified labour will pose a significant challenge in the selected transport areas in the future. It will be important to join the issues of competitiveness with the social agenda in the context of the social dialogue in order to prevent social conflicts. Vocational training should certainly not be limited to executives only. Lifelong learning and training should cover all levels in the transport sector, improving its overall performance.

### Measures:

- **Secure sufficient numbers of qualified and professionally skilled employees for further development of specialized transport areas (logistics, terminals for combined transport, locomotive, truck and bus drivers) by creating educational programmes in secondary schools, colleges and universities.**
- **Create conditions for improving vocational training of employees in the area of passenger transport, including educational programmes in secondary schools, colleges and universities.**
- **Create conditions for improving vocational training of employees in the area of freight transport.**
- **Fund and organize campaigns and educational awareness events focusing on the behaviour of road traffic participants, in particular with the objective of reducing fuel consumption and improving transport safety and raising awareness on new information and communication technologies in transport.**
- **Secure education and training of professionals for current and future tasks in the transport sector.**  
Responsible for all the above measures: universities, secondary schools and colleges majoring in transport and logistics, MEYS, MLSA and MoT; deadline: continuous process; check date: 2017

## 4.8 Other Long-term Visions

The Transport Policy sets out the objectives and measures for the period up to 2020 and a long-term vision up to 2050. This long-term vision concerns mainly steps supporting sustainable development of the transport sector. In particular the following steps will have impact on the long-term development:

- Long-term planning of the transport infrastructure development up to 2050 (elaborated in the Transport Sector Strategies), in the context of the deadlines laid down in Decision (EU) No 661/2010 on the Union guidelines for the development of the TEN-T network<sup>51</sup>.
- Fulfilment of the important objectives set out in the European Transport Policy<sup>52</sup>.

<sup>51</sup> The still valid Decision on the TEN-T Policy will be replaced by the draft Regulation, which will contain the obligation to complete the TEN-T core network by 2030 and the TEN-T comprehensive network by 2050.

<sup>52</sup> In particular the objectives focusing on reduction of the production of greenhouse gases from transport, lower dependence of transport on non-renewable sources, higher use of rail and waterborne transport in freight transport for medium and long distances, higher share of passenger railway transport including the conversion of passengers from shorter air lines, higher application of advanced technologies, significant reduction of accident rates in road traffic.



- Connect the Czech Republic to the European network of high-speed railway lines; by 2050 at the latest complete in the Czech Republic the network within the High-Speed Railway Connection Programme. The project must also include a concept of the feeding system in relation to the development of transmission and distribution grids.
- Support a reduction of diesel powered cars in the area of city transport by 2030 up to one half, gradually decommissioning them in the cities by 2040.
- On a long-term basis prepare the D-O-E water corridor, if the project proves to be economically viable and its passage through the territory is secured in terms of its environmental impact.
- Support the sustainable development of transport by highly innovative approach to the development of the means of transport, transport systems and advanced control and information systems. By such approach accentuate scientific and technological development and implement its outputs in the transport system, increase the share of combined transport with efficient use of the railway transport and introduce electricity in road transport. These activities are understood also as economic measures supporting growth.

## 4.9 Subsidiarity, Responsibility at Individual Levels

The Transport Policy elaborates the intentions of the European Transport Policy, in particular in those areas that concern the national and regional levels. The Transport Policy is a document of the Government of the Czech Republic and the objectives and measures it contains are binding upon all the national administration bodies and administrators of the national transport infrastructure (investors). Many objectives and measures are also valid at the regional and local levels; for the regional and local authorities they have the form of recommendations and methodical guidelines for conceptual documents in the area of transport at the regional level.



## **IMPLEMENTATION PART**

# 5. Tools, Follow-up Strategic Documents, Monitoring and Competences



## 5.1 Financial Instruments

### 5.1.1 Financing Repairs and Maintenance of the Transport Infrastructure and Financing of the Development of the Transport Infrastructure

In order to ensure efficient financing of the transport infrastructure, stabilization of the income side for the funding of the transport infrastructure is necessary<sup>53</sup>. The institute of the mid-term outlook of the STIF budget, which is linked to the mid-term outlook of the national budget, is not tenable in the long-term, since the mid-term outlook of the national budget is not binding for the compilation of national budgets in the following years. Annual budget planning results in considerable complications and, in the final analysis, lower efficiency of expended funds. The secondary objective consists in searching for ways how to raise the total amount of financing sources. At any rate, the final decision on the method of stabilization of the funds earmarked for the transport infrastructure can only be taken by the Government and the top political representation.

Given the current development of economy and the condition of the public finances, it is necessary to secure the fulfilment of the primary task of the Government of the Czech Republic, which is the consequent consolidation of public budgets and stabilization of national debt. Specific systemic and institutional changes in the financing of the transport infrastructure, which will secure the stabilization of resources for the funding of development and maintenance of the transport infrastructure in the future, can be prepared and discussed within the context of the fulfilment of this current fundamental Government objective. In the area of the construction of the transport infrastructure, currently, the significant task is to implement more efficient measures aiming at obtaining the best possible prices in public procurement while maintaining the quality of construction, intensify and deepen control activities during preparation and implementation of investment projects, which will ultimately contribute to more efficient, transparent and maximum use of available public funds, including the EU funds.

<sup>53</sup> As supported, for instance, by Resolution of the Economic Committee No 137 from 21st Session held on 8 December 2011.

