

Radek Novák *

RIADENIE PROGRAMU VÝVOJA DOPRAVNEJ INFRAŠTRUKTÚRY V ČESKEJ REPUBLIKE

MANAGEMENT OF THE TRANSPORT INFRASTRUCTURE DEVELOPMENT PROGRAMME IN THE CZECH REPUBLIC

Článok sa zaoberá problémami dopravnej infraštruktúry v Českej republike vo všetkých odboroch a druhoch dopravy. Sú v ňom objasňované náležitosti a princípy základného národného projektu „Program rozvoja dopravnej infraštruktúry v Českej republike“. Ide o základný prierez týmto materiálom. Článok vychádza z rozličných materiálov a dokumentov rôznych úrovní riadenia najmä z materiálov Ministerstva dopravy a spojov ČR. Tieto dokumenty sú v „Programme“ sumarizované. Základná pozornosť článku je venovaná budúcim potrebám prestavby a modernizácii dopravnej infraštruktúry v ČR, najmä cestnej a železničnej dopravnej sieti. V článku sú tiež uvedené niektoré údaje o infraštruktúrnych problémoch riadenia verejnej, mestskej a leteckej dopravy.

The article deals with problems of the transport infrastructure in the Czech Republic in all branches and modes of transport. There are discussed some details of the essential principles of the global national project “Transport Infrastructure Development Programme in the Czech Republic”. This is the principal focus of this article. The article is based on various materials and documents of different management levels - especially those of the Ministry of Transport and Communication of the CR. These documents are summarised in the Programme. The article is focused mainly on the explanation of the future trends of rebuilding and modernisation of the transport infrastructure in the CR, especially in terms of road and railway networks. But there are also some comments on the problems of inland waterways development, municipal public transport and air transport.

The Main Characteristics of Transport Network in the CR

The infrastructure position of the Czech Republic (CR) at present represents a total of 9 430 km of rail lines of which 1940 km are double-tracked and multiple-tracked. About third of the rail lines have been electrified (the first of them before World War II by the electric system of 1500 volts). After WWII there was a big explosion of electrification at the system of 3.000 volts and in the end of the 1950s electrification on alternating current of 25 kV by 50 Hz frequency started. The density of rail lines in CR amounts to 0.119 km/km² of the territory, and in comparison with average density in EU countries (0.50 km/km²) it is more than twofold. The road network comprises 498 km of motorways, 304 km of expressways and 54 613 km of other roads in exploitation. The length of motorways less than only one percent of the total length of roads in the country. Almost ten percent of all traffic performances are achieved on motorways. The basic problem of present management of built up road infrastructure in CR is absence of the connection of our motorways with the West-European network. As of spring 2000 the connection is only completed at the motorway border crossing of Rozvadov – Waidhaus (D 5 motorway). In the German territory the connection has not been finished (there is about 30 km motorway missing). The first class of roads, making about twelve percent of the total road lengths, provide for almost half of all traffic performances of the road transport. The road

density in CR is fully comparable with that of EU countries. But the motorway density in our country amounts to mere 6.3 km/1 000 km² of the territory, which roughly equals to a quarter of the average motorway density in developed EU countries (14.1 to 53.1 km/1000 km²). There are about 1.8 million people in the CR who are active in the field of transportation of goods and passengers. More of them are share in carriage of raw materials and products, but in the complementary services at all to (including forwarding management). The assets value involved in the transportation branch is higher than 350 billion CZK (in prices of 1989 year).

The Global Situation of the Czech Transport Infrastructure

Various analyses were done for the purpose of identifying the range and process of the management of construction of motorways and expressways. The analyses were monitoring not only the financial resources and possibilities of the construction, ecological aspects but the relations between the existence of high quality transport connections and the development of the country regions too. After the basic analyses it turned out that in the field of financing the capability of the area to absorb investments for such an investment intention plays very important role. For the management of future transport infrastructure programme in that case

* Dipl. Ing. JUDr. Novák Radek,

The Faculty of Law Charles University Prague, Department of Logistics University of Economics Prague, U Albrechtova vrchu 9, CZ-155 00 Praha 5, Tel./Fax: +420-2-652 47 92

and in terms of the environment was so clear: the motorway as a line compact construction represents for the landscape a certain confusion. However, the negative environmental impacts of all sides of its construction are minimised. Anyway in our conditions the motorways and expressways also have a positive impact on the health of the population. In this consequence we can think about impact of motorway construction for increased road safety. The statistics documents deduce the traffic on directionally separated roads is approximately four times safer than on classic two-lane roads. Next fact is the relation between the quality of a motorway network and the global economic power of the region. Each area or territory with a developed motorway infrastructure shows much better economic results in all branches of industry, bussines etc. Areas having contacts with motorways and four-lane expressways network have a higher rate of employment and are observed to have average wages too.

