

## FORECASTING OF THE FREIGHT TRANSPORTATION BY LITHUANIAN RAILWAYS

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### INTRODUCTION

Aim of this article is to analyse evolution of freight and passenger transportation by Lithuanian railways as well as market development opportunities, to foresee perspectives of transportation activities and to present forecast of freight and passenger transportation up to 2020.

To this effect an analysis of freight transportation market and of its changes was carried out, as well as the current status in the Lithuanian railways was examined. Based on the analysis of development indicators of the Lithuanian railway transport sector in 1997-2003, the SWOT analysis (of strengths, weaknesses, opportunities and threats) was carried out. The most important factors and premises, which form a basic foundation for the long-term railway transport strategy, were identified.

In order to form a perspective, the study was based on macro-economical indicators of the Lithuanian economy, of their evolution and forecasts. Also, external and internal factors having impact on the evolution of freight and passenger transportation were analysed, perspective directions were put forward, and as well as possible risk factors were identified. When determining long-term freight transportation forecasts, references were made to the "Long term strategy of the Lithuanian transport development (up to 2025)", which was prepared on the basis of factors and assumptions, arising out of an analysis of tendencies of the Lithuanian economic and transport sector development and out of the general forecast. Besides, the newest development tendencies of the EU transport sector were taken into consideration, as well as economic evolution (Basel) scenarios and (Lisbon) strategy directions and methods.

When preparing long-term forecasts of the Lithuanian railway transport development, three possible growth scenarios of the Lithuanian economy – 1) an optimistic, i.e. of a speedy economical development, 2) the basic, i.e. of a realistic economic growth, progressing towards moderate tendencies (based on the scenario of the Ministry of Economics), 3) a pessimistic, i.e. of a slow economic growth, were assessed. When preparing forecast of the modal split, references were made to the forecast of total freight transportation volumes contained in the Long-term strategy of the Lithuanian transport development up to 2025.

### 1. ANALYSIS OF RAILWAY TRANSPORT ACTIVITIES

The country's main and the biggest railway transport company AB "Lithuanian Railways" carries out freight and passenger transportation, development and maintenance of infrastructure, traffic organization and control, technical supervision and repairs of the rolling and traction stock and other services related with these activities.

Increased freight transportation volumes (43.4 million tons of freight) in 2003 exceeded transportation volumes by 18.5% of 2002. The flow of international freight increased by 26,0% and amounted to 38,0 million tons. Local transportations during the year decreased by 16,2% (up to 5,4 million tons). International transportation was distributed as follows: 7,2 million tons of freight were imported, 7,1 million tons of freight were exported, and 23,8 million tons of freight were transported

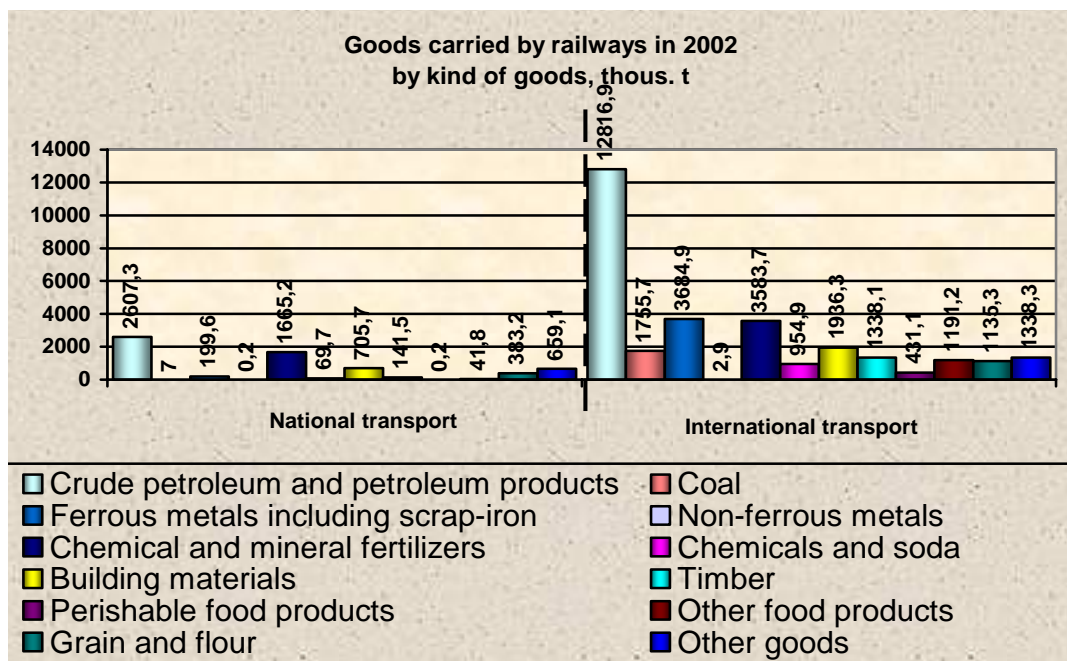
by transit. Amongst the factors determining these changes in local and international transportation volumes were the changes in the transportation of oil and oil products: bigger volumes of oil were transported by local routes in 2002, whilst a greater part of oil freight was exported in 2003.