## Starting Points:

- The primary problem of the funding system for the transport infrastructure in the Czech Republic, besides the absolute amount of funds available, consists mainly in its instability year-on-year, which is related to the difficulty in predicting the development of the absolute amounts – it is of crucial importance for conceptual preparation and implementation of the transport infrastructure projects that this situation should change.
- The volatility of expenditures year-on-year makes it impossible to engage in conceptual planning of the transport infrastructure projects, having regard to the long-term nature of such projects (time of construction approximately 3 – 4 years, lifecycle 30 years and more). In fact, construction projects commence without the assurance of future covering, even if they are projects co-financed by the EU.
- Prolongation of the time of construction and postponing the start of construction results ultimately in higher costs.
- It can be stated that the sources of the transport infrastructure financing are well diversified in the Czech Republic, but it is their mutual proportion that complicates matters. The share of the more stable and easier-to-predict sources (proportion of tax revenues, charges) is completely insufficient in relation to the total needs. This so-called guaranteed income does not cover even the mandatory expenses related to the operation, maintenance and renewal of the transport infrastructure. The result is absolute dependence on a national subsidy for the STIF, the amount of which is difficult to negotiate each year.
- The Czech Republic is the only one of the analysed countries (DE, SK, AT, PL, IT, HR) which does not use as a standard any private financing for stabilization or increase of the income side. Also other countries employ private capital under the responsibility of sectoral organizations for the financing of the transport infrastructure as a matter of course. If this financial instrument is to be applied in a beneficial and efficient way, good practice rules for PPP in transport must be compiled, including a system of objective selection of projects suitable for its utilization.
- However, in order to be able to include private financing (e.g., bonds or PPP), it is necessary to be a credible debtor and to have a stable source from which the debt will be subsequently repaid. These debts can be under certain conditions recorded according to European ESA 95 methodology outside of the published debt and public sector deficit. Thus, the Maastricht criteria remain intact and the Government's fiscal strategy is not jeopardized.
- It is crucial for the stabilization of the system of financing of the transport infrastructure that in the long run the sector becomes less dependent on the annual approval cycle of the national budget. The role of the national budget will, however, have to remain significant, having regard to the incomplete condition of key portions of the transport infrastructure, which makes it necessary to stabilize also this part of the income side.
- The projects and analyses have led to the conclusion that the only section where there is potential for using off-balance-sheet debt financing to stabilize the budgets is in the superior road infrastructure (motorways and dual carriageway roads). These roads have been generating and are likely to continue generating in the long term income from toll and vignettes, against which off-balance-sheet debt can be incurred in order to stabilize the income side. On this basis a proposal for transformation of the RMD is being prepared. The proposal aims primarily at cultivating the environment in the organization, achieving higher transparency and efficiency of its functioning as a result of a reduction of the scope of outsourced services. After achieving these objectives, it will be possible to use funds in the form of off-balance-sheet debt financing. Another alternative for achieving a strong short-term effect of raising funds for the financing of the transport infrastructure in the form of off-balance-sheet debt are PPP projects with long-term maturity.
- The conditions for eligibility of off-balance-sheet debt reporting are laid down in the Eurostat ESA 95 methodological manual, which is currently being amended. The MoT proposals for off-balance-sheet debt reporting mentioned here are in conformity with the current as well as the amended wording of the manual. Nevertheless the risk of a change of approach by Eurostat cannot be completely eliminated, which would entail the threat of retroactive inclusion of the obligations into the government debt balance. This factor is strongly connected to the proposed constitutional law on budgetary discipline and responsibility, which is currently being drafted.
- All proposals for stabilization or increase of the income side which have been analyzed would be feasible either at the expense of users (higher direct payments > higher transport costs > higher price of goods) or at the expense of the national budget (higher share of mandatory expenditures, or increasing the balance of government debt and deficit). Even so, these measures can still be considered possible or suitable for stabilization of the income side of the financing of the transport infrastructure, which is why they are further described and submitted as a basis for a future decision on the ways of securing the transport infrastructure in the Czech Republic.

The required mandatory expenditures related to the already existing infrastructure and the need to secure safe transport on it amount annually to about CZK 29 billion. This has been identified as the minimum amount required for good-quality repairs and renewal. Any decrease would result in further deterioration of the quality of the transport infrastructure, which has been declining in the long term, raising the required costs in the future. So far this phenomenon could not be stopped. It is impossible under the current structure of guaranteed income earmarked for the transport infrastructure to achieve a stabilized way of financing of the transport infrastructure. It follows that there is a need of a systemic change on the income side. The condition for the use of debt financing as a stabilizing mechanism is to increase the share of guaranteed income, because such solution requires long-term stability of funds from which the debts can be repaid.

**Summary regarding the availability of debt financing in relation to guaranteed income:**

- Debt financing must be based on a binding and long-term investment policy / need of the debtor, from which a suitable scope and way of indebtedness can be predicted. Debt financing must be repayable from future income generated by the system in which the debt funding was used. Thus, primarily such modes of transport or construction projects should be financed by debt, which will generate further “guaranteed” income in the future.
- If guaranteed income is to be used in the future to repay the debt financing which would be used as a stabilizing element eliminating the year-on-year volatility of funds, then such guaranteed / predictable income must exceed mandatory expenditures. Thus the amount of the guaranteed sources must be such that the Czech Republic can earmark them to cover the mandatory expenditures related to the operation and maintenance of the existing portions of the transport infrastructure.
- Any “free” future guaranteed income exceeding the amount of the necessary mandatory expenditures can then become the basis for gradual drawing on the debt capacity, which is nonetheless limited, so that it should serve exclusively as a stabilizing source, or as a source to cover indisputable needs (e.g., co-financing of EU funds in the current as well as future budgetary period), as the case may be. This earmarking of debt funds must be clearly declared before the drawing is allowed.

**Stabilization of the expenditure side of the STIF budget:**

It is appropriate that hand in hand with the stabilization of funds also the expenditure side of the STIF budget be stabilized. The way towards such stabilization is by binding expenses according to their type. The current institute of mid-term outlook does not work and in fact never has, owing to high volatility of actual financial limits. The STIF budget must be, therefore, managed more consequently via so-called budgetary sections which define mandatory expenditures and enable the management of new investment. Mandatory expenditures must also be bound to specific income lines, which would reduce the volatility of the STIF budget and to a certain degree also stabilize the funding of mandatory expenditures.

- The basic logic of such a budget would take into account mandatory expenditures clearly defined in advance for:
  - repairs and maintenance of the network,
  - investment projects already commenced by mandatory expenditures,
  - semi-mandatory global items for small projects and design and ownership preparation
- Separately approved new investments would become mandatory expenditures after having been approved by PSP ČR, or the Economic Committee of the PSP ČR, and they must be treated as such when setting out limits for individual funds during approval of subsequent STIF budgets.
- However, approval of new investments would only be possible if the expenditure side of the STIF budget, after the deduction of the above mandatory expenditures, would allow the new investment in its full time scope.

**Mineral Oils Excise Duty:**

- Currently it represents a certain form of performance-based charge and payment for externalities (pollution, noise) for all users, paid according to the amount of fuel consumed. However, matters are complicated by the fact that this duty forms an income line for the national budget only if the fuel is pumped at the territory of the Czech Republic.
- Of the amount of this duty collected, which is to more than 70 % paid by road transport users, only 9.1 % returns back to the STIF. The proportion historically used to be 20 % but after the transfer of Class II and Class III roads to the responsibility of the regions, the proportion was reduced and the regions were compensated for the difference within the framework of budgetary distribution of other taxes, so that the 11 % of difference is not directly earmarked for Class II or Class III regional roads either.
- Thus the proportion of the excise duty which goes back to the transport infrastructure is diametrically lower than the amount collected. The reason declared by the MoF is the necessity to use these funds for other



expenditures of the national budget with a reference to the necessary universality of income and expenses of the national budget.

