

POSSIBILITY OF PASSENGER INTERMODALITY IN LITHUANIA

Daiva Griskeviciene, Algirdas Griskevicius

*Vilnius Gediminas Technical University
Transport Management Department
Plytines Str. 27, Vilnius, LT - 2040, Lithuania
Ph: (+370) 5 2744779, Fax: (+370) 5 2745059*

1. INTRODUCTION

The passenger intermodality has not yet received the same attention as intermodality in freight transport, which is being promoted with a number of concrete initiatives on a European level. The main aim of intermodality is to provide the passenger with a seamless door-to-door journey, which is efficient and comfortable. For the individual passenger the intermodality is a route consisting of a combined chain from origin to destination involving at least two different modes, excluding walk for passengers.

On another hand, the intermodality is not a route of a single passenger only, but also a concept and planning principle of co-operation and organisation of several modes of transport. Preconditions for true intermodality are connected with the terms of interconnection and interoperability. Intermodal transport can constitute complex trip chains, which create high demands on the interfaces and operational integration of the transport system.

Implementation of intermodal passenger transport chains is an efficient and more sustainable alternative to car transport. However, there is no comparable work programme for intermodal passenger transport as there is regulative and financial incentive action for freight transport.

The research on intermodal passenger transport at the European level has remained at the level of policy, research programmes and relatively uncoordinated standardisation activities mainly in the area of transport telematics. The aim of the Lithuanian study is to create the basis for policy implementation and work programme in the country. It will assist and but will also cover issues of regulations, financing programmes, European co-ordination and standardisation.

2. ANALYSIS OF PASSENGER SERVICE MARKET

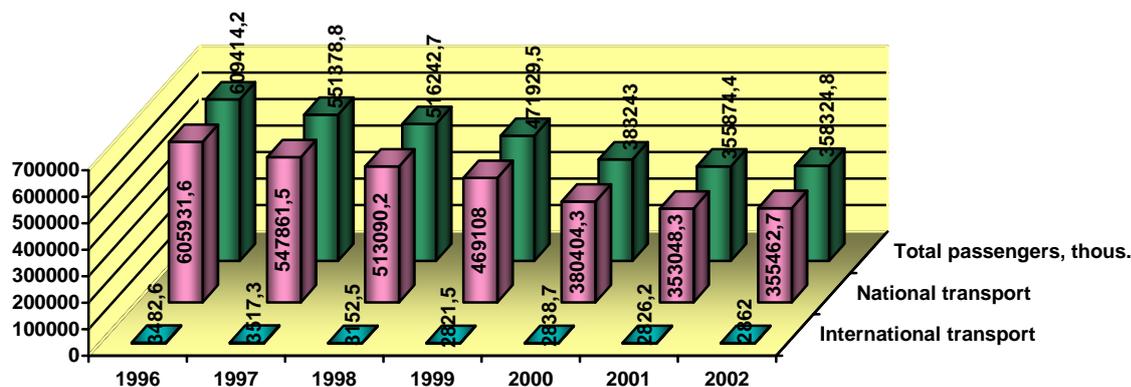
In Lithuania passengers are transported by the public regular scheduled transport: by road, railway, air and water transport modes; also passengers travel by cars: own and/or official. Public regular scheduled transport is quite popular among population (Table 1).

During Soviet times the public regular scheduled transport has been very well developed according to then existing lifestyle and population demands. Then it fully met the dislocation of productive force and population demands in terms of domesticity, culture and leisure travels. Much attention was paid not only to urban transport but also to the transport within the entire country, as well as to that connecting with other Soviet republics.

After restoration of Independence it became clear that the inherited transport system was inadequate to meet the altered transport demands of population. Whereas the economic reform had continued for a whole decade the passengers' demands for transport were also gradually changing. However from the very beginning of reformation the regular scheduled transport has undergone economic losses caused by confusion of travel demands and insolvency of population, especially in the long-distance and international transport. In the beginning of the Independency period the flows of national and urban passengers decreased, the same as those of incoming tourists and Lithuanians travelling abroad. Constantly, through the entire decade, decreasing passenger flows in the public transport still keep the tendency to recede. This proves that the socio-economic level of population has not reached an adequate level, and that regrouping/shifting of passenger transportation modes is still going on.