Local carriages in freight transportation accounted for 12.5%, export for 16.2% and import for 16.5%, whereas transit in freight transportation constituted the greatest share of 60.8 % (Table 1).

**Table 1.** Freight transportation by Lithuanian railways in 1997-2003

	1997	1998	1999	2000	2001	2002	2003
<b>Total freight transported, in thsnd. tons</b>	30498	30912	28347	30712	29173	36650	43447
Of which:							
Local transportation	4720	5977	4595	4664	6340	6481	5435
International transportation	25778	24935	23752	26048	22833	30169	38012
Of which:							
import	4581	4977	4317	3961	3410	4898	7176
export	5495	6210	4359	4099	4273	4476	7053
transit	15702	13748	15076	17988	15150	20795	23783
Freight turnover, in mln. tarif. tkm	8622	8265	7849	8918	7741	9767	11457
Average distance of one ton transported, km	283	267	277	290	265	266	264
<b>Freight turnover, in mln. oper. tkm</b>	8933	8658	8169	9233	7917	9936	11523

Oil and oil products constitute the main share of freight transportation by Lithuanian railways (44.8% of the total freight transportation volume). Transportation of this type of consignment, as compared to 2002, has increased by 25.2%. Chemical and mineral fertilizers accounted for 14.2%, and ferrous metals for 8.3% in the total freight transportation structure, and increased, correspondingly, by 17.6% and 4.6%. Also, a volume of construction consignments and cement increased by 12.6%, of grain and flour by 22.5%, of coal and coke by 18.7% and of foodstuff consignments by 6.4% (chart 1).



**Chart 1.** National and international goods transportation by Lithuanian railway transport in 2002

The main directions of freight transportation are concentrated on the Trans-European corridor IX: 31.7 % of freight is transported through Klaipeda port, 65.8% in Kaliningrad direction and as little as 2.5% of the remaining freight is transported in other directions.

Growth tendencies in freight transportation also persist in 2004: freight transportation by JSC "Lithuanian Railways" has increased by 13.1 % during 1<sup>st</sup> quarter, transit increased by 5.8%, and export by 38.1%.

## 2. COMPLEX ECONOMIC ANALYSIS

The results of analysis on the evolution and current status of the Lithuanian railways core businesses, i.e. of freight transportation and of passenger transportation, are evaluated with the help of the analytical form in order to identify further development opportunities:

### *Strengths:*

1. The upgraded and reconstructed railway transport infrastructure going alongside Trans-European transport Corridors I and IX crossing the territory of the country creates favourable conditions for freight transportation and international freight and passenger transportations;
2. The upgraded and developed non-freezing Klaipeda sea port generates freight flows the main share of which is transported by the Corridor IXB railways;
3. Good political and economical relations with the neighbouring countries foster cooperation in freight transportation and passenger transportation by rail, implementation of combined carriages;
4. Due to favourable transportation conditions, branch of corridor IXD is intensively operated for transporting CIS freight and passengers through the territory of Lithuania;
5. The completed fundamental restructuring of the railway transport sector will enhance performance of operation, and will induce investments into the railway infrastructure and upgrading;
6. The improved training, qualification maintenance and advancement system of workers in the railway sector allows to achieve higher performance standards and to create more qualitative services;
7. New tourism opportunities, opened up together with the membership in EU, will increase the need of services for international and local communication by rail.
8. Qualified scientific potential of the transport sector, which prepares feasibility studies of different transport branches and participates in preparing programs and projects.