- The easiest way of stabilizing the funds earmarked for the transport infrastructure is the stabilization of income for the financing of the transport infrastructure. An increase is necessary for stabilizing the national funds at the level of at least CZK 43 billion for maintenance and development of the transport infrastructure, of which about CZK 3.8 billion should be earmarked for design and ownership preparation of construction projects. In such a case the STIF would not necessarily require any additional sources from the national budget<sup>55</sup> given the expected amount of EU sources<sup>54</sup> and the current amount of collection of the excise duty and use of a supplementary stabilizing source in the form of debt financing.

## 5.1.2 Financing of Public Transport Services

The Ministry of Transport ensures national public transport services by trains of trans-regional or international nature pursuant to Sec 4 (1) of Act No 194/2010 Coll., on Public Services in Passenger Transport and Amending Certain Laws (hereinafter referred to as "Act 194/2010 Coll."). In order to secure the transport services, the Ministry of Transport as the competent authority concludes contracts on public services in passenger transport with transport operators pursuant to Sec 8 of Act No 194/2010 Coll. In addition to this contracted transport the operators may operate commercial long-distance public transport services outside the public service contract and without entitlement to any compensation of losses from the public budgets. For contracts on public services concluded after 3 December 2009, the key law is Regulation (EC) of the European Parliament and of the Council No 1370/2007 on public passenger transport services by rail and by road and repealing Council Regulations (EEC) Nos 1191/69 and 1107/77 (hereinafter referred to as "Regulation No 1370/2007"). This regulation lays down the competitive tendering procedure as the basic method for the selection of a transport operator for public services and contains certain exemptions allowing the contracting authority to award a public services contract directly<sup>56</sup>.

In the area of financing national public transport services by trains in the Czech Republic, the preparation of the public service contract by the Ministry of Transport is based on the amount of funds earmarked in the specific national budget indicator "Transport by rail" in Chapter 327 of the Ministry of Transport. In order to create stable conditions in long-distance railway transport, the Government of the Czech Republic approved a long-term financial framework for covering public service contracts and tasked the Minister of Finance to incorporate into the draft national budgets and mid-term budgetary outlooks for 2010 to 2019 the special indicator of funds earmarked for stable financing of the public services obligation to secure the national transport needs by public passenger transport by rail, namely in the amount of CZK 3,873.305 million for 2010 (without the lines Pardubice – Liberec and Pilsen – Most and excluding student tariffs), and to increase this amount during the subsequent nine years (2011-2019) by the relevant average annual consumer price index. Owing to budgetary savings measures the funds provided for long-distance railway transport since 2011 have been paid at the level of 2010, without the inflation adjustment.

The duration of the public services contract is of key importance for railway services. Unless the rolling stock is to consist only of vehicles which have been fully amortized and whose economic and technical life has been exhausted, and which are only available with certain, already established operators, it must be financially feasible to acquire the vehicles in the duration of the contract. Therefore, there is a rule in tenders that as the duration of the contract increases, the part of price allocated for vehicle acquisition decreases because it can be spread over a longer period of time. At the same time, the sustainability from the perspective of the banking sector is rising so that it is easier and less expensive for the transport operator to acquire debt capital. For these reasons the Ministry of Transport expects contracts to be awarded for 15 years. With regard to the expected number of operating sets the gradual opening of the market will be achieved by gradual calling for bids for those sets in short time intervals.

To conclude contracts for 15 years, it is not necessary to have a constant scope of services but a stable financial framework is needed. With regard to the continuing validity of Government Resolution No 1132 of 31 August 2009 it is expected that the funds will be secured in the required amount. Significant changes in the area of financing are not only a challenge for the ensuring of public services but constitute a direct threat to the process of market opening and can be highly risky in the situation when long-term contracts have been concluded. Thus it will be necessary in relation to tenders to define in the tender documentation for the selection of operator such scope of public services to be contracted that the sum of compensations arising from all public service contracts in each year of contract validity does not exceed the financial framework set by Government Resolution No 1132 of 31 August 2009.

<sup>54</sup> The subsidy could be retained by a political decision of the Government of the Czech Republic, for instance in order to fulfil a European obligation relating to the completion of the TEN-T network and providing for co-financing of the OPT 2014 – 2020.

<sup>55</sup> According to negotiation currently in progress under the auspices of the MLD it can be expected that about CZK 90 billion will be allocated for the transport infrastructure from EU funds in 2014 – 2020 as the share of EU sources without co-financing; this can only be confirmed after the future content of operational programmes is finally agreed.

<sup>56</sup> The contracting authority may award a contract directly to secure public services with so-called internal operator, in emergency situations, for small contracts or contracts concerning public transport by rail on national or regional lines.

In order to stabilize the financing of public transport services in the long term, the alternative of linking the funds to a specific tax revenue will be elaborated (for instance, a share in the excise duty amounting approximately to 15 %) in exchange for the national budget funding (Chapter 327 MoT). In this context the appropriate law amendment must be prepared.

### 5.1.3 Financing of Multimodal Transport Terminals and Public Logistics Centres

The infrastructure of multimodal freight transport is owned by the private sector, which is, however, unable to build the requisite network with suitable parameters without the help of public funds. This is why the Government of the Czech Republic by its Resolution No 1571/2009 took note of the document Strategy for the support of logistics from public funds. However, national funds could not be secured for the programme during 2010 – 2012. The focus will be on the use of funds from the Cohesion Fund for 2014 – 2020.

### 5.1.4 Financing of Road Safety

Ensuring of sufficient funding is one of the decisive elements required for effective implementation of the measures set out in NSRTF and, therefore, for a reduction of high socio-economic losses caused by the consequences of traffic accidents. In October 2012 the Government Council for Road Traffic Safety tasked the Minister of Transport to draft a new model of organization and funding of road safety based on shared co-financing by national and private funds. The draft will be submitted to the Government Council for Road Transport Safety by the end of June 2013.