Table 1. Passenger transportation by Public Transport in Lithuania

	1996	1997	1998	1999	2000	2001	2002
Total passengers, thous.	609414,2	551378,8	516242,7	471929,5	383243,0	355874,4	358324,8
Rail transport	14189,6	12556,6	12194,6	11527,3	8852,1	7718,1	7217,2
Road transport	593474,6	537079,7	502138,8	458327,6	372684,2	346400,8	347782,7
buses	361648,0	346834,3	316157,7	273492,4	213349,9	182099,4	182117,7
trolleybuses	231826,6	190245,4	185981,1	184835,2	159334,3	164301,4	165665,0
Water transport	1510,8	1471,3	1607,3	1779,1	1364,1	1392,4	2948,6
sea	40,8	36,4	43,7	50,8	64,2	68,8	58,4
inland waterways	1470,0	1434,9	1563,6	1728,3	1299,9	1323,6	2890,2
Air transport	239,2	271,2	302,0	295,5	342,6	363,1	376,3
National transport	605931,6	547861,5	513090,2	469108,0	380404,3	353048,3	355462,7
Rail transport	12159,8	10611,5	10536,4	10044,2	7411,6	6314,0	5755,4
Road transport	592300,0	535813,7	500989,0	457334,3	371691,7	345410,2	346815,7
by buses	360473,4	345568,3	315007,9	272499,1	212357,4	181108,8	181150,7
by trolleybuses	231826,6	190245,4	185981,1	184835,2	159334,3	164301,4	165665,0
Inland waterways transport	1470,0	1434,9	1563,6	1728,3	1299,9	1323,6	2890,2
Air transport	1,8	1,4	1,2	1,2	1,1	0,5	1,4
International transport	3482,6	3517,3	3152,5	2821,5	2838,7	2826,2	2862,0
Rail transport	2029,8	1945,1	1658,2	1483,1	1440,5	1404,1	1461,8
Road transport (buses)	1174,6	1266,0	1149,8	993,3	992,5	990,6	967,0
Sea transport	40,8	36,4	43,7	50,8	64,2	68,8	58,4
Air transport	237,4	269,8	300,8	294,3	341,5	362,7	374,8

Passenger transportation by Public Transport in Lithuania**Chart 1.** Passenger transportation by Public transport in Lithuania

A share of the passenger market in long-distance communication has been taken over from the public transportation by the automobile transport over the last decade. The number of automobiles registered in Lithuania doubled during the last 10 years. The automotive level in 2002 reached 340 per 1000 residents, whilst it was 145 automobiles per 1000 residents in 1990. The automotive level is increasing due to the expansion of sales in the new and the widely spread western make "second hand" automobiles.

The fallen positions of the public transport, even more induce the use of automobiles. After the economic reform an increasing share of private automobiles is used for trips to work and for work

purposes. Non-correspondence of the public commuter transport network and traffic schedules to the passengers' changed demands impels residents to acquire private cars and use them more often. It is expected that the public transport should offer more attractive routes and a traffic schedule in demand.

An overmuch increased intensiveness of the automobile transport is noticeable in intercity communication, especially during the summer time, what comes close to the limit of the main highway capacities. Due to this reason the railway and bus transport will be used more often for long-distance national trips. The share of the passenger market reverted to the railway and bus transport will depend on the quality and attractiveness of the public transport.

