Freight Villages in Brandenburg and Berlin –
Traffic and logistical starting point of the railway connection to the Baltic States,
potentials and requirements

Study within the framework of the Interreg III B – Project RAIL BALTICA

On behalf of the German Partners:
Ministry for Infrastructure and Spatial Planning of the State of Brandenburg
Senate Authority for Urban Development Berlin
Freight Villages in Brandenburg and Berlin – Traffic and logistical starting point of the railway connection to the Baltic States, potentials and requirements

Study within the framework of the Interreg III B – Project RAIL BALTICA

Final report

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<thead>
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<th>Description</th>
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<tbody>
<tr>
<td>GDP</td>
<td>Gross domestic product</td>
</tr>
<tr>
<td>GE*</td>
<td>Industrial park</td>
</tr>
<tr>
<td>GI*</td>
<td>Industrial estate</td>
</tr>
<tr>
<td>CIS</td>
<td>Commonwealth of Independent States</td>
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<tr>
<td>GVS*</td>
<td>Goods traffic sub-centre</td>
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<tr>
<td>GVZ*</td>
<td>Freight Village</td>
</tr>
<tr>
<td>ha</td>
<td>Hectare</td>
</tr>
<tr>
<td>i.d.R.*</td>
<td>as a rule</td>
</tr>
<tr>
<td>IuK*</td>
<td>Information and communication technologies</td>
</tr>
<tr>
<td>SME</td>
<td>Small and medium-sized enterprises</td>
</tr>
<tr>
<td>Lkw*</td>
<td>Truck</td>
</tr>
<tr>
<td>mill.</td>
<td>Millions</td>
</tr>
<tr>
<td>MIV*</td>
<td>Motorised individual traffic</td>
</tr>
<tr>
<td>bn</td>
<td>Billion</td>
</tr>
<tr>
<td>ÖPNV*</td>
<td>Local public transport</td>
</tr>
<tr>
<td>m²</td>
<td>Square metres</td>
</tr>
<tr>
<td>km²</td>
<td>Square kilometres</td>
</tr>
<tr>
<td>h.</td>
<td>Hour</td>
</tr>
<tr>
<td>u.U.*</td>
<td>Under certain circumstances</td>
</tr>
<tr>
<td>o.g.*</td>
<td>afore-mentioned</td>
</tr>
</tbody>
</table>

* Translator’s note: These are generally recognised abbreviations used in the German text for which there are no equivalent abbreviations in English
1 REASON AND GOAL

The railway network of the Baltic States was oriented to Berlin and Warszawa in north-south direction before the Second World War. The connection to Central Europe ran through the present Königsberg territory (via the Insterburg railway junction). The Baltic States were additionally connected with Warszawa through a further north-south axis via Bialystok and Hrodna through the Vilna territory (which at the time belonged to Poland).

With the loss of the state sovereignty through the integration of the Baltic States into the Soviet Union the whole route network was reoriented in east-west direction and the gauge changed to the Russian gauge. The main function of the route network was to connect the hinterland traffic of the Baltic Sea ports of the Soviet Union to the Russian mainland. The whole public railway traffic (with the exception of special military transports) was interrupted between Poland and the Königsberg territory as well as between Poland and Lithuania from 1945. During the Soviet Union era the Baltic States could only be reached by taking a detour and travelling via the Russian or Belarusian border crossings Brest and Hrodna.

Until 1996 it was possible to use the relatively well developed double-track main route Warszawa - Bialystok - Hrodna - Vilnius - Pskov – Leningrad (St. Petersburg) for traffic from Berlin and Warszawa to the Baltic States. As this route runs south of Vilnius approx. 50 km through Belarusian territory, complicated customs and visa regulations made it difficult to pass through this territory so that international rail traffic came to a standstill here. The long-distance traffic from Central Europe to St. Petersburg has been running via the Belarusian border station Brest since the middle of the nineties by making a big detour around the Baltic States. The continuous train and sleeping car connections from Berlin and Warszawa to Vilnius have been suspended since this time. A branch line with narrow curve radiiuses was reactivated via the border station Sestokai between Poland and Lithuania as a temporary solution. However, this railway link has a low level of occupancy and only allows low speeds. The efficient connection to Tallinn is also missing with the closure of the direct connection from Warszawa to St. Petersburg via Vilnius: the route Warszawa - St. Petersburg leaves the territory of the EU a second time near the town of Pskov and Tallinn can only be reached by the former main route Warszawa - Leningrad from the Russian station Pskov. The only routes available on the territory of the European Union for traffic within the Baltic States are those which only had the character of branch lines during the Soviet Union era. The use of the Kaliningrad territory for traffic between EU states is also out of the question owing to the customs and visa regulations and the complicated control procedures in Russia.

Owing to the afore-mentioned political and historical reasons the railway in north-south direction is hardly used in international traffic. The existing network built according to Russian standards is slow and not interoperable with the Polish or German network. With “Rail Baltica” a transnational railway link is planned from Helsinki via Tallinn, Riga, Kaunas, Warszawa and continuing to Berlin. The Warszawa hub is to serve traffic between the Baltic States and other EU countries. In addition, the aim of the EU Commission is to enable more land-based transports between the Baltic Sea countries and Northern Europe, especially Finland. For this reason the Commission included the “Rail Baltica” project in the list of priority projects.
With the EU enlargement the companies are increasingly choosing eastern locations for their logistics centres. The economy in the new EU member states, in Russia and the Ukraine developed with growth rates of around 5-6% in the last few years. Logistics is of special significance when setting-up production locations in these countries. The production cost benefits in these countries can only be used efficiently if consistent logistics connections with the west are also set-up.