### 5.1.5 Financing from European Funds in 2014 – 2020

Measures looking for funding from European Funds in the sector of transport focus mainly on the transport infrastructure<sup>57</sup>. The ownership of and responsibility for the transport infrastructure is in most cases with the public sector. This is why the use of European Funds is a suitable solution because European Funds also form part of public budgets. Interventions in the most important transport infrastructure have also an important pan-European dimension, expressed by the inclusion of such infrastructure into the TEN-T network. Projects of such nature, i.e., projects which not only help reduce the differences between advanced regions and those lagging behind, but also help improve the competitiveness of the EU as a whole, are among clear priorities for funding through EU Funds. In order to use the EU Funds in a reasonable way and achieve more pronounced results it is necessary, in the area of the transport infrastructure, to allocate funds at least in the order of EUR billions so that complete motorway sections, longer sections of conventional and high-speed railway lines and waterways, a functional network of multimodal terminals, urban public transport infrastructure and significant part of lower class roads could be built or modernized.

From the perspective of the TEN-T policy, measures in the area of **freight transport terminals** are considered also measures related to the transport infrastructure. In this case the interest of the private sector is higher but with regard to the impact on the operation of the whole transport system it is necessary to support the process by appropriate support programmes. Participation of public funds is important also in order to secure a public nature of these facilities, a necessary condition for ensuring competitive environment in the multimodal transport sector.

In case of **passenger transport terminals** the responsibility rests with the public sector only, with the need to secure cooperation at different levels of public administration.

Measures for **fleet/rolling stock replacement in public transport** in the form of a special programme need to be seen as fading away, fulfilling the objective of catching up on a debt from the past.

In case of **development of a fleet of intermodal transport units** for continental transport the situation is more difficult, as support programmes for this area in the past were of a limited scope, so that such fleet is totally insufficient in the Czech Republic, undermining the intermodal transport system. This has negative impact on the division of transport labour among different modes of transport in continental transport. This intervention should also be considered temporary, aiming at setting the market of intermodal continental transport in motion.

<sup>57</sup> Including the equipment of the infrastructure with intelligent transport systems, ensuring interoperability and support for the establishment of a network of feeding stations for alternative energies

### European Financial Instruments:

- CEF ("basic" part) – support of development of the rail and waterborne transport infrastructure on the TEN-T core network
- CEF ("cohesion" part) – support of development of the rail and waterborne transport infrastructure on the TEN-T core network and cross-border sections of the road infrastructure on the TEN-T core network
- Cohesion Fund – support of development of the transport infrastructure on the TEN-T network (in case of rail infrastructure also outside the TEN-T network), support measures for multimodal approach to transport and measures supporting sustainable urban mobility (including public transport)
- ERDF – measures on the transport infrastructure in the regions and outside the TEN-T network

## 5.2 Legislative Instruments

### Draft Legislation:

- 1. Proposal for an amendment of Act No 114/1995 Coll., on inland waterways, as amended**  
*The proposed amendment aims in particular at a comprehensive regulation of the operation of ports and transshipment points, comprehensive regulation of navigation rules on defined waterways, implementation of European regulation on the transport of hazardous goods and regulation of passenger rights in inland waterways transport.*
- 2. Proposal for an amendment of Act No 13/1997 Coll., on roads, as amended**  
*The proposed amendment aims at a comprehensive regulation of pollution and damages to publicly accessible service roads including administrative penalties and transfer of the competence of road administration offices from small municipalities to local authorities of municipalities with extended competency. The draft also includes a new categorization of roads (establishing the category of a road with maximum speed limit of up to 110 km/h – related amendment of Act No 361/2000 Coll., on traffic on the road network). There is also a legislative proposal for the restriction of entry of heavy trucks to lower class roads, unless the haulier has its origin or destination on such road.*
- 3. Proposal for an amendment of Act No 111/1994 Coll., on road transport, as amended**  
*The proposed amendment aims at implementing European laws and regulations on passenger rights and bus and coach travel and laws and regulations on the working time of persons performing mobile road transport activities and further amending the legal regulation of the operation of taxi services, as implied by practical experience.*
- 4. Proposal for a Government Decree amending Government Decree No 266/2009 Coll., on technical requirements on maritime facilities, as amended**  
*The proposed amendment aims at including, in relation to European regulation, regular changes of technical requirements, testing procedures and conformity assessment procedures concerning maritime facilities into national legal regulation.*
- 5. Proposal for an amendment of Act No 49/1997 Coll., on civil aviation and amending Act No 455/1991 Coll., on trade licensing (Trade Licensing Act), as amended, as amended**  
*The proposed amendment aims in particular at implementing European laws and regulations in the area of the position of aviation personnel (air traffic controllers), regulation of the provision of air navigation services in so-called Single European Sky, regulation of safety investigation of air accidents and in particular regulation of measures for air security.*
- 6. Proposal for a law on the railways and rail transport**  
*The substance of the law is still being elaborated. The proposed law should aim at a comprehensive legal regulation of the construction and operation of railways, operation of transport on such railways and performance of national administration on railways, which includes the implementation of a number of EU legal regulations into national law. Terminals for multimodal transport will be defined as part of service facilities in this law.*
- 7. Substance of a proposal for a law on the acquisition and improvement of professional competence for car driving**  
*The substance of the law is still being elaborated. It should aim at a comprehensive legal framework for the acquisition and improvement of professional competence for car driving with a new approach to the position of beginning drivers or applicants for driver's license (driver's license on probation), performance of tests by*



*a nationwide testing organization, eliminating corruption possibilities, introduction of the obligation for driving instructors to periodically attend improvement training, including the implementation of a number of EU legal regulations into national law.*

In addition, during 2014–2020 the implementation of EU laws currently being discussed in the form of drafts by EU institutions will have to be ensured. It concerns for the time being about 16 proposed EU laws which, if adopted, can have impact on Czech laws and can be reflected in a plan and outlook of legislative work of the government to be adopted in that period. For instance, the Commission submitted important proposals, like the package of regulations on technical performance of vehicles.