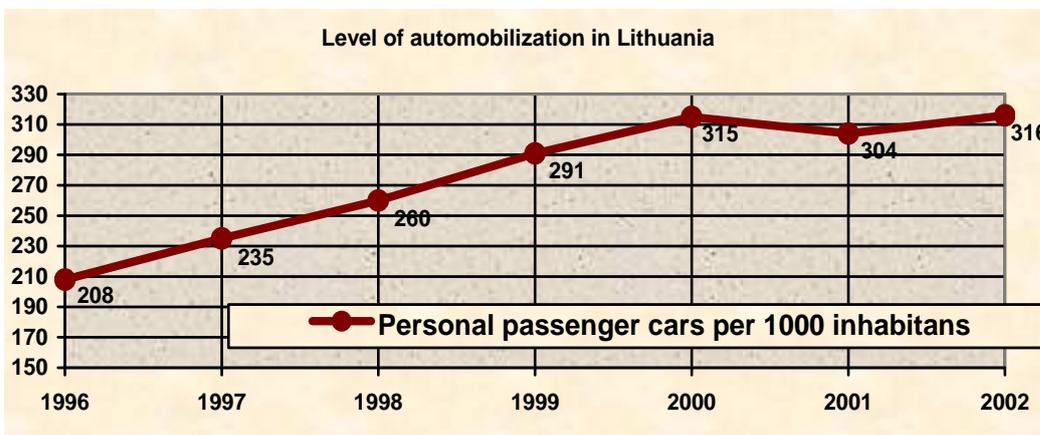


Table 2. Number of road vehicles

	1996	1997	1998	1999	2000	2001	2002
Passenger transport							
Passenger cars	785088	882101	980910	1089334	1172394	1133477	1180945
of which personal	745742	835462	920373	1021795	1097797	1055164	1093882
Personal passenger cars per 1000 inhabitants	208	235	260	291	315	304	316
Buses	15482	14888	15156	15590	15069	15171	15376
Trolleybuses	544	547	523	500	474	470	466
Motorcycles	19402	19128	19266	19515	19842	20244	21017

The growth of the automotive level in Lithuania is fostered by an improved standard of living. If the greatest boom of the automotive level took place in cities, the number of cars is expected to increase in rural areas and small settlements due to the growth of work places and re-deployment of labour resources in peripheral areas. It is forecasted that the transport mobility will increase in the entire territory of Lithuania, and, at the same time, the demand for travel by public transport will increase. The need for travel by the railway transport is expected to increase in those regions and cities, which have a good access to the railway lines/stations: bus schedule is coordinated with the train traffic schedule, there is a sufficient infrastructure and parking lots for cars, motorcycle and cycle transport at passenger stations.

Although 88,5 % of the registered road transport vehicles consists of cars, only part of them, however, is used during a weekday or traffic jams. The renovated and upgraded bus stocks propose more flexible services for passengers in long-distance routes. Because of a speedier implementation of investments, the bus transport attracts a share of passengers on intercity routes. It is probable that the railway transport will offer cheaper, however qualitative and modern services in the future, at the same time conquering back the lost share of passengers during the reform. Renovation and upgrading of the suburban train stock will provide more opportunities to increase passenger transportation on local routes.

One of the reasons for an increasing market share of the private car across most of European countries is its ability to provide (nearly) door-to-door transport – despite the problems with congestion and parking in many urban regions. A lack of interoperability for intermodal transport systems is among the reasons for congestion in Europe.

Passenger transport in 2002

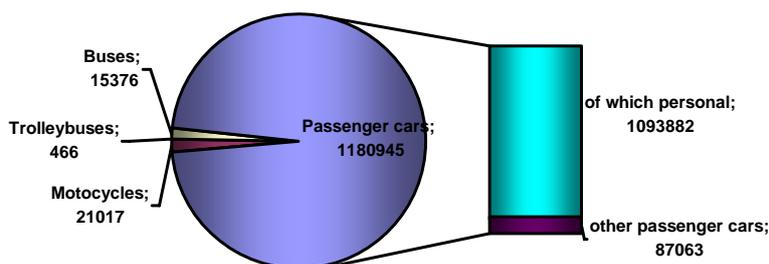


Chart 2. Structure of the passenger transport park in Lithuania

An analysis of the passenger service market and today situation of passenger long-distance travel in Lithuania shows that the main weakness is as follows – an absence of the organized passenger intermodality in the country. The strengths – county's favourable geographic position, needs of the international trips, good conditions of road, air and water transport infrastructure – stimulate to improve the quality of passenger conveyance and to organize the intermodal service network. There are some opportunities to develop the system.