This study examines the tasks and potentials of the Freight Villages (GVZ) in Berlin and Brandenburg with regard to development ideas and chances in the region as starting point of the railway magistral “Rail Baltica”. The region of Berlin-Brandenburg already has an efficient logistics infrastructure. The GVZ in Großbeeren (Berlin South) and in Wustermark (Berlin West) ranked third and fourth place in a nationwide ranking of the GVZ in 2004.

In the further course of the study we will assess the efficiency of the logistics infrastructure along “Rail Baltica”. So far it was only possible to record more than average transport volumes in the Baltic States on the east-west axes. The north-south traffic by rail is to be substantially revived with the initiation of the urgent TEN project “Rail Baltica”. However, this route is still lacking in efficient transport and logistics infrastructure.
2 FREIGHT VILLAGES (INTRODUCTION)

2.1 Tasks of logistics

The "classical" logistics term comprises tasks such as warehousing, picking, cargo handling and transport. A host of further operational and administrative activities are covered in the "modern" delimitation. These include tasks of production supply and disposal as well as packaging for example in the operational field. In the administrative field the tasks range from warehouse and stock management to supply chain planning through to IT integration.

Logistics optimises the material and goods flows of companies which operate on an international and global level. It is thus responsible for the whole goods management of the enterprise, has itself become the motor of numerous and various links with suppliers and buyers and is now of a strategic importance, which ranges far beyond the more introspective efforts for harmonisation of the interfaces between procurement, production and sales.

Today logistics assumes the function of a stabiliser and coordinator in a constantly changing supply and distribution group within the framework of Global Supply Chain Management. It controls not just the own goods and information flow, but optimises the whole value-added chain by coordination with the other companies.

2.2 Trans-European transport networks and Pan-European transport corridors

The Trans-European transport network (TEN-V) plays a decisive role in guaranteeing free passenger and goods traffic in the European Union. It comprises all transport carriers and processes around half of the whole goods and passenger traffic.

By 2020 the TEN-V will comprise a road network of 89,500 km and a railway network of 94,000 km, thereof approximately 20,000 km high speed routes for speeds of 200 km/h and more. The inland waterway network will encompass 11,250 km. This includes 210 inland ports as well as 294 seaports and 366 airports.
Freight Villages in Brandenburg and Berlin – Transport and logistical starting point of the railway link to the Baltic States, potentials and requirements

Fig. 1: Trans-European transport network - axis “Rail Baltica”

The travel and transport times for passengers and goods will be reduced substantially through the completion of the networks. A study conducted by order of the European Commission in 2004 showed that the completion of the 30 priority axes / projects, which form the “backbone” of the TEN-V, will effect a relief of the roads by 14 % and service improvements in rail traffic. This will mean significant time savings. The benefit for national traffic alone is estimated at almost EUR 8 billion per annum. Moreover, goods traffic in the EU is expected to increase by more than two thirds between 2000 and 2020. It is expected to double in the new member states in the same period of time. Goods traffic between the member states is expected to record the most substantial total growth.¹

With the accession of the Central and Eastern European states Brandenburg moves from the border of the European Union back into the middle of Europe. Traditional trading relationships will thus become more important again, transport connections which are centuries old will be revived again. The Trans-European transport network of the European Union was extended to the East with the enlargement. The so-called Pan-European transport corridors (PEK) represent the continuation of the large transport axes of the European Union to Cen-

¹ TEN-V; European Commission
tral and Eastern Europe. These were stipulated by the Ministers of Transport at the European Ministers of Transport conferences on Crete (1994) and in Helsinki (1997) as a supplement to the Trans-European transport network for West Europe. Ten main transport axes connect Europe from the Atlantic to the Ural or from Scandinavia to the Mediterranean. The corridors are respectively envisaged as transport axis on rail and road, partially also combined.2

Fig. 2: Pan-European corridor no. 1

Source: www.unece.org

2.3 Trends in international logistics

It is to be observed that leading companies in industry and trade together with their service providers from the transport industry are extending their logistical activities beyond the limits of their own companies. Co-operations are developing with the partners along the whole value-added chain from the supplier to the producer to trade down to the end customer. Logistics is integrating the companies to form value-added chains down to global networks, in which various partners from industry, trade and services are increasingly linked with each other.

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2 European Commission; 2003
The global networking of the business regions in terms of information leads to an improved transparency of the procurement markets with regard to existing price and performance differences. In particular the West European countries as well as the border-zone countries of the European Union and several Asian countries can substantially expand their position as procurement markets. This development is accelerated by a harmonisation of the basic economic conditions. The entry into new sales markets is also seen as a side effect of this global sourcing.

Besides the structural changes of global sourcing there are also indications of shifts in preferred locations of the companies. The global market presence is increasingly gaining in importance and is seen as an essential pre-requisite for improving the market position in international competition. Among others the focus is also placed on the proximity to the new customers when erecting new production plants.

There is no doubt that the EU eastern enlargement exercises a far-reaching influence on the European transport market. The new production locations in East Europe lead to additional cross-country traffic and also the lapse of the customs borders facilitates goods traffic. In addition, the market entry barriers for Eastern European transport service providers are eased through the lapse of the cabotage ban.