#### **Further needed legislative amendments up to 2020**

- 8. Amendment of Act No 194/2010 Coll., on public services in passenger transport and amending certain laws**  
*The amendment of this law can be carried out if it proves necessary for the fulfilment of measures mentioned in part 4.1.4 (Public Service in Passenger Transport). It concerns in particular the contracting for public services in passenger transport gradually through open tenders and safeguarding of appropriate protection of public services in an environment of opening transport market in the area of the rail and road transport. The law can also be amended in the context of the announced intention of the European Commission to complete the process of the opening of the railway transport market (including public services), which will probably entail either a complete abolition or a significant limitation of the possibility of direct awards of public services pursuant to Art. 5 of Regulation 1370/2007 (see the relation to Art. 18 of the said law).*
- 9. Amendment of Act No 104/2000 Coll., on the State Transport Infrastructure Fund**  
*Formal amendments will be proposed which result from practical experience with the implementation of the law. Necessary changes will relate to the transfer of revenues from performance-based and time-based charging, should the government approve the proposed transformation concept of the RMD (see 5.1.1), which would entail also the necessity to make a concurrent amendment of Act No 13/1997 Coll., on roads.*
- 10. Amendment of Act No 361/2000 Coll., on traffic on the road network**  
*The amendment of this law can be carried out on the basis of the results of an analysis of accidents and their main causes and on the basis of consultations with the political parties in the Czech Parliament (see one of the measures in part 4.2.6 – Improvement of Traffic Safety). The amendment further aims at extending the scope of information providers to ITIS by Emergency Rescue Services, utility administrators and excess cargo carriers. Another amendment is related to the definition of design parameters for the road and motorway network (concurrent amendment discussed in parallel with the submitted amendment of Act No 13/1997 Coll.).*
- 11. Amendment of Act No 56/2001 Coll., on the conditions for the operation of vehicles on the road network**  
*The amendment of the law should improve the legal framework for securing institutional supervision of TC in order to strengthen the role of national professional supervision in the area of roadworthiness tests (see one of the measures in part 4.2.6 – Improvement of Transport Safety).*
- 12. Amendment of Government Decree No 484/2006 Coll., on the amount of time-related fees and the amount of toll rates for using appointed roads**  
*The amendment of the Government Decree should in the first place adapt the toll rates with the view to differentiating as much as possible according to vehicle emission classes (an update with regard to the development of Euro emission standards), number of axles, pressure category and duration of travel (higher rates at peak times, e.g., Friday afternoons).  
It should also provide for a variation of rates for the use of infrastructure for different vehicle categories according to their specific consumption with the view to ensuring that the transport vehicles with lower specific energy consumption and lower level of emissions will be favoured by the system of distance-based charging for the use of infrastructure.*
- 13. Amendment of Decree No 527/2006 Coll., on the use of roads subject to charging and amending Decree of the Ministry of Transport and Communication No 104/1997 Coll., implementing the act on roads, as amended**  
*The amendment of the decree should provide for the introduction of distance-based charging on other roads of Class I and possibly also on roads of lower classes (after proving its economic efficiency, subject to approval by the regional/local authorities).*



#### 14. Amendment of Act No 13/1997 Coll., on roads, as amended

*The amendment of the law will be elaborated at the moment when a political decision to start charging road freight transport for selected external costs (noise and air pollution) is adopted, in accordance with the amendment of the Eurovignette Directive. Another objective is to complement the binding system of monitoring, evaluating and removing black spots. The need for a partial amendment in relation to the decision on the form of the toll system after 2017 cannot be ruled out.*

#### 15. Amendment of Act No 13/1997 Coll., on roads, Act No 416/2009 Coll., on acceleration of construction of transport, water and energy infrastructure, Act No 104/2000 Coll., on the State Transport Infrastructure Fund and Act No 184/2006 Coll., the Expropriation Act)

*This continuous adaptation of the above valid laws should aim at facilitating and accelerating the process of preparation of construction projects.*

#### 16. Amendment of Decree No 388/2000 Coll., on timetables of public passenger line transport

*It aims at enabling the introduction of alternative systems of servicing of a territory (bus on demand).*

## 5.3 Structure of the Follow-up Strategic Documents towards the Implementation of the Objectives of the Transport Policy

The detailed elaboration of specific objectives and measures and their implementation is the subject of follow-up strategic documents:

### 5.3.1 For the Area of the Transport Infrastructure and Its Financing (*Transport Sector Strategies (Mid-term Plan of Transport Infrastructure Development with Long-term Prospect until 2050)*)

The Transport Sector Strategies represent the necessary condition for the approval of the Operational Programme for the transport sector for 2014 – 2020; their elaboration is therefore directly monitored by the European Commission. The main objectives of the Transport Sector Strategies are as follows:

1. Establish a database of all known objectives in the area of development of nationally-owned the transport infrastructure for all modes of transport; determine the scope of financial needs for regional infrastructure,
2. Using a forecast (for the years 2020, 2035 and 2050) compiled with the help of a national multimodal transport model, determine the importance of the objectives using the methods of multi-criteria assessment and simplified cost-benefit assessment; the objectives are divided to projects and suggestions (there is no clear boundary between both types of objectives, both categories differing by the level of preparation and scope of available information),
3. Forecast of financial means,
4. Breakdown of funds earmarked for repairs, maintenance and operation of infrastructure and for development objectives,
5. Laying down a schedule for preparation and implementation of projects and suggestions in the order of importance and availability of funds.

Deadline for completion of the strategy: June 2013

Responsible: MoT

Monitoring: efficiency assessment in 2017 at the latest, update in 2018 at the latest

Information on the strategy: [www.dopravnistrategie.cz](http://www.dopravnistrategie.cz)

### 5.3.2 For the Area of Public Transport Services

Public transport services are currently regulated by Act on public services in passenger transport and by national and regional public transport plans. Further direction of the public transport system including the selection from among the options for system organization will be laid down in the document *Public Transport Conception*, which will propose a new structure of public transport organization, the requisite amendments of national law and a proposal for the funding of the system.

Deadline for completion of the *Public Transport Conception*: 31 December 2014  
Responsible: MoT in cooperation with the regional and local authorities

### 5.3.3 For the Area of Road Safety

The *National Road Safety Strategy 2011-2020* aims at reducing the number of fatalities in road traffic to the level of the European average and reducing the number of seriously wounded by 40 % by 2020.

Deadline for completion of the strategy: the document has been approved

Responsible: MoT  
Monitoring: annual efficiency assessment

### 5.3.4 For the Area of ITS and Advanced Technologies

The *Action plan for ITS deployment in the Czech Republic* for 2014 – 2018 will be elaborated for the area of intelligent transport systems in road transport and interfaces to other modes of transport, including a detailed elaboration in the *Implementation Plan* (laying down the time schedule of follow-up steps and ways of financing). The document will take into account not only road transport but also city transport, public passenger transport and railway transport.