Background of the Transport Infrastructure Development Programme

Investments into the transport infrastructure in CR will pay off. On one hand, dense network of railways and roads covers CR's territory, but on the other hand, important railway lines are only under modernisation to achieve required technological parameters. The serious problem of transport infrastructure management represents especially low quality and bottlenecks on high capacity roads and motorways, which of course limits not only the needs movement of goods and people but also inhibits next development of resources of the Czech economy. In addition, the assessment prepared by the European Commission, in respect of CR application for EU membership, reflects that although the road network meets its total length it fails to offer enough high capacity roads and motorways which would meet the requirements of the increased road traffic of this time.

The CR government during midyear session of 1999, approved the "Project of the development of transport networks in the Czech Republic until 2010" which constitutes a basic obligatory document outlining future construction of all transport ways in the CR. This material provides completion of the modernisation and reconstruction of all important railway lines and deals with some long discussed questions about motorway network development of the future.

The Railway Infrastructure

For the management of Transport Infrastructure Developed Programme in CR analysis was done which was made in respect of the range and progress in the modernisation of the railway network. Based on such analyses the lines of greatest importance were among the four national railway corridors designed for the general reconstruction of such technological parameters which would ensure the next higher quality interconnection with neighbouring countries. The total length of these four railway national corridors is 1.962 km but the length of modernised railway lines

is only 1.442 km (because of some corridors). Within the scope of such rearrangement a complex reconstruction of the railway substructure and permanent railway (including railway bridges, selected tunnels and - if appropriate - new construction of the traction wire), will be carried out. However, our new modernised railway corridors will increase the speed of trains up to 160 km per hour (and in some parts up to 140 km per hour). The reference profile of corridors will be adjusted according to the AGTC (UIC GC) Agreement and the operation of goods wagons with axle load of 22.5 tonnes (D 4 class of loading). The implementation of intentions will safely ensure not only the lesser inconsistency of the railway infrastructure capacity with the demands for traffic carriage volume, but it will also satisfy the requirements of the increase in quality and - particularly - the higher speed and better quality of traffic safety. Apart from the modernisation of the most important railway lines, the implementation of the program of the electrification of lines, notably of internationally important lines, is envisaged. Since the year 2000, the reconstruction of other railway lines included in international agreements was started.

The railway objective on selected lines is to achieve maximum speed of 160 km/h in high quality international connection between Berlin, Vienna, Bratislava, Warsaw, Nuremberg, Munich and Linz. The consideration of national demands includes a fast and high quality connection between particular hinterland areas of CR.

Railway network development is designed, include necessary investment measures relating to the provision of transits through decisive railway junctions and stations, in parameters corresponding to lines leading to such nodes so that bottlenecks on modernised corridors are not created in the future. Particularly it is a case of the following nine railway junctions and stations situated on the corridor I: Decin, Praha, Kolin, Pardubice, Usti nad Orlici, Chocen, Ceska Trebova, Brno and Breclav. The provision costs of the transit amount to 34, 021.6 million CZK.

The rebuilding of the railway corridor II (Breclav - Prerov - Petrovice u Karvine with railway part Prerov - Ceska Trebova) which is 206 km long, will be completed in 2003, and the construction of the Prerov - Ceska Trebova leg will be completed two years later.

Separate from the modernisation of the most important railway lines, it is envisaged to implement the electrification program, especially for lines of international importance. After 2005, reconstruction of further lines included into international agreement will be launched. The reconstruction after 2010 will be considered with lines promising increased revenues from cargo transport.

The Road Infrastructure

A great assignment for transport infrastructure was to include individual motorway and expressway civil engineering projects into the time schedule. Transport demands a swift solution of the critical situation of existing road routes (namely within the space of large residential agglomerations), and for a high-quality road

connection between CR large residential agglomerations to ensure their economic development. Also the demand for a high-quality linkage of road communications in CR with the European transport network, in accordance with international agreements (is very important). Apart from these, construction of new lines of motorways and expressways should contribute to environment improvement in cities and communities affected by road transit.