Due to the not vast territory and its compactness two main objectives of long-distance passenger transport may be noticed in Lithuania: interurban (intercity) and international (cross-border). In the international transport prevail: mainly air, railway, bus transport and some maritime and car transport. In the interurban transport inside the country prevail: regular route scheduled bus and railway transport, and car transport.

3. STRATEGY OF LITHUANIAN TRANSPORT SECTOR

Total productive force restructuring followed by the gradual regrouping of work places and their new dislocation, change of residence places of a certain part of inhabitants, alteration of the mental model and occurrence of new interests, growing economic potentials of demand satisfaction – all this directly has influenced and continues to impact the population and the passenger market. As the result of the economic development during the thirteen years of independence two main facts may be noted – the leap of auto mobilisation level in the whole country especially in towns and the decrease of demand in public transport services caused by the inadequacy of supply to the altered requirements of demand.

In this situation efforts were made to create a new national transport strategy. In 2004 was finalised the elaboration of the Strategy of Lithuanian transport sector development until 2025 prepared by the Ministry of Transport and Communications of the Republic of Lithuania. The intermodality concept of passenger transport is already included there as one of its objectives. It has been presented in the form of concrete measures for the medium-term (until 2013) and long-term (until 2028) perspective periods. The integration of external and internal passenger transport services has been foreseen by linking external passenger transport terminals (air, maritime, river ports and railway stations) with the internal/local transport system thus enabling good accessibility in towns and settlements. It is foreseen to make pedestrian and bicycle paths in the suburbs of towns and settlements, to integrate them into the general transport system by installing parking sites at the terminal bus stops of the public transport. It is foreseen to co-ordinate the use of cars with the work of the regular scheduled public transport, to limit and restrict/prohibit the car traffic in the old-town and central areas of cities and in the densely inhabited district centres where it is purposeful to set the zones of pedestrian and motor-less traffic.

4. OPPORTUNITY TO IMPLEMENT THE INTERMODAL PASSENGER TRANSPORTATION

Intermodal passenger transport ranges from small-scale “bike & ride” schemes to international trips combining air, rail or private car transport. To improve the opportunities for sustainable intermodality, a systematic and high quality approach to transport is needed. Sustainable transport will

be the guiding principle, that environmental, social and economic sustainability issues define priorities and that mode combinations will receive most attention.

The effort to improve intermodality involves many issues ranging from framework conditions, to concrete services and implementation issues.

Legal framework. The basic framework of the legal acts is created. However there are no legal acts regulating combined and intermodal passenger transport, its co-ordination and control. Although there are no artificial barriers for passenger transport intermodality, there are not yet created conditions for arranging such type of transport. There is lack of legal basis for operators of different origin for their work in the single market. Therefore there were difficulties in passenger transport market based co-operation of activities between the small size private buses and the state owned bus fleet/park that lost its former status.

Economic assumptions. Some modal conflicts exist because of the different economical interests of different operators. The changers of commercial and technological requirements due to the integration to the EU and development of the market and demand constrain the public transport operators to accommodate to new circumstances. But this is own separate adaptation of these companies to the new situation in the market.

The changers of the demand are going to the development of passenger market. Social-economic possibilities of population are increasing every year. But financial potential of population is arising slowly, so demand for trip of international passenger transport is lower than in other countries. The best opportunity to implement the intermodal passenger transportation is the organization good interface with EU level passenger transport network, integration into the international passenger service market.

International co-operation. Until now yet there are no intergovernmental agreements on the development of intermodal transport, however Lithuania participates in the Baltic Sea Region Countries' Programmes in the fields of the road network development, traffic safety enhancement and short sea shipping development.

Service combination. Certain elements of co-ordination of separate transport modes have been formed in Lithuania, but they are not included into the general system. It is, for example, the combination of car approach facilities to the Vilnius airport with the short-term and long-term parking facilities.