A trend can be seen towards the reduction in production depth in almost all branches of industry. A shift is taking place in the original production tasks in the field of procurement and on the level of the components suppliers, i.e. the share of third party services in production is increasing.

*Fig. 3: Degree of outsourcing*

![Degree of outsourcing](image)

Logistic expenses (provided personally)  Provided by external service providers

Source: IPG mbH

The outsourcing not just of operational, but increasingly also of administrative logistics services is becoming more and more important. With this strategy companies are not just pursuing the aim of focus on core competences, but in particular see potential for optimising their own processes. Through the introduction of new concepts such as Lean Production and Just-in-Time deliveries the companies reduce the throughput times of their products and can thus be particularly flexible when reacting to constantly changing market situations.
2.4 Significance of logistics for the German economy

The logistics sector in Germany has become more and more important in the last few years. According to the actual study “Top 100 of logistics”\(^3\) it is now among the three biggest industries in Germany after the automotive industry and health industry. Approx. EUR 170 billion are generated each year in the logistics industry, which employs approx. 2.5 million people. The gross revenue volume of logistics amounted to EUR 730 billion in Europe in 2004. With 23% Germany thus accounts for the largest share and therefore with logistics also stands in the centre of Europe purely in terms of figures. The segment continues to have a high potential for growth, primarily due to progressive globalisation and the EU Eastern enlargement.

The increasing exchange of goods between the economies continuously increases the demand for transport and logistics services. The logistical added value stems with 54% from companies of industry and trade. 46% of the logistics services are provided by logistics service providers. It can also be assumed that the logistics sector will be among the driving industries of the economy in future. The actual industry report “Transport and Logistics” of the German Industriebank (IKB) assumes an average nominal market growth of approx. 4% per annum for logistics services for the next few years.

In order to continue to be successful on the logistics market the companies are trying to continuously expand their range of services. Thus, new provider structures were created in the last few years, in which logistics companies supplement their offers above all by high-quality logistics services\(^4\).

Fig. 4: Share of logistic costs

<table>
<thead>
<tr>
<th>Total / Economy</th>
<th>Industry</th>
<th>Trade</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logistic costs share</td>
<td>84.8%</td>
<td>87.2%</td>
<td>77.9%</td>
</tr>
<tr>
<td>Other production costs</td>
<td>15.2%</td>
<td>12.8%</td>
<td>22.1%</td>
</tr>
</tbody>
</table>

Source: IPG mbH

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\(^3\) Prof. Klaus and Kille; The Top 100 in logistics; 2006

\(^4\) Prof. Klaus and Kille; The Top 100 in logistics; 2006
2.5 Explanation of the GVZ philosophy

The Freight Villages (GVZ) are defined as a future-oriented system for solving regional transport and structural problems among others as follows:

*GVZ are transport industrial parks with independent transport companies / branches and system interchange points between the transport carriers (as far as possible: road, rail, water, air). They enable the cooperation of all parties involved to generate synergy effects. GVZ are connection points of local and long distance transport as well as interface of the transport carriers.*

It is to be noted that this is one of various definitions, the contents of which however express the same meaning.

One goal of the GVZ development is to relieve the roads from goods traffic and promote the use of environmentally-friendly transport carriers such as rail and waterways. An essential part of a GVZ in this respect is a terminal for intermodal transport. This enables efficient interchange of transport carriers from containers, swap containers and semi-trailers.

The aim of developing a nationwide GVZ network with regard to the erection of terminals for the intermodal transport is to operate between the individual locations in an “overnight delivery [Nachtsprung]” in order to thus be competitive in terms of time compared with road haulage.

Both positive economic as well as ecological goals are realised with the erection of Freight Villages at the interface of local and long distance traffic. To be named here as examples for this are the ecological concerns, avoidance of landscape urban sprawl in the Berlin commuter belt and relief of the Berlin inner city from heavy goods traffic.

The economic effect is e.g. the savings of high leadtime and follow-up costs through the spatial proximity of the transport carriers to each other. This also allows the resident companies to optimise the transitions between the transport carriers as well as the local and long distance traffic through co-operations under one organisational umbrella (location company) in line with the environment and costs (keyword: city logistics).
2.6 Assessment criteria for a GVZ location

Criteria are listed in the following diagram which should be examined for the suitability of a location as GVZ.

*Fig. 5: GVZ assessment criteria*

2.6.1 Offer of areas

Size of the site

The GVZ erected to date in Germany cover areas between 15 ha (Göttingen) and 400 ha (Emsland). More decisive however than the used gross area is the available net settlement area. This can vary between just a few ha (e.g. Lübeck) and several km² (e.g. Bremen). The average settlement area is approx. 100 ha.

The net settlement area is above all of significance when forming synergies between settled companies, the establishment of service providers at the location and the profitability of investments in transport connections. Thus, one will as a rule dispense with an elaborate transport development and connection of a GVZ with a size of just a few hectares.

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5 The GVZ Duisburg/Lower Rhine with an area of 847 ha is not taken into account here as a result of its special form.
Site layout

The site layout and the relief should allow square properties (from 1 to 3 ha) and rectangular properties (from 3 ha). Development roads, which merely develop properties on one side, are to be dispensed with for reasons of costs.

Undeveloped and extension areas

As the experience with the GVZ in Germany has shown an area concept should be created in the planning phase already despite the in part pretty long development periods that enable a step-by-step extension of the GVZ. With the creation of the necessary building law for the extension areas in question there is the possibility to satisfy changes in demand on the part of the investors in the short term. The extension areas can be developed parallel to the building projects of the investors in case of doubt. The areas are then developed requirements-oriented in individual construction stages. Besides the development as required it is advisable to include a prospective extension in the considerations for the development concept when looking for a location already.