### *Weaknesses*

1. Outdated railway freight and passenger rolling and traction stock;
2. Poorly developed network of electrified passenger railway lines, insufficient for freight transportation;
3. Poor communication by rail with EU countries through Poland (different gauge width), absence of the European gauge line into the depth of the country;
4. Passenger transportation is not coordinated with the services of other transport modes;
5. Legal basis for regulating the upgrading and development mechanism of the transport infrastructure by applying principles of the private- public capital has not been prepared;
6. Great competitiveness of the road transport, especially of automobiles, based on higher communication speeds and technologically developed interoperability among individual passenger transportation modes;
7. Insufficiently efficient interoperability between Klaipėda seaport and the Lithuanian railways, and insufficiently developed railway network in the port.

### *Opportunities*

1. To improve and comply with EU the legal and normative basis in order to create favourable conditions for developing and upgrading the Lithuanian railway transport sector;
2. To create logistics centres in Kaunas, Klaipėda, Panevėžys and Vilnius and to integrate them into the transport logistics network of the Baltic sea region;
3. To achieve the status of the Trans-European network for the most important trunk-roads of Lithuanian railway transport;
4. To cooperate with the subjects of transport services in the continental Europe market;

5. To strengthen agents' and expeditionary services by increasing freight flows in the East-West direction through Klaipėda and Kaliningrad ports and realizing economical interests of Lithuania and of enlarged EU.
6. To improve and to upgrade commuter passenger communication by creating new quality of services and introducing a new ticketing system;
7. To upgrade traffic command and control systems, by ensuring traffic safety and increasing capacities of infrastructure.

#### **Threats**

1. Insufficiently efficient action coordination with neighbouring countries when developing Trans-European networks;
2. Deepening public passenger transportation crisis due to decreasing number of passengers, i.e. situations of a delayed public transport adjustment to the rearranged layout of production forces and the changed situation of planning cities and settlements;
3. Neighbouring countries' (especially Russia's) ambitious national plans and programmes incongruent with the interests of Lithuania and EU in developing the sea transport (ports, logistic centres, sea highways) and railway transportation;
4. Limited railway opportunities to compete in the transport market with the carries of the liberalized "cheap ticket" air transport system;
5. Unbalanced railway tariff policy with neighbouring countries;
6. Political decisions are seldom based on careful studies and necessary research and analysis of an object.

On the basis of SWOT analysis goals and means of further railway transport system network were envisaged seeking to make the Lithuanian railway transport sector competitive by satisfying growing needs of both markets of transport services, the Lithuanian and that of enlarged EU.

### **3. MAIN TRENDS OF THE LITHUANIAN RAILWAYS STRATEGY**

Main goals of the long-term development of the railway transport:

- To prepare a legal basis and to establish institutions for market regulation necessary for Lithuania's integration into the European Union;
- To complete restructuring and its partial privatisation of the railway enterprise;
- To create a strong and efficient safety control system;
- To create a uniform environment protection system for the railways, encompassing all possible (air, water, soil) pollution sources;
- To upgrade the infrastructure for its efficient integration into the European Union transport system, and to carry out upgrading works according to AGC and AGTC agreements;
- To restructure railways according to EU directive 91/440 and to the supplementing directives 2001/12/EB, 2001/14/EB, 2001/16 /EB, in order to increase the competitiveness of railways in the European market of transport services.
- To acquire passenger and freight rolling stock to meet the parameters of the upgraded infrastructure.

In order to be able to get integrated into Trans-European railway network structures successfully, and to reach a high speed of trains and a maximal traffic safety, to implement EU requirements for environment protection, to ensure efficient communication between the West and the East by railway transport by providing passenger and freight transportation services, it is necessary to be guided by the European Parliament and Council directive 2001/12/EB regarding the Community's railway development and to continue implementation of the envisaged measures in 2004-2008.