Deadline for completion of the strategy: 2013  
Responsible: MoT in cooperation with the regional authorities, statutory cities, traffic police, rescue services, transport and logistics operators and relevant professional organizations  
Monitoring: efficiency assessment in 2017 at the latest, update in 2018 at the latest

### 5.3.5 For the Area of Freight Transport and Logistics

The principles of support of the development of logistics and multimodal transport terminals are dealt with in the document *Strategy for the support of logistics from public funds*.

Deadline for completion of the strategy: the document has been approved (Government Resolution No 1571/2009)  
Responsible: MoT  
Monitoring: efficiency assessment in 2015 at the latest, update in 2016 at the latest

### 5.3.6 For the Area of Charging of Users and Internalization of Externalities

The document including deadlines for approval and implementation will follow European processes set out in the *White Paper – Roadmap to a Single European Transport Area – Towards a Competitive and Resource Efficient Transport System*. The issues relating to the further operation of the toll system after the expiration of the contract with the current toll system operator (the contract expires on 31 December 2016) will be dealt with in a separate government document.

### 5.3.7 For the Area of Air Transport

Contrary to other modes of transport, there has never been a separate development conception for the air transport. This is why it was decided to draft an *Air Transport Conception* for 2014 - 2020 under the responsibility of the Ministry of Transport. Airport infrastructure is nowadays (except Prague Airport) owned by the regional authorities or private entities. If aviation infrastructure is to be supported from European funds, a concept must be elaborated. The air transport conception will also lay important groundwork for territorial planning.

Deadline for completion of the strategy: 2014  
Responsible: MoT  
Monitoring: efficiency assessment in 2017 at the latest, update in 2018 at the latest



### 5.3.8 For the Area of Inland Waterway Transport

A separate concept will be elaborated for the area of the waterborne transport because of its specifics: besides transport, waterways also perform many other functions, so that this area transcends sector boundaries.

Deadline for completion of the strategy: 2013

Responsible: MoT in cooperation with MoA, MoE, MIT and MLD

Monitoring: efficiency assessment in 2017 at the latest, update in 2018 at the latest

### 5.3.9 For the Area of Cycling

The *National Cycling Strategy* focuses on the development of non-motorized transport, in particular cycling, in two segments – non-motorized transport as part of the public transport system and non-motorized transport as part of recreational activities.

Deadline for completion of the strategy: the document has been approved (Government Resolution No 678/2004)

Responsible: MoT in cooperation with MLD, MoE, MoH, MoA

Monitoring: update in 2013 at the latest

### 5.3.10 For the Area of the Preparation of Construction of High-Speed Railway Lines

The document *Preparation of Construction of High-speed Lines* aims at setting out a schedule of preparatory works for the construction of high-speed railway lines. The document will include:

1. An opportunity study (deadline: 30 June 2014),
2. A zoning-technical study (deadline: by the end of 2015),
3. A feasibility study (deadline: by the end of 2016),

for the following routes:

- Prague – Brno – Ostrava border / Břeclav border
- Prague – Dresden border / Most
- Prague – Munich border
- Prague – Wrocław border

The document must also include a concept of the feeding system in relation to the development of transmission and distribution grids.

Responsible: MoT in cooperation with MLD and MIT

### 5.3.11 For the Area of Space Technologies in the Transport Sector

The development of the Czech space sector is closely related to the European Space Policy and strategies of the European Space Agency (ESA) and the European Union (EU). The document *National Space Plan* is destined for bodies that will take the decision on further development of Czech space activities. The document describes the context of the space sector and space activities and proposes ways and measures to maximize return on public investment.

Deadline for completion of the strategy: the document has been approved

Responsible: MoT

Monitoring: update in 2016

### 5.3.12 For the Area of Clean Mobility

The document *National Action Plan on Clean Mobility* aims at creating a strategy of the Czech Republic in this area, assessing current development of the fleet and rolling stock in the Czech Republic (summary of projects or support of the use of alternative propulsion vehicles) and the impact of transport on the environment. It will set



objectives in the area of clean mobility in the Czech Republic and measures for the strengthening of the share of alternative propulsion vehicles.

Deadline for completion of the strategy: 31 December 2014

Responsible: MIT in cooperation with MoT and MoE

Monitoring: update in 2017

## 5.4 Monitoring and Proposal of Indicators for the Efficiency Monitoring of Measures, Assessment Plan and Change Management Plan

The Transport Policy will be monitored by making an assessment by 2017 at the latest. The assessment will lay the groundwork for the elaboration of an updated Transport Policy including the proposal for remedies, to be completed by 2018 at the latest. The monitoring will assess individual objectives and measures of the Transport Policy and fulfilment of the indicators:

Chapter	Indicator	as of 2011	as of 2017	as of 2020	
4.1 Users	4.1.1 Conditions for Competitiveness	Building of at least one track section in the high-speed mode	no	no	yes
	4.1.2 Conditions for regional coherence	Connection of all regions to motorway or dual carriageway network (according to the new definition)	no	no	yes
		Connection of all regions to rapid high capacity railway or start of the implementation of such a project	no	no	yes
	4.1.3 Freight transport as part of the logistics process	Number of public multimodal terminals satisfying the AGTC parameters, connected to regular lines of continental multimodal transport	0	3	5
	4.1.4 Public service in passenger transport	Percentage of Czech population living in municipalities included in one of the transport systems integrating railway and public bus line transport	59.80 %	75 %	80 %
	4.2.2 Traffic irregularities	Number of km of road and motorway network equipped with dynamic traffic control	12 km one-way 28 km both ways	100	150
	4.2.3 Co-modality in freight transport	Performance of combined transport (thousand ton-km)	2,233,406	2,350,000	2,450,000
		Number of operational rail freight corridors (according to Regulation 913/2010/EC)	0	3	3
		Share of the volume of the rail and waterborne transport in the total volume of freight transport over 300 km	41%	45%	50%
	4.2.4 Passenger transport	Performance of public passenger transport, in millions of person-km	27,581.1	27,600	28,000
		Share of public passenger transport in total passenger transport performance, in %	30	30	35
		Percentage of the volume of railway passenger transport operated on the basis of tenders or in open market mode, in %	2%	10%	15%