Transport development

The transport development is to be distinguished into an internal development and the integration into the local and national road network. The same applies to the connection by rail. The internal development should be assessed to the extent that no impediments whatsoever are caused through vehicles parking on the side of the road. This is especially important during the “rush hour” so that no tailbacks are formed in front of property access roads. Further curve radiuses, roundabouts, traffic light controls and lane set-up are to be adjusted to the requirements of the heavy goods vehicle traffic.

With the connection by rail it has to be taken into account that the delivery of wagons can mostly only be realised profitably from half-train length. Substantial track lengths are required in this respect insofar as the wagons cannot be unloaded and loaded on the route track.

Development work and expenses

The location within the networks of the electricity, gas, telecommunications and water provider is significant for the amount of the development costs. In particular the supply with electricity (cooling and sorting plants) is of major significance. The provision of the necessary fire water quantities and the discharge of the incurred precipitation water from the sealed areas can lead to problems.

Further aspects which must be considered when assessing the suitability of the location are ground water, foundation soil and old contamination circumstances, weapon contamination and archaeological locations. In addition, special regional factors are to be observed which may influence the development costs.

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6 Thus first extensions already took place in the GVZ Bremen. Preliminary investigations are being carried out at present for an extension with regard to GVZ Berlin South.
2.6.2 Centrality of the location

Proximity to the inner city

The proximity to the inner city can be presented both in the time required as well as in the spatial distance between the GVZ and town centre. The spatial and time distance has two meanings for the companies.

On the one hand the urban area is as a rule the place of origin of the employees. With too great distances it is difficult for companies which move their location from the town to a GVZ to continue to bind the regular personnel. Due to the wage structures the employees are often dependent on local public transport. However, this must as a rule first be reorganised in order to integrate a new industrial park into the existing network. Particularly in the phase of initial settlement there are not enough passengers in order to establish profitable local public transport. The customary working hours in the logistics industry aggravate this problem even more.

The distance to the town centre is relevant with regard to the time required and fuel consumption for a company based within a GVZ if delivery relations exist to the town centre.

Proximity to industry and trade

Logisticians operating for industry and trade endeavour to keep the distance to the delivery locations as small as possible in order to minimise the risk of recourse claims through delays in delivery and ensuing loss of production. This also applies to a limited extent to the to-bin transfer, distribution and picking of the finished products.

Proximity to port

The proximity to a port is particularly important for companies, which deal with import / export and transship large quantities of containers. The transshipment systems of a port can also be of significance for motor vehicle logistics. Examples for this are the transport of new vehicles on the Rhine as well as the transport of used cars by ship to the Baltic States.

Proximity to wholesale and retail trade

A high density of retail and wholesale enterprises automatically leads to the settlement of logisticians which provide services for the trade.

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7 Thus, ⅓ of the employees have left since the Rieck company moved from the centre of Berlin to the GVZ Berlin South Großbeeren. 50% of the remaining employees have found a residence in the meantime which is closer to the registered seat of the company.
Proximity freight forwarding / transport trade

The choice of a GVZ location in a region, in which a multitude of freight forwarding and transport companies are based, speaks on the one hand in favour of the location and on the other hand the production of synergy effects between the companies is very probable at such a location. However, insofar as a multitude of companies have already established themselves at individual locations it is possible that there is already saturation in the region and there is no need for further logistics areas. In such a case the desire for concentration of logistics in a GVZ and the risk of banishment of a “trade industry” has to be weighed up.

2.6.3 Quality of the transport offers

Transport connection road

A GVZ should preferably be connected to the local and national road network with four lanes as impediments between goods traffic and motorised individual traffic (MIV) can thus be avoided to a large extent. Under the aspect of pollution through immissions the transport routes should be located at a greater distance from urban settlements. At the same time attention is to be paid that a location with good transport connections near a motorway can represent a disadvantage if this is liable to fees and it is the only efficient feeder road to the municipal area.

Transport connection rail

The existence of a rail link is usually welcomed by the investors. Even if only a small number of the companies based in the Berlin GVZ use the rail connections, the possibility to change a transport carrier is generally assessed as positive. This can also be seen by the fact that higher property prices are accepted by the companies for properties with a rail connection than for properties without. In addition, the distance to the nearest shunting yard is of significance for determining the delivery costs in single wagon traffic.

The situation is similar with the provision of a terminal for the intermodal transport. The existence is generally welcomed, however the use depends to a large extent on the services offered by the terminal. The provision times, above all however the transport costs and times, are the decisive criterion for the use by logisticians.

Only a few companies have sufficient volumes to maintain train connections under their own administration. As a rule several companies will have to amalgamate in order to establish economically feasible train links. Such efforts can be supported by state measures.  

Marco Polo / LOCON train from Bremen to Wustermark
2.6.4 Nationwide GVZ integration

The establishment of a network of Freight Villages can result in macroeconomic benefits by better exploiting the existing infrastructure or that which is still to be created. This applies in particular to the infrastructure of the tracks, whose capacity reserves can above all be used during the night for the “overnight delivery” goods transport. The great benefit of a GVZ network lies above all in the concentration of large goods quantities in long distance traffic. These can, if they occur in sufficient quantities for a destination, be used for generating own train connections. The capacity utilization of the vehicles in long distance traffic can thus also be increased.