Because of the space shortage there is no possibility to equip bigger car parking close to most external transport terminals (air and railway). Compactly inhabited territories located near the passenger railway stations' terminals were not reserved for car parking because in the initial period of their design the auto mobilisation level was low thus the related forecasts were also low.

Presently there are foreseen to be started low budget flights from Kaunas airport; they would attract many clients and, on the other hand, would require special equipment for parking of cars coming from other towns and from Kaunas as well. Similar development is possible also in Palanga airport.

In any case the public urban transport systems are traditionally interrelated with the external/outgoing transport terminals and they serve them through the whole working day according to the seasonal changes. This problem has been solved in smaller cities as well; there buses that service the district go on the schedule/timetable co-ordinated with the arrival of trains into the stations of these cities.

Well-balanced and sustainable urban and external transport services in the country are looked upon as a long-term target being constantly aimed at and corrected according to the changing situation in the market of passenger transport services supply.

Integration and interoperability. Conveying of the external transport priority to the international passenger transportation has to be harmonised with the neighbouring countries. Lithuania has experience from the I Trans-European Railway Corridor project protection and defining of its route (places of border-crossing with neighbouring countries) and from priority attachment to the project, its long discussing and time-consuming co-ordination with the Republics of Latvia and Poland. High-speed passenger traffic – it is also foreseen to be implemented in this European gauge railway 'Via Baltica' line that is now fixed in the international agreements. Furthermore, in this project there is proposed an additional high-speed railway track from Kaunas to Vilnius as the most important and well founded by possible flows high-speed line. In terms of intermodality the traffic of this project will have to be fully integrated and co-ordinated with the national level transport system.

The interoperability of inland transport networks lacks a developed railway route system (the railway network is underdeveloped) to which regular scheduled route bus system could correspond, as

at present its interrelation with railways is not sufficient. The development of networks can be implemented only on the basis of scientific research. As far as now there are no concrete calculations and no modelling of combined passenger transport operation inside the country (local) and in cross-border/international transport.

In the railway transport for passenger transportation the passenger trains are destined, which goes by an average speed with numerous stops, also there are international high-speed trains, which stop only in large towns. Whereas the territory of Lithuania is not vast and the railway network is not dense the inhabitants of Lithuania as far as now do not have to change transport modes during their trips.

However the analysis of international transport requires co-ordination of separate transport modes for the passengers that are living in remote areas from the international railway stations. In major towns the railway stations are easily accessible by the street network of urban transport by buses (trolley-buses), taxis and cars.

In similar way the stations of outgoing buses can be reached. However in small towns where the public traffic is not frequent, and in rural type settlements, the problems of railway or bus station accessibility may occur.

Traditionally the bus fleets/parks of small cities and districts used to plan their regular scheduled routes by harmonising them with the passenger transport traffic: when the train arrived to the station the scheduled regular bus was already awaiting, as it had had brought passengers into the railway station thus afterwards taking in turn passengers that came by railway. This principle had been maintained until now in locations where the correspondence of scheduled bus routes with the railway traffic remained. For local people such co-ordination is well known and they make use of it.

The international regular scheduled routes of all international bus carriers are published in the yearly journal/magazine issued by the State Road Transport Inspectorate. In the Internet this information does not exist. The fleets/parks of long-distance buses also do not publish all their timetables in the Internet, the same as all haulers. For this they have their own commercial argumentation.

Besides the regular scheduled haulage the bus fleets/parks perform charter operations too. Although not all charter haulages can be profitable. The presence of illegal haulers in the market used to cut haulage prices, therefore a certain number (not high) of companies suffered losses (in the year 2000 out of 38 companies 5 ones suffered losses).

Information system. Advance informing of population on the provided transport services, concrete travelling possibilities, as well as informing passengers in terminals and during the travelling time improves every year due to the implementation of marketing means, modern technologies and better organisation of works.

Regretfully, all information related to transport services in Lithuania is available only according to different transport modes. Therefore it is difficult for people to orient about the possible time duration of travels in the case of different transport modes combination/interchanges.