Chapter		Indicator	as of 2011	as of 2017	as of 2020
4.1 Users	4.2.5 Urban transport	Number of cities with a valid urban sustainable mobility plan	0	3	5
		Share of the volume of public transport to private car transport in cities over 100 thousand inhab. (separately) (%)	57 %	keeping the 2013 figure	keeping the 2013 figure
	4.2.6 Traffic safety	Development of accident rate (number of fatalities, seriously wounded)	3092 seriously wounded, 773 fatalities (within 30 days)	at most 2399 seriously wounded, at most 462 fatalities (within 30 days)	at most 2123 seriously wounded, at most 360 fatalities (within 30 days)
	4.2.7 Restructuring of railways	Completing the restructuring	no	yes	yes
4.3 Funding	4.3.1 Classical funding	Use of the Cohesion Fund and the national envelope of "cohesion" CEF to finance the transport infrastructure	-	-	100 % (in 2022)
		Year-on-year fluctuation of investment spending for the transport infrastructure (over two previous years)	2009-2010 - 20% 2010-2011 - 28%	max ±15 %	max ±10 %
		Number of km of roads with distance-based charging (km)	1,382	7,000	7,500
	4.3.2 Alternative funding	Use of private capital to finance the transport infrastructure – number of projects	-	1 pilot project implemented, more in preparation	2 implemented projects
	4.3.4 Resource distribution	Increase of funds for maintenance of the transport infrastructure	CZK 23,241.1 million	increase by 25 % over 2013	increase by 35 % over 2013
	4.3.5 Funding of public transport services	Number of person-km per one Crown spent from public budgets in line bus transport in public interest	0.74	0.75	0.80
		Number of person-km per one Crown spent from public budgets in public transport	0.89	0.9	0.9
		Number of person-km per one Crown spent from public budgets in the railway transport	0.53	0.55	0.60
	4.3.6 Ensuring energy for transport	Share of the fleet in road transport using energy not derived from crude oil	0.03 %	1 %	3 %
		Share of gasoline, diesel and kerosene on total energy consumption	93 %	88 %	85 %

Chapter		Indicator	as of 2011	as of 2017	as of 2020
4.4 Transport infrastructure	4.4.1 Maintenance and operation of the transport infrastructure	Increase of funds for repairs and maintenance of the road infrastructure, in CZK mill.	14,009.4	19,000	19,700
		Increase of funds for repairs and maintenance of the railway infrastructure, in CZK mill.	8,963	11,500	12,000
	4.4.2 Development of the transport infrastructure	Number of completed projects (km) of the core TEN-T road network, in %	77	85	90
4.4 Transport infrastructure	4.4.2 Development of the transport infrastructure	Number of completed projects (km) of the core TEN-T railway network for freight transport	48.9 %	60 %	75 %
		Number of completed projects (km) of the core TEN-T railway network for passenger transport	63.3 %	70%	80 %
	4.6 Reduction of the impact on public health and environment	Emissions of nitrogen oxides from transport, in tons	69,531	65,000	63,000
		Share of population exposed to excess noise from transport (%)	reference year	- 5 %	- 15 %
		CO <sub>2</sub> emissions from transport, in thous. tons	17,930	17,900	16,200

## 5.5 Feasibility Analysis and Risk Analysis

The fulfilment of the Transport Policy objectives can be jeopardized for political reasons – in case of a change of government the new political representations are very often unwilling to continue the previous processes and at first try to change the course drastically, even though **the objectives of the Transport Policy have been set independently of the ideology of individual political streams**. Another risk lies in a serious budgetary limitation – in particular for the area of public transport services, maintenance and repairs and development of the transport infrastructure; last but not least, measures in the area of equipping the transport infrastructure with advanced technologies tend to be perceived as less important.

### *Creation of conditions for the competitiveness of the regions and the Czech Republic*

The main risks are:

- Strong regional lobbying, which can result in growing differences in the level of the transport infrastructure among regions. Political representations of certain regions tend to be more active and push for a faster development of the transport infrastructure in their region at the expense of other regions, with no regard to the actual condition of the infrastructure in different regions,
- Strong cuts in funds earmarked for maintenance and development of the transport infrastructure, including year-on-year fluctuations of the financial framework (construction of the transport infrastructure usually takes 3 – 4 years),

Failure to fulfil the objective would result in growing differences in the development of regions and on failure to improve competitive position of the Czech Republic in international trade (creation of better conditions for Czech exports).

### *Freight transport as part of the logistics process under co-modality principles*

Risks will arise mainly if the measures to support multimodality are not implemented (for financial reasons, non-fulfilment of requirements for public access to private terminals and ports).

Failure to fulfil the objective would not allow to reduce sufficiently the impact of freight transport on the environment and public health, to achieve higher economic efficiency of transport for medium and long distances (impact on exports), to respond sufficiently to changes in energy availability and to fulfil European objectives in the area of reduction of emissions of greenhouse gasses.

### ***Public service in passenger transport, functional system of passenger transport and tackling challenges in urban transport***

The biggest risk consists in reduction of public expenditures for public transport services, where even a small spending cut would result in a significant decrease of system functioning.

Disintegration of the public transport system (about half of the passenger transport volume is secured by public transport) would have impact on the capacity of the transport infrastructure (road congestions, in particular in cities), which would result in direct economic losses from congestions. Another consequence would be the impact on the environment and public health, inability to respond sufficiently to changes in energy availability and to fulfil European objectives in the area of reduction of emissions of greenhouse gasses<sup>58</sup>.

### ***Improving transport safety***

The biggest transport issues are found in road transport, in particular as regards the human factor. The biggest risk lies in insufficient law enforcement.

### ***Ensuring energies for transport***

This is a global issue and it must be put into context with the fact fossil fuel consumption is linked to the problem of greenhouse gas emissions, which is a question of sustainable development. The main risk is that the development of alternative energies would not be fast enough to respond to the growth of fossil-based fuel prices. Higher utilization of transport with direct electric propulsion can also help solve the problem (electrified railway and public transport systems).

### ***Funds for the transport infrastructure, maintenance and development of the transport infrastructure***

Stopping the modernization of the transport infrastructure network due to insufficient funding would have a significant impact on the competitiveness of the Czech Republic and the regions (mainly on exports but also on labour mobility). Significant savings in the funding of the transport infrastructure usually have the consequence of starting the processes of positive feedback, which result in deepening public budget deficits<sup>59</sup>.

### ***Advanced technologies, research, development and innovation***

The risk in the area of research and development lies in a transfer of the funding of applied research and development in transport from the MoT to the Technological agency, with the danger that the needs of transport research will not be sufficiently reflected at that level. Research and development is one of the main competitive factors of the Czech Republic, including research in the transport sector.