2.6.5 Environmental situation

GVZ location area

An area of approx. 100 ha is required to establish a GVZ, as already explained. There is substantial intervention into the protected assets ground, water, air, fauna and flora due to such a project. In order to avoid conflicts with national or European environmental law a location is needed which if possible is not of too high ecological significance. Under ecological aspects conversion areas or derelict industrial land are highly suitable for a follow-up use. Particularly the latter frequently already have favourable infrastructural pre-requisites.⁹

Surrounding area of the location

A minimum distance should be observed from existing residential locations, which corresponds with the distance of newly built main roads to housing development due to the inmission pollution caused by a GVZ (noise, exhaust gases). Thus, the implications of the massive building shells with their large cubatures on the scenery are more acceptable as the planting of green areas in the facilities is not possible owing to their particular features (multiplicity of openings and height of the halls).

Traffic load

The erection of a GVZ with 100 ha or more settlement area requires, as already described in the section “Quality of the transport offers”, the connection to efficient transportation routes. The traffic volume generated by the companies is supplemented by the traffic volume of the employees. An employee volume of on average 25 employees per ha settlement area can be derived from the information provided by the Berlin GVZ.

In particular the road links are of interest in accordance with the actual Modal Split in goods traffic. The vehicle fleets of the logisticians are concentrated on the transportation routes during the traffic peaks in the early morning hours and – at a lower level – in the evening hours, through which they increase the burden through commuter traffic. Counts within the GVZ

⁹ An example of this can be seen in the GVZ Berlin East Freienbrink, that was erected on the area of a former military supply depot.
Berlin South Großbeeren have shown peak loads of more than 1,200 vehicles / hour. From this it is possible to derive a load of the road network of up to 12 vehicles per hour and hectare settlement area. The lorry share fluctuates here between 5% and 50% depending on the direction of traffic and time. The adjacent road network must be able to accommodate these traffic volumes. Possible impediments to traffic result in higher environmental pollution and transport costs as well as a negative prevailing mood among the population.

2.6.6 Planning safety

As with all settlement projects the planning safety is also of special importance for companies in the logistics industry. Due to the short leadtimes between the order being placed and commencement of the logistics activity this industry requires a high level of planning safety and short approval times.

Planning procedure

The companies, which wish to erect a new facility, are frequently not based in the region in which the project is to be realised. The necessary procedures and administration flows are thus not always known. Therefore, coordinated administration flows are beneficial to accelerate the procedures. Preferably there will also be a central contact in the administration or at the business promotion company. The approval procedures should not take more than 2–3 months. Procedures which take longer are not accepted by the applicants as these themselves are subject to far shorter deadlines. Possibilities for subsidies are to be presented in a transparent manner. Possible dependencies on the company size (revenue, number of employees), production orientation or origin of the company are to be mentioned.

Property and ownership circumstances

The number of owners concerned is to be taken into account for the development of the location. Under certain circumstances long-winded land acquisition proceedings may be necessary insofar as owners are not willing to sell. Clear ownership circumstances are important particularly for medium-sized companies in order to avoid problems with the financing credit institutes. One single seller should preferably act as a contact.

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10 Own survey of IPG
3 LOGISTICS REGION BERLIN–BRANDENBURG

3.1 Logistics industry Berlin-Brandenburg

With more than 150,000 employees in the logistics industry Berlin-Brandenburg is among the most important logistics regions in Germany. Nine of the ten biggest German logistics service providers (Deutsche Bahn AG, Deutsche Post AG, Kühne+Nagel AG, Dachser GmbH, DPD, UPS, Rhenus AG, Panalpina AG and Fiege) are represented with branches in the region.11

The largest German logistician, Deutsche Bahn AG, has based the management of its logistics branch in Berlin with the head office of Stinnes AG. Even now already the region does not just offer logistics service providers, but also a very good environment for transport- and logistics-oriented companies from industry and trade. The strengths of the logistics location Berlin-Brandenburg include:

- the location in the intersection point between West, Eastern, Northern and Southern Europe,
- a large local sales market with six million inhabitants,
- a very good traffic infrastructure which will be further expanded,
- efficient logistics centres which are very attractive for the settlement,
- a science and research landscape in the fields of logistics and transport telematic, which provides know how and highly qualified personnel.

Fig. 6: Logistic region Berlin-Brandenburg

Source: ipg mbH

11 German transport publishing company “Top 100 of logistics 2006”
With its Freight Villages and ports Berlin-Brandenburg has a host of efficient centres for cargo handling, logistics and the settlement of transport and logistics companies. The GVZ in Großbeeren (Berlin South) and in Wustermark (Berlin West) ranked third and fourth place in a nationwide ranking of GVZ in 2004.

Both GVZ have a motorway connection, container terminals and railway sidings. Wustermark will soon have an inland port. The GVZ in Freienbrink (Berlin East) also has a motorway connection and railway siding. Between 55 % and 80 % of the areas of the GVZ have now been sold. A total of 100 companies with 7,000 jobs have settled here, to a large extent freight forwarders and trade logisticians. The three GVZ do not just serve Berlin-Brandenburg as hub for the shipment and receipt of goods worldwide; large parts of East Germany and the west of Poland are also served from these GVZ.