On the other hand, even our local people will not be able to define from the information provided a possible combination of transport modes if an element of local transport of other town or district/periphery is included into the chain of combined transport.

Superficial Internet information is available on the sights of enterprises. As a rule the sights are reluctantly changed, seldom renewed. Therefore even published timetables are not very reliable to Internet browsers. Everybody in Lithuania that the most precise information may be obtained only in the stations knows it.

Ticketing system. The ticketing system in the public transport does not meet the requirements of the present time. It lacks versatility, innovation, modern ticketing variety, and introduction of electronic ticketing in urban and local transport. The entire public transport needs a clear structure and information. It is considered that public urban transport lacks uniform tickets. Lithuania needs to have real-time traffic timetable information, possibilities of booking by Internet, electronic accountancy.

In the urban transport tickets in most cases are not integrated. Long-distance transportation companies also have their own tickets. National level united information centre is mostly necessary. It is necessary to create a site where information on carriers and their services could be accumulated and displayed.

It is still early to speak about a one-ticket concept because the question of profit distribution is not clear. Besides, there are no guarantees for a carrier that he will regain his profit from the institution that has sold the ticket. For haulers it is easier to agree with agencies: if in several months' time the carrier does not regain his profit, the agreement is cancelled. Thus, according to the opinion of carriers there is a commercial risk in the attachment to one institution selling tickets for all routes.

Beside the main services the travel agencies find and coordinate other long-distance links abroad coordinating them to the timetable of plain arrival in the destination airport and book tickets, for example, for any long-distance railway/bus journey. Therefore people are happy to communicate with the travel agencies and book their tickets there.

Other travel agencies represent only a certain transport carrier, therefore they book/reserve tickets exceptionally to the services of that particular carrier. Such are agencies representing Lithuanian and foreign airlines, maritime ferries, inland waterway ferries, railways, long-distance transportation and tourist bus enterprises. Regarding the tide and ebb of passenger flows they advertise and take part in public events in the role of sponsors

Data collection. Data of the intermodal passenger transport are not collected, as there does not exist the traffic of such kind in Lithuania. Each participating company would collect when such traffic occurs the data of such kind. But there does not exist and there is not yet foreseen any institutional distribution and there is no nomination of such institution responsible for the arranging of such kind traffic. Great difficulties are caused by data collection of any passenger transportation kind, definition and composition of their reliability. Accessibility of data, especially of the economic-financial causes difficulties in elaboration of studies and limits the depth of analysis.

CONCLUSIONS

1. The investigation of different modes of passenger transport shows the possibilities for the cooperation in the integrated service market.

2. There is no functioning mechanism in Lithuania able to co-ordinate transportation services according to the origin of capital and perform co-ordination of route lines in long-distance transport. For the preparation of regular scheduled routes for combined passenger transport in Lithuania it is necessary to start with the elaboration of the general concept, formation of the legal basis, realisation of strategic tasks, as well as designing and implementation of concrete pilot projects.

3. Lithuanian transport strategy already for quite a long time states that it is necessary to join the common continental information systems on transport traffic and ticketing so that people could choose travel combination and book tickets in advance on their own. This is now very important because the numbers of personal computers and Internet users are rapidly increasing. This is particularly important in major towns the inhabitants of which are more mobile in transport terms.

4. The State being responsible for public transportation has to take care of organising the public transport. Through the local municipalities the local, suburban and intercity transport formation, co-ordination and financing functions are performed. The State has to keep its obligations: to arrange public transport services, arrange agreements with operators, compensate loss-making routes of public transport, subsidise and guarantee State owned capital enterprises the vehicle fleet of which needs to be renewed.

5. For operator coordination of large numbers of passenger transportation services a new structure is necessary, which would be able to perform similar functions and form long-distance passenger transportation service market on the national and international levels. The lack of such institution is the foremost barrier for the development of passenger transport intermodality.

6. Finally, a better-organised transport system contributes to the main Community objectives competitiveness, employment, sustainable development and territorial cohesion.

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