**Railway security insurance.** The railway sector has always been safer than that of the roads. This is proved by statistical data. The increasing need for international services and interoperability of the system, together with the opening up of the market, caused the need to toughen an attitude towards the railway security. Mutual interoperability of the systems should ensure the same or even bigger safety level, than it is achieved in each state. Namely because of that safety is declared as one of the most necessary requirements of operating the Trans-European railway system, which is laid down in

the directive 96/48/EC on interoperability of the Trans-European high-speed railway system and in the directive 2001/16/EC on interoperability of the Trans-European conventional railway system.

This induces to take up parallel actions on two levels:

- on the technical level it is necessary to define standards for each component of the railway system (rails, rolling stock, signalling system, work procedures, etc.). This is the role of the “directives on interoperability”;
- on the administrative level it is necessary to specify duties and liabilities of all workers of the system, starting with the managers of infrastructure, and finishing up with representatives of the communication institutions (without forgetting representatives of railway companies and state institutions). Making reference to the safe traffic programme of AB “Lithuanian railways” that is planned in order to submit for consideration in the near future should do this.

#### 4. FORECAST OF FREIGHT TRANSPORTATION

Factors forming the main freight transportation flow:

##### 1. *Local freight transportation.*

The market of local freight transportation is formed by the country's major enterprises, i.e. the main clients, the changing commodity structure, distribution of freight transportation among transport modes and the share of freight transportation flows falling on the railway, what is often conditioned by a possibility of access to the railway lines/stations and by an average distance of transportation by rail in the total transportation.

##### 2. *Freight export and import*

Freight export is determined by export of international trade, by its spectrum, the production potential and competitiveness of the country's economy, foreign demand of exported goods. Freight import is determined by the country's demand for imported goods and by consumers' purchasing power or financial capabilities.

##### 3. *Freight transit*

Freight transit forms the main flows in the East-West direction: the direction to Kaliningrad area and to Klaipėda seaport. The transit flow by rail in the North-South direction is insignificant, however, huge EU and Lithuanian investments are directed namely towards the construction of this direction railway line.

##### 4. *Combined transportation*

Combined inter-modal transportation is a direction of a modern technology. The crucial share of the services falls on the railway transport. To this effect, transportation by containers is fostered, and special rolling stock is purchased, shuttle freight trains are being organized.

##### 5. *Freight terminals.*

Freight stations are being upgraded in the railway transport; the technology of interoperability of two different systems is being improved. Lithuania needs universal logistics centres, multi-modal terminals, and freight villages. Projects of freight terminals were developed for Klaipėda, Kaunas and Vilnius cities.

Factors having a negative impact for changes in freight transportation:

1. Renovation and upgrading of the freight rolling and traction stock.
2. Upgrading of the railway infrastructure in compliance with AGC and AGTC requirements.
3. Integration of the railway network into Pan-European networks.
4. Upgrading and improvement of the traffic safety system.
5. Balancing out of the environment protection system in the railway (pollution of air, water, soil).
6. Implementation of restructuring of the railway sector.
7. Creation of the legal and normative basis of railway operation.
8. Implementation of requirements of EU directives 91/440, 95/18, 2001/12/EB, 2001/14/EB, 2001/16/EB and of other legal acts in order to liberalize the Lithuanian railways, to enhance their competitiveness in the market of European transport services, to technically improve and technologically upgrade, by ensuring safety and environment protection.

Premises for the freight flow increase:

1. Development of the Lithuanian economy, and a positive development of its separate sectors, the development of industry, agriculture, local and international trade.
2. Membership in the European Union, harmonization of business activities with the social indicators.
3. Opening up of the production and consumption markets of EU states, geographical and quantitative development.
4. Increase of the purchasing power of residents of the newly joined EU states;
5. Recovering and reformed economy of CIS, especially of Russia and of Ukraine, where the pushing force of economic relations passes from the politics and the state control into the field of private initiative and economic decisions.
6. Russia's accession into the World Trade Organization should catalyse international agreements concerning railway cooperation, including the tariffs.
7. The reviving demand and purchasing power of the consumer society of the Eastern neighbouring countries will boost exports of Lithuanian goods.