3.2 Integrated logistics concept

The process of international work distribution and the globalisation of the world economic area, the eastern enlargement of the European Union and the demands for speed, complexity and flexibility of logistics services continue to generate high growth rates in long-distance goods traffic. The growth rates in road haulage are dramatic as the other transport carriers are not used sufficiently so far. New concepts are needed in goods traffic in order to counteract the threatened traffic collapse and support relocation to environmentally-friendly transport carriers. The set-up of a Trans-European transport network and a European network of Freight Villages represents an important possible solution.

The special basic conditions require an integrating concept for processing the business traffic. Based on the resolutions passed at the beginning of the 1990s concerning the development of GVZ the states of Berlin and Brandenburg initiated joint, cross-state policies for the organisation of goods traffic, which led to the “Integrated Goods Traffic Concept Berlin-Brandenburg”. This was registered as a “global project” by the management of EXPO 2000 GmbH.

The superior goal of the project is the environmental- and urban-compatible organisation and processing of business traffic in Greater Berlin through the optimisation and supplement of the existing transport infrastructure as well as its intelligent use. This goal is essentially achieved by creating modern logistics interfaces as well as supplementary urban-compatible single measures which offer the transport industry an environmentally-friendly and economical feasible solution for all supply and disposal tasks.

The Integrated Goods Traffic Concept Berlin-Brandenburg is oriented here to the following general principles:

- Avoidance of traffic, which in particular means the avoidance of unnecessary truck trips. This can e.g. be achieved through the intelligent bundling or optimisation of delivery tours. Examples for this are the “platforms business traffic” described below with the included “city logistics” and the building logistics with the supply and disposal of large construction sites.

- **Relocation of traffic**, with which the goods transports are to be relocated from road to more environmentally-friendly transport carriers. Examples for this are the Freight Villages erected in front of the entrances to the city ("commuter belt") and the goods traffic sub-centres located in the inner city, which are particularly distinguished by the fact that they enable a connection of the road with the rail and in part with inland navigation vessels through terminals of intermodal transport.

- **Improvement in the flow of road traffic** through the reduction of reciprocal impediments between motorised individual traffic (MIV) and delivery traffic. Examples for this are the measures against parking short-term in the “2nd lane” by creating special delivery zones within the framework of the “platforms business traffic”.

**Fig. 7: Goods traffic concept Berlin-Brandenburg**

The “Integrated Goods Traffic Concept Berlin-Brandenburg” consists in the meantime of various complementary single components:

- **in Brandenburg**: the Freight Villages (GVZ) Wustermark, Großbeeren and Freienbrink

- **in Berlin**: the goods traffic sub-centres (GVS). Transshipment points will be set-up near to the consignees in order to simplify the logistics of regular and extensive deliveries to fixed destinations. The picked load is distributed from rail or water via the road.

- **the business traffic platforms**: these were jointly initiated by the Berlin Senate Administration for Urban Development and the Chamber of Commerce Berlin. A greater compatibility for the city and relief of road traffic is achieved through Public-Private-Partnership.

- **the large construction site logistics Berlin Potsdamer Platz (special case)**. The construction site concept was implemented successfully.
The Berlin west port was developed into a GVS besides the GVS Neukölln/Treptow. The location Neukölln has lost in significance in the meantime. It has been replaced by the west port, which has developed into an inner city GVZ with the new transshipment terminal rail/road.

Platforms business traffic were realised in several areas with substantial volumes of private and business traffic such as Karl-Marx-Straße in Neukölln. The concept is also still continued today in other areas of Berlin. The large construction site logistics at Potsdamer Platz has proven to be of considerable value and is considered to be finished with the completion of the construction site.

### 3.3 Benchmark study of the Freight Villages in Germany

The development of the Freight Villages in Europe is progressing very dynamically. More than 100 locations are recorded in West Europe alone. However, there are still development deficits and obstacles within the GVZ landscapes. The Institute for Sea Transport Industry and Logistics published a benchmark study in 2003 with the aim to present the status of development and the experience potentials of the Freight Villages. The number of GVZ included in the benchmarking process was 33.

*Fig. 8: Status of development GVZ*
3.3.1 Area structures

On average 65.2 % (97.6 ha) of the total area (149.7 ha) available in the GVZ are featured as industrial real estate. The public transport areas (roads, parking areas, local public transport areas, etc.) account on average for a share of 10.9 % (= 16.3 ha) of the total area. The terminals take up on average 6.2 % (= 9.3 ha). All other areas, which in particular include the buffer areas and the rain storage reservoirs, account for a share of 17.7 % (= 26.5 ha).

3.3.2 Development and marketing status

The first development measures began in the years 1992-1997. It was possible to clearly prove the development progress of these GVZ several years later already. Thus, it turned out that – irrespective of the commencement of development – on average 67 % of the total areas were developed.

The marketing status is one of the most important benchmark indicators with regard to the recording and presentation of the respective service status. In 2003 the average area marketing features a share of around 40 %, whereby there is substantial diversification. The Freight Villages in the Berlin region feature marketing statuses of around 50-70% at this time.

3.3.3 Transport carrier interface

The option for using an efficient inland and sea port interface in the direct vicinity of the GVZ is also among the factors which additionally increase its efficiency besides the primary GVZ transport carriers road and rail. The analyses show that the average spatial distance to the federal motorway is only 2.5 km to 3.5 km, whereby the average accessibility of the higher-level roads was between 5-6 min with low load limit and with high load frequency the value was 8 min.