### ***Social issues, education and qualification***

The transport sector grapples with a lack in certain professions, which jeopardizes the competitiveness of the whole sector. The solution to this issue lies rather in measures of organizational nature.

### ***Subsidiarity***

Linking of different levels – European, national, regional and local – is important in the transport sector. While the Transport Policy reflects the objectives of the European Transport Policy, the links to strategic documents of the regions and large cities are also important. The biggest risk lies in the application of the principle of independent sphere of action, when the solutions proposed by the regional and local authorities only deal with issues related to “their” territory without regard to the links to neighbouring regions and the national level. Within the framework of the subsidiarity principle the Transport Policy is of recommendation and methodological nature for the regional and local authorities, but the regional strategies need to take over the main principles set out at the national and European levels, complementing them with regional specifics (the same relation is between the Transport Policy and the European Transport Policy).

<sup>58</sup> The impact can be illustrated on the MMT in Prague, which receives the most funds for its operation from among all transport service sectors – 57 % of the volume of passenger transport in the city is secured by MMT. Shift of this volume to private transport is impossible as the current road system has already difficulties managing the current volume of private car transport.

<sup>59</sup> Slowdown of the development of the transport infrastructure has many direct and indirect impacts on the income of public budgets in the short-term and medium-term – no elimination of impact on public health, losses from congestions (within the EU the losses are estimated at as much as 2.5 % GDP), reduction of the buying power of the population (reduction of employment in construction, lower labour mobility) etc.



# GLOSSARY

<b>Co-modality-</b>	efficient use of different modes of transport operated independently or within multimodal integration in a transport system with the view to achieving optimum and sustainable utilization of resources.
<b>Combined transport -</b>	movement of goods in one or more shipping units or a vehicle, using different modes of transport step by step, without the need of separate handling of the transported goods when the mode of transport changes.
<b>Intermodal transport -</b>	the term is nowadays used in the same sense as combined transport. In earlier European documents there were slight differences between the terms – combined transport included cases where road transport was used only for the shortest part of shipping, i.e., when shipping to/from the nearest combined transport terminal. The concept of the intermodal transport was used where the railway transport was only used to overcome a difficult spot, while the main portion of transport was on the road (an example is the former Ro-La Lovosice – Dresden). Thus, intermodal transport was an accompanied form of transport (the driver of the road vehicle was transported as well on the railway portion of the journey), while combined transport was mostly unaccompanied.
<b>Multimodal transport -</b>	transport of goods by at least two modes of transport – it is a broader term than just combined and intermodal transport, as in this case there can be handling of the transported goods or not when the mode of transport changes.
<b>Railway transport -</b>	according to the Act on railways it includes transport systems with fixed tracks, i.e., railway transport, tram transport, metro, cable railway and trolleybus transport. A draft amendment to the Act on railways intends to exclude trolleybus transport from the definition of the railway transport.
<b>Rail transport -</b>	includes railway, tram and metro transport.
<b>Tram-train systems -</b>	connection of tram and rail operation without the need to transfer, using special vehicles satisfying both the requirements for the operation on railway and tram tracks
<b>Rapid connection -</b>	system of infrastructure and operation of high-speed railway on the territory of the Czech Republic, which includes construction of new high-speed tracks, modernized high-speed tracks and modernized conventional tracks with higher parameters, including the rolling stock and a concept of operation
<b>Gigaliner -</b>	freight road transport vehicles exceeding the longest allowed length (18.75 m) and weight (40 t), set out by Directive 96/53/EC, laying down for certain road vehicles circulating within the Community the maximum authorised dimensions in national and international traffic and the maximum authorised weights in international traffic



## LIST OF ABBREVIATIONS

<b>AGC</b>	European Agreement on Main International Railway Lines
<b>AGN</b>	European Agreement on Main Inland Waterways of International Importance
<b>AGR</b>	European Agreement on Main International Traffic Arteries
<b>AGTC</b>	European Agreement on Important International Combined Transport Lines and Related Installations
<b>B+R</b>	Bike and Ride
<b>CEF</b>	Connecting Europe Facility
<b>D-O-E</b>	Danube-Oder-Elbe water corridor
<b>EC</b>	European Commission
<b>EGNOS</b>	European Geostationary Navigation Overlay Service
<b>EIA</b>	Environmental Impact Assessment
<b>ERDF</b>	European Regional Development Fund
<b>ERTMS</b>	European Rail Traffic Management System
<b>ESA</b>	European Space Agency
<b>EU</b>	European Union
<b>GDP</b>	Gross Domestic Product
<b>GNSS</b>	Global Navigation Satellite System
<b>GPS</b>	Global Positioning System
<b>ICT</b>	Information and communication technologies
<b>ITIS</b>	Integrated Traffic Information System
<b>ITS</b>	Intelligent Transport Systems
<b>JIT</b>	Just in Time Delivery
<b>K+R</b>	Kiss and Ride
<b>MEYS</b>	Ministry of Education, Youth and Sports
<b>MIT</b>	Ministry of Industry and Trade
<b>MLD</b>	Ministry for Local Development
<b>MLSA</b>	Ministry of Labour and Social Affairs
<b>MoA</b>	Ministry of Agriculture
<b>MoE</b>	Ministry of the Environment
<b>MoF</b>	Ministry of Finance
<b>MoH</b>	Ministry of Health
<b>MoI</b>	Ministry of the Interior
<b>MoT</b>	Ministry of Transport
<b>NAIADES</b>	Navigation and Inland Waterway Action and Development in Europe
<b>NOx</b>	Nitrogen oxides
<b>NSRTF</b>	National Strategy of Road Traffic Safety
<b>PCT</b>	Private car transport
<b>PM</b>	Particulate Matter
<b>PPP</b>	Public Private Partnership
<b>P+R</b>	Park and Ride
<b>PSP ČR</b>	Chamber of Deputies of the Parliament of the Czech Republic
<b>RDI</b>	Research, development and innovation
<b>RFID</b>	Radio Frequency Identification
<b>RIA</b>	Railway Infrastructure Administration
<b>RMD</b>	Road and Motorway Directorate
<b>SEA</b>	Strategic Environmental Assessment
<b>SEC</b>	State Energy Conception
<b>SEF</b>	State Environmental Fund
<b>SEP</b>	State Environmental Policy
<b>STIF</b>	State Transport Infrastructure Fund
<b>TC</b>	Testing Centre
<b>TEN-T</b>	Trans-European Transport Network
<b>TSI</b>	Technical specification for interoperability
<b>VOC</b>	Volatile organic compounds







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