External risk factors:

1. Adversarial economical and political decisions of CIS bloc countries concerning commercial-transport relation's with/through the states newly acceded to the EU.
2. Construction and upgrading of the new Russian sea ports on the Eastern Baltic seaside will increase competition for Klaipeda port, as a result of which freight transit may decrease by the Lithuanian railways;
3. Instability and insecurity of the foreign banking sector, especially, in the regions of economically instable states may cause fluctuations in the market demands;
4. Fluctuation of oil supply and oil prices and instability of the market, linked with the military, political and economic situation of the world and of the neighbouring states which govern industrial enterprises;
5. Threat of terrorism immobilizing transport- commercial relations even in neutral states;
6. Instability of the USD and possibly, of other main currencies prevailing in financial settlements with the Eastern neighbours due to recurrent political-economical crisis in the regions of the world.

## 5. THE LITHUANIAN FREIGHT TRANSPORTATION MARKET

The Lithuanian market consists of 22 % of local freight transportation and of 78 % of international transportation. 5436 thousand tons of freight were transported in the domestic market, and 23783 thousand tons of freight were transported by transit through the territory of Lithuania in 2003, whereas export and import distributed nearly evenly, i.e. 7053 thousand tons and 7176 thousand tons, correspondingly. All international transportation amounted to 38012 thousand tons of freight

In the future smaller volumes of freight, as compared with international freight transportation, will fall on the railways in local transportation, since the main transportation in the domestic market is carried out by the road transport. The increasing competition within the market of the road transport services itself, induces enlargement of enterprises, expansion of the quality and spectrum of services. Meanwhile, the road transport competitiveness will increase against the railway transport, for which freight transportation distances within the country's market are too small due to a small territory of Lithuania. However, the growth of the country's economic potential and increase of the consumer market will be the crucial factors for increasing the plenitude of goods and volumes of their transportation.

If daily consumer goods are transported by specialized road transport vehicles, the production of major industries are transported by rails in as much there is access to the railway lines. It is expected that the domestic market of services will be stabilized and will remain in the same level in the near future. Therefore, a current share of the local freight transportation in the domestic market falling on the railway transport should also remain in the future.

In the railway transport, Lithuania is related with the neighbouring *Baltic States* by the common project of developing the European level infrastructure, which should revive a comparatively passive transportation of international freight by the surface transport, especially by railways, in the North-South direction. Completion of the project Rail Baltic throughout all three Baltic states together with

Finland and Poland will not only create necessary conditions for a modern transportation and loading of freight, but will actually integrate this remote economical region into the common railway networks of EU states.

The growth of economies of the *Central and Eastern European countries* has gained an ever-accelerating rate as compared with that of the developed Western European neighbours. In the opinion of experts of EU structures, the main macro-economical indicators in the acceded states should retain their regular growing tendencies: the GDP of the countries will grow by 4 % per year, foreign trade by 7% per year.

Trans-European I Corridor connects national markets of the Northern EU states with the Central and Eastern, and further on, with the Western and Southern European states' markets. This is a direct international connection among the majority of EU countries. The already functioning automobile highway Via-Baltic activated transit transport flows through Lithuania. It is expected that the constructed railway trunk road Rail-Baltic will become an actual axle connecting the nucleus of Europe with the more Northern states.

*Western European states*, belonging to the common EU market, have different levels of economic development, and the economical growth of these countries has stabilized at a small rate of GDP growth. 1,5% growth was achieved in 2004. Forecasts approved by EU structures indicate 2% annual growth rates, however, it is expected that international trade should reach an average 4,1% growth rate.

*Russia's* economy is manifestly recovering from the financial crisis of 1998. Although the domestic market suffers due to devaluation of the national currency, great hopes were entailed by the growth of prices in oil export in the world market. During the last 5 years, an average GDP growth was approximately 6,5%. Recovery of non-ferrous metallurgy, agricultural, foodstuff and retail sale industries gives hopes for the further growth of the GDP (table 9). The Russian Ministry of Economic Development and Commerce envisages that the country's economy will develop at a rate of approximately 5 % of annual growth during the next 20 years, if the tendencies of 8-9% of investment are be retained.

Russian export will increase more significantly than import. Export of oil, natural gas, metals and other raw materials will be continued further on. In recent years, raw materials and semi-fabricated goods constituted approximately 70% of the Russian export.

Export to Lithuania decreased insignificantly, as well as import increased insignificantly.