28 Freight Villages already had a direct connection to the railway network of Deutsche Bahn AG, thus also the three GVZ in the Berlin region, in the middle of 2003. The evaluation with regard to the terminals for the intermodal transport showed that these are already in operation in 24 GVZ, 11 are in the planning and construction stage and eight are in the direct construction preparation stage.

The GVZ Berlin South Großbeeren has a direct connection to the Anhalter Bahn and the Berliner Außenring in the Großbeeren station. The transshipment is processed via the terminal of Deutsche Bahn AG with the help of 2 rail portal cranes. Important connections of the GVZ are the seaports Hamburg, Bremen, Bremerhaven and Cuxhaven (Albatross Express®) as well as the relations to Eastern Europe (Poland / CIS) with the Ostwind.
The GVZ Berlin West Wustermark has a publicly accessible terminal for part and block trains. The goods and postal consignments change quickly and cost-effective between road and rail with the help of reach stackers. An extension of the terminal by further tracks and a crane runway is being planned. The construction of a port facility is being prepared so that the GVZ can be used trimodal in future.

Of the 33 GVZ 17 have this direct interface. Seaport interfaces are located in Hamburg, Lübeck, Bremen and Rostock. None of the GVZ are located in the direct vicinity of a commercial airport. The analysis showed that it did not produce any significant integration relationships and thus the trimodality is only determined by the seaport and inland port interfaces.¹³

### 3.3.4 Results of the benchmark study

**Fig. 9: Benchmark study**

<table>
<thead>
<tr>
<th>Location</th>
<th>Overall valuation</th>
<th>Total area in ha</th>
<th>Industrial real estate in ha</th>
<th>Marketing status</th>
<th>Property price</th>
<th>Use of internal and external ratio potentials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bremen</td>
<td>272</td>
<td>362</td>
<td>259</td>
<td>+++</td>
<td>-</td>
<td>+++</td>
</tr>
<tr>
<td>Regensburg</td>
<td>268</td>
<td>362</td>
<td>302</td>
<td>+++</td>
<td>++</td>
<td>+++</td>
</tr>
<tr>
<td>Berlin South</td>
<td>259</td>
<td>260</td>
<td>150</td>
<td>+++</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Berlin West</td>
<td>251</td>
<td>210</td>
<td>102.5</td>
<td>+++</td>
<td>-</td>
<td>++</td>
</tr>
<tr>
<td>Leipzig</td>
<td>249</td>
<td>240</td>
<td>150</td>
<td>+++</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Nuremberg</td>
<td>248</td>
<td>337</td>
<td>203.5</td>
<td>+++</td>
<td></td>
<td>+++</td>
</tr>
<tr>
<td>Lübeck</td>
<td>245</td>
<td>23.5</td>
<td>15</td>
<td>+++</td>
<td></td>
<td>+++</td>
</tr>
<tr>
<td>Trier</td>
<td>244</td>
<td>66</td>
<td>42</td>
<td>++</td>
<td>--</td>
<td>++</td>
</tr>
<tr>
<td>Emscher</td>
<td>234</td>
<td>23</td>
<td>15.5</td>
<td>++</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Weil am Rhein</td>
<td>228</td>
<td>25</td>
<td>14.5</td>
<td>++</td>
<td>+++</td>
<td>++</td>
</tr>
<tr>
<td>Dresden</td>
<td>223</td>
<td>27.5</td>
<td>13.3</td>
<td>+++</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Emsland</td>
<td>220</td>
<td>400</td>
<td>300</td>
<td>-</td>
<td>--</td>
<td>++</td>
</tr>
<tr>
<td>Koblenz</td>
<td>203</td>
<td>220</td>
<td>180</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Berlin East</td>
<td>203</td>
<td>130</td>
<td>96</td>
<td>++</td>
<td>-</td>
<td>++</td>
</tr>
<tr>
<td>South Saxony West</td>
<td>200</td>
<td>256</td>
<td>153</td>
<td>+++</td>
<td>-</td>
<td>++</td>
</tr>
</tbody>
</table>

**Legend:** +++ clearly above average, ++ above average, + national average, -- clearly below average, - below average

Source: own presentation in line with Dr. Nobel, ISL; 2004

Altogether the benchmark study showed that – seen on a nationwide level – the GVZ idea has established itself successfully, however clear development processes are still required until the full final expansion.

¹³ Development of the Freight Villages; Dr. Thomas Nobel; 2004
The Freight Villages Berlin south Großbeeren and Berlin west Wustermark occupied high places in the ranking. In the past few years Großbeeren recorded the highest development dynamic of all GVZ in Germany. As the capacities here are almost exhausted with a current marketing status of around 80 %, extension concepts are already being drawn up.

Strong growth in the industry is also expected in future in the Berlin-Brandenburg region. A further GVZ will establish itself in the Berlin-Brandenburg region not least with the erection of the BBI international airport in Berlin-Schönefeld in 2013.

3.4 National relations of the Freight Villages

In the forefront are the supply and disposal of Berlin and the interface between local and long distance traffic. Two clusters are formed with regard to the delivery relations.

Those companies are represented in the first cluster the activities of which are oriented to the main town region and the nearer hinterland. These are above all service providers such as petrol stations (Aral), washing facilities, trailer leasing (TIP-CTR), installation, repair and service of transport refrigerating plants (Thermo King), fork lift truck rental and sales (among others Trafö) and truck trade and repair (DAF, Renault) as well as KEP companies such as DPD German parcel service or General Logistics Systems and as a special case Hermes mail order company. On the other hand these include the distribution centres of the food discounter such as Aldi, Lidl and NETTO as well as drinks logistics such as Rössler and Trinks.