Influenced by the current situation in development and decisions upon land planning, the top level of our State management must ensure quick construction of necessary buildings. The above mentioned decision taking process is influenced by the international institutions and organisations in the high degree. Nowadays, serious problem of the State and municipal management can be found in obtaining land-use decisions and rights to lands needed for the realisation of the construction according to applicable legislation. For instance it particularly concerns the possibility of immediate realisation especially: The road bypass of Praha, D 5 motorway bypass of Plzen, R 3 expressway bypass of Ceske Budejovice and some others.

For all levels of the CR state management, investment financing is the fundamental limiting element of further motorways and expressways construction. Time schedule is based on the assumption of possible increase in costs covered by the State budget (in the future, the State Transport Fund): in the period until 2002 in the amount of 10 % annually, from 2003 to 2010 about 15 % annually. The EU funds, the EIB credits and other resources are considered as complementary financial resources.

In the motorway construction the main attention of the State and municipal management is focused on:

- accelerated completion of the D 5 motorway around Plzen (as soon as possible),
- the realisation of the D 8 motorway running along the European multimodal corridor IV (within the time schedule agreed with the FRG representatives),
- an early launching of the D 11 motorway construction towards Hradec Kralove and later on in some decades, towards the Polish borders near Náchod, the construction of the D 47 motorway in the area of Ostrava
- the D 1 motorway towards Vyskov and Kromeriz.

So much discussed construction of the essential D 3 motorway is being suggested with respect to the condition of the preparation for launching the construction within the area of the Tabor agglomeration. In view of the financial resources considered so far for the construction of motorways, it will not be possible to put into service the entire planned motorway network.

In terms of expressway construction is the main attention is paid to the construction of the Praha bypass road, early completion of four-lane road and motorway connection between Praha, Brno, Olomouc and Ostrava region, including a linkage in Cesky Tesin with expressway to Warsaw (branch B of Helsinki multimodal corridor VI),

- completion of the four-lane expressway connection Praha - Liberec with a linkage to FRG and the construction of a radial expressway towards of Praha.
- in Moravia, as regards the construction of expressways, the main attention is focused on the completion of the R 35-road bypass around Olomouc and the improvement of the transport connection to Zlin agglomeration.

By 2010, having in mind limited financial resources, it is envisaged, to put only a smaller part of the range of planned, unfinished expressways into operation. In the interest of reducing the investment demands the construction by stages is considered to be implemented in halves with some expressways (for instance, R 7 Slany - Chomutov, R 3 Krasejovka - state border).

The Inland Waterway Infrastructure

The development of the inland waterway transport is a very important precondition and a primary factor of the quality and range of the transport infrastructure. From this arises a task to ensure, on the existing Labe-Vltava waterway, improvement of the navigation conditions at the Usti nad labem - CR/FRG state border so that the same parameters may be achieved as with the following German stretch of Labe/Elbe. The suggested work time adjustments comprised the construction of two navigation projects. As regards other stretches of this existing waterway, the reconstruction and modernisation will be focused on gradual improvement of parameters of Labe-Vltava waterway. But only on the level approved for the Labe/Elbe river on the territory of Germany and its reliability, the provisions of the European agreement on waterways international importance to be successively applied. It is essential to improve the parameters of the Labe-Vltava waterway in the Usti nad Labem - Melnik stretch and the reconstruction of large locks. There is envisaged reconstruction into effective dimensions 150.0 x 22.0 m with the provision of the 2.2 m draught (it means the same parameters like in Germany). On the Labe in the section of Melnik - Chvaletice is the great intention given to the height of bridges, replacement of the dynamic protection of the lock gates, reconstruction of the crash-barriers and construction of the lay-by points for vessels. The measures to increase navigation safety will be implemented on both Labe stretches. The Vltava river in the section Melnik - Radotin should be adjusted step by step to the new parameters (of class V. a. of international classification standard) with the provision of the 2.2-m draught. The adjustment of the Horin lock is currently facing a rejecting standpoint of the Care of Historical Monuments. The design of the lock in Praha - Smichov is in the same situation.