Russia's regular economical and political interests connect Russia by transport ties with its Kaliningrad area. Freight transportation and part of passenger communication is going on by the main Corridor IXD-IXB, which connects them through Lithuania. This is the shortest and the most economically acceptable way to communicate with a geographically remote Russian area. The results of recent years demonstrate that Russia's freight transportation through Klaipeda port is regularly decreasing and it is increasing towards the Kaliningrad area

*Russia's transit* through Lithuania from/ to Klaipeda port is related with the changes in the country's national policy. The Russian government plans to better use possibilities of the current port and the ports being newly built and to provide them with a sufficient load of cargoes. Such tightening up of the political direction of the planned economy is a characteristic and usual tool of Russia's economic policy. As result, transfer of part of the usual freight flow in Klaipeda direction to other railways (table 8) has been tangible in recent years. The further stability of freight flows is related only with the interests of the Russian businesses in specific ports of the Baltic Sea, e.g. Ventspils. Lithuania, on the contrary, having only one port, retained the national ownership of the port infrastructure during the entire period of independence and provided services to the country's businessmen. It is evident, that Klaipeda port and the railway corridor IXB towards it may experience a decrease of freight volumes due to the above-mentioned political steps of Russia.

*Byelorussia* is the closet Lithuanian neighbour from the Eastern side. After formation of CIS, this country of extraction of natural resources and machinery industry starts to gain speed in the evolution of economical development during the last three years. Due to strict planning and control, the Byelorussia economic evolution is related more with political decisions, rather than economical levers. Irrespective of a difficult economic-social situation after the financial-economic crisis, long-term economic instability, the Byelorussia economy is gaining speed. If the state succeeds directing the planned and sufficient investment into upgrading of the national plants instead of exporting the production means abroad, then it is probable that the country may achieve a far speedier development

rate, than it is foreseen by economic-financial institutions, as compared to the evolution scenario of the Russian economy. However, the further perspective of the country's evolution during the next decade is related more with the investments of the national origin, therefore it is probable, that the growth proportions should remain more moderate.

Freight transportation between Lithuania and Byelorussia had a tendency to increase up to 2003 until reached 7,8 million tons per year. Freight flow by IX Corridor is distributed in two directions: by IXB corridor to Klaipeda port and by IXD Corridor to the Kaliningrad area. 4/5 of the Byelorussia total transit is transported by IXB corridor to Klaipeda port; meanwhile 1/5 of transit freight is transported to the Kaliningrad area. In 2003 the flow of transit freight in Klaipeda direction decreased by 4,5%, and it increased by 22,5% by the Kaliningrad corridor.

**Ukraine's** economy has been developing intensively during the last three years. The GDP increased by 4,8% in 2002, and by 5,4% in 2003. It is expected that GDP will increase by even 8% in 2004. However, evolution of the country's economy greatly depends on the course and results of the structural reforms. At present, 30,5% of the GDP is created by the industry, and 13,4% is created by agriculture. Foreign trade has reached an annual growth of 10% under present prices. Around half of export consists of metals and mineral cargoes. 41,5% of the total import consists of the mineral cargoes.

Based on the essential conditions of the economic evolution, it is forecasted that Ukraine's freight transportation will increase correspondingly to the evolutions of the GDP and economical-political conditions

Lithuania's transportation connections with Ukraine are starting to develop more intensively. Freight transportation by rail increased in import, export and transit through Lithuania.

The increased import from Ukraine to Lithuania demonstrates increasing commercial interests of the latter and cooperation development with the Ukrainian manufacturers and businessmen. This is confirmed by transit, which increased twice during the year, and by export from Lithuania, which increased by 1/3. The structure of the main cargoes, transported by railways, remains the same.

Market of the *Central Asian states* starts to recover after an economic crisis which followed the reformation of the Soviet states into CIS. Russia's financial crisis of 1998 had a negative impact for the recovering economies of these countries. However, the again strengthened Russia's economic situation in the field of world oil trade and exported raw materials helped to recover economies of other CIS countries. Market success of the Central Asian countries is based on the extraction of energy and mineral raw materials and on manufacturing and trading in consumer goods, which is still very vulnerable to the impact of external markets. Due to Russia's great impact and a speedy development rate characteristic to the developing countries, quite a fast economic rise is expected from the low social –economical level, which is close to a number of CIS countries.

**Kazakhstan** is one of the Central Asian states, which has transport relations with Lithuania. Kazakhstan's freight exported to Lithuania decreased by 61,9%, and import from Lithuania increased by 192,5%. Kazakhstan's transit through Lithuania decreased by 13,0% during 2003.

## 6. GENERAL FORECASTS AND TENDENCIES OF INTERNATIONAL FREIGHT TRANSPORTATION

Forecast scenarios:

Premises for an optimistic scenario:

1. Freight transit through Lithuania gains growth tendencies due to the improved economies of CIS states;
2. International freight transportation increases due to the established normal economic cooperation relations with all neighbouring and major states and due to activated foreign trade in the European Continent and in the whole world;
3. As a result of implementation of investment projects into Klaipėda sea port, opportunities of the port are developed, what activates freight loading and big ship servicing, and the infrastructure is prepared for the application of more modern technologies;
4. Thanks to great investments into the Lithuanian railways, the upgraded infrastructure and rolling stock ensure safe and speedy freight transportation in compliance with the EU standards.



Premises for a radical scenario:

1. The level of freight transit through Klaipėda port does not change since the port and railways reinforce their positions in the international freight market;
2. Russia's connection with Kaliningrad will be consolidated, transportation volumes will increase due to the reviving economy of the Russian Federation;
3. After Russia's accession to the World Trade Organization, tariffs and solutions discriminating the Baltic countries' railways will be cancelled;
4. The Lithuanian railways are developed by investing into them all envisaged resources;
5. The Lithuanian international trade is intensified due to integration onto the common EU market, and simultaneously, into the world market;
6. After construction of the European railway trunk-road Rail Baltic, regular freight transportation in the North-South direction through the territory of Lithuania begins;
7. The railway transport maintains its positions in the market of local transportation.

Based on these main premises, the three main scenarios of an economical evolution of the Lithuanian railways for up to 2020 have been formed, which specify the environment, under which freight transportation by the Lithuanian railways is expected to develop. Forecasts have been calculated for total freight flows, local and international transportation: export, import and transit. Since freight transit by the Corridors IXB and IXD has been formed long ago and has some structural and origin differences, forecasts for these flows were calculated separately. Besides, seeking to identify the railway transport share in total transportation, modal split in freight transportation is forecasted (table 2).

**Table 2.** The actual data and the forecasts of freight transportation by the Lithuanian railways (thous. t)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2010	2015	2020
<b>Local freight transportation</b>	4595	4664	6340	6481	5435							
Forecast						5521	5641	5767	5901	6290	6880	7358
<b>International freight transportation:</b>												
1. Import	4317	3961	3410	4898	7176							
Forecast						7195	7293	7651	7840	8435	9536	10190
2 Export	4359	4099	4273	4476	7053							
Forecast						7119	7296	7383	7579	8139	9065	10212
3. Transit	15076	17988	15150	20795	23783							
Forecast						25554	26685	27570	28620	30561	33986	38993
Total transit to/from Byelorussia, Russia, Kazakhstan and Ukraine through <b>Klaipėda</b>				7684	7260	7322	7753	7641	7806	8544	9535	11319
Transit to/from Byelorussia, Russia, Kazakhstan and Ukraine in Kaliningrad direction				13756	16338	17239	17938	18707	19320	20201	21448	22142
Total international freight transportation	23752	26048	22833	30169	38012							
Forecast						38568	39274	40604	43039	47135	52587	56914
<b>Total transportation of freight by Lithuanian railways</b>	28347	30712	29173	36650	43447							
Forecast						44089	44915	46371	48940	53425	59467	64272

## CONCLUSIONS

1. The complex SWOT analysis of the present economical situation corroborated the optimistic tendencies of the freight transportation by Lithuanian Railways.

2. The rate of economics development of European Union and the joint states corroborate the possibilities of the increasing of freight transportation by railway transport.

3. On the results of restructuring of JSC „Lithuanian Railways“ the assumptions are created for the increasing of freight flows, improvement of the service quality, increasing the speed and security of transportation.

4. The forecasts scenarios based on the internal factors and external assumptions create the conditions for reliability of forecasting of future freight transportation by railway transport even until year 2020.

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