Great interests of the State and especially of the municipal management of regions are concentrated to the scope of the Labe navigability program to Pardubice. It should be enabled in case of future demand by connecting the already navigable sections between Chvaletice and Prelouc and ensuring the building of the Pardubice port. The implementation of such intention will enable the linkage of the East-Bohemian region to West-European waterway network contributing thus to the increase of the volume of

international transports and also to the increase of the attraction of our waterways for domestic and foreign investors naturally in case of proper demand for the transport traffic.

In the future there is an intention to let the Europe to build-up a connection of the CR to the Danube river (Danube has International River Status - on the contrary of Labe), by making the Morava waterway navigable, and by connecting the Ostrava agglomeration to the navigable Odra river.

But this project has strong international EU character.

The Municipal Transport Infrastructure

The present situation in the municipal transport market of the CR is represented by 19 transport companies operating in the municipal public transport. Most of them are joint stock companies with a 100 % of participation of the city. In addition to these large enterprises, there are also some private companies operating in this business. Annually, about 2 billion passengers are carried by municipal transport companies. In terms of infrastructure and vehicles, the State management takes part in development and reconstruction, namely in accordance with the Resolution of the CR's Government.

The investment actions concentrated on the construction of the Praha metro (subway) are relatively separate. Some structures and reconstructions of existing routes and present vehicles, which are considered for next years, are as follows:

- completion of the operational section IV of subway line B Ceskomoravská - Cerný Most (finished in 2001)
- construction of the IV C subway line in the section Nadrazi Hošovice - Letňany (forecasted implementation in the period of 2000 - 2005)
- Depot Zličín (final completion of the building in 2003, already in progress)
- forecasted construction of the I D subway line Nove Dvory - Namesti Miru (in the period of 2005 - 2012)
- reconstruction and modernisation of buildings of the A subway line (especially the replacement of escalators and reconstruction of the block system - in the period of 1999 - 2007)
- procurement and renovation of metro vehicles comprising the reconstruction of existing exsoviet vehicles, purchase of new vehicles in terms of renovation, purchase of new vehicles for new metro lines (in the period of 2000 - 2010).

The management of city of Brno puts a great emphasis on realising new construction of the tram line in Brno, so called north-south diameter representing a non-collision separated network of the tram line in order to connect points with greatest passenger fluctuation.

In other Czech cities operating municipal transport systems, the plan envisaged for the future is to reconstruct existing or, if appropriate, construct new tram and trolley bus lines and tram or bus depots. It is the focus of particular municipal policies. This is

one of the basic problems which must be sorted out by the municipal management of the regions and cities.

The Air Transport Infrastructure

The transport infrastructure networks development at airports is focused especially on the reconstruction and modernisation of the clearance area at International Airport Praha-Ruzyně. Additional construction of buildings for CARGO and adjustments of both take off and landing runways are taking place as well. By this modernisation the airport capacity will be increased to 4.8 million passengers per year. At this moment, the existing capacity is fully exploited. After 2003, the reconstruction program of the airport capacity will be increased up to the forecasted capacity of 6.4 million passengers per year.

The following solutions are focused on improving the quality of such areas as passenger clearance, air traffic safety and maintenance of the aviation equipment:

- The construction of the Airport Terminal III (forecasted for the period of 2003 - 2005) especially represents extension of buildings.
- The Terminal IV should be extended by constructing of some additional runways.
- The extension of runway system in the way of construction parallel runway will start, when full utilisation of the existing runway system is achieved.
- The interconnection of the link-up of the airport with the municipal transport system is also important to improve. This should be achieved by construction of a speed rail line. The speed railway connection of Praha centre and Praha airport is discussed by both the management of the Ministry of Transport and Communication and municipal management nowadays.
- The new Cargo Terminal with capacity of 100 000 tones of handled cargo per year, was completed in May 1998. Another part of this Cargo Terminal is planned to be built on the same place in case of higher demand. Total planned capacity of cargo handled is estimated at 300 000 tones per year.

Complex development program of the transformation of the management, provision and control of the air traffic above the territory of the CR will be completed in 2000.

The Pedestrian and Bicycling Transport Infrastructure

Pedestrian traffic and bicycle transport represent inseparable parts of the transportation system because of the environmental protection. This program includes both construction of new cycling paths and adding special lanes for bikers to already existing roads. Of course, the long-distance international cycling paths EURO-VELO are included in the network too. The construction of this system should be financed namely by the community funds.



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