In the second, far bigger, cluster those companies are summarised which maintain national delivery relations. In this respect it must noted that these companies also maintain partly very marked delivery relations in the Berlin region and therefore have chosen a location in the direct vicinity of the capital. This cluster includes almost all logistics service providers based in the GVZ, but also producing companies such as Mahle Nockenwellen, J & S Stanztechnik and Wepoba Wellpappenfabrik as well as central warehouses of the food retail trade such as REWE and EDEKA.

Case examples:

With its six locations in Germany WLS (Warenhandel + Logistik + Service GmbH) provides the whole logistics services for McDonald's in Germany and Luxembourg. These include the procurement and distribution of all food and non-food articles and the supply of more than 1,250 restaurants. Almost 200 restaurants in the east of Germany are supplied from the Wustermark location.

REWE, the largest investor in Großbeeren, supplies 384 branches in Berlin, Brandenburg and Mecklenburg Vorpommern (up to Rügen).
26 of 85 companies based in the GVZ (without tenants) concern relocations from the Berlin urban area, which also corresponds with the intention of the Integrated Goods Traffic Concept Berlin-Brandenburg. Owing to the location at the border of Berlin city and based on the fact that the south of Berlin is marked by trade settlements, it is only natural that 21 of the 26 companies have settled in the GVZ Berlin South Großbeeren.

There are also pronounced national delivery relations for the intermodal transport. Thus, the DHL train from Unna/Bönen which runs to the GVZ Berlin West Wustermark and the Berlin west port five times a week. Also to be mentioned here are the seaport hinterland transports (see Chap. 3.5), although these represent a border case as the source of the goods is almost without exception overseas.

Pronounced national relations on an organisational level exist under the umbrella of the German GVZ-Gesellschaft [GVZ association] and since March 2006 within the framework of the logistics network Berlin-Brandenburg. The logistics network Berlin-Brandenburg is carried as Private-Public-Partnership by the states of Berlin and Brandenburg as well as numerous companies in the industry. 15 companies are currently members of the logistics network. The initiative wants to contribute to developing the Berlin-Brandenburg region to a leading European hub in goods traffic by 2020. Besides extensive marketing measures these also include the further expansion of the infrastructure in the region.

3.5 International relations of the Freight Villages

The GVZ in the Berlin-Brandenburg region also maintain various international relations. Large logistics companies have established hubs here which are integrated into their European network. For example there are daily transports from GEFCO in Großbeeren to 3 branches in Poland. There are regular groupage freight transports from the branch in Poznan in imports.

However, international relations do not just exist in the logistics field, but also to foreign institutions and companies. Thus a multitude of foreign delegations have already visited the GVZ in Berlin-Brandenburg as these now enjoy the reputation of a “model function” for the construction of GVZ overseas.

In 2006 the Russian minister of transport Levitin visited the GVZ Berlin South Großbeeren. He subsequently presented the plans to the Russian government for improving the infrastructure at the BVL logistics congress which took place in Berlin in October 2006. These also include in his words the erection of logistics centres on the outskirts of Moscow based on the example of the Freight Villages Großbeeren and Wustermark.

Case examples:

**Rieck logistics group**

- Head office with 250 employees in the GVZ Großbeeren
- Business premises 5.1 ha
- Hub for Eastern Europe traffic
Bundling of the goods from all European partners from the network of the general cargo co-operations

Daily groupage freight transports to Poland by IDS (largest general cargo cooperation in Europe) and ILS-EEAST

Daily transports to the Polish partner freight forwarder Raben in Poznan, from there blanket coverage distribution in Poland

Daily goods pick-up by ElectronicPartner (Genshagen), supply of all EP dealers in Poland from 35 depots of the partner Raben

Supply of the production plant of Bosch-Siemens household appliances at Lodz; parts come from all Southern European countries and are bundled in Großbeeren; 5-10 trucks per day.

Fig. 10: Logistical integration: Rieck company

Fixemer Logistics

Fixemer Logistics GmbH as large transport service provider is specialised in international transports. Above all the transports from and to Eastern Europe are bundled from the Freienbrink location.

SMS

SMS Industrie Service GmbH exports construction machines to Eastern Europe from the Freienbrink location.

LARTA Logistics

LARTA Logistics offers railway services from and to West and Eastern Europe at the Freienbrink location. This is connected with pre- and follow-up runs by truck as well as the customs clearance for all types of goods.
Freight Villages in Brandenburg and Berlin – Transport and logistical starting point of the railway link to the Baltic States, potentials and requirements

**Europlattform**

The networking of the European GVZ through the Europlattform began in 1991 already. The national GVZ associations of Spain, Italy and France had amalgamated by this time. From April 1995 the countries without national GVZ connections could also accede to the Europlattform with all rights and duties. The Europlattform today comprises more than 40 GVZ.

Within the first few years it could be seen that all of the countries defined a GVZ in different ways and the experience with regard to the erection and operation also varied considerably. A now uniform GVZ definition today creates a joint framework in order to erect European transport and communication networks, which meet the requirements of the European Union.

The Europlattform is also a tool for the decision-makers of the EU with the help of which transport policy decisions are supported and coordinated in close exchange with qualified experts. Here in particular the Europlattform records visible successes and became partner in numerous projects subsidised by the EU on issues such as IT, quality management and intermodal networks.

**Ostwind**

Trade between Germany and the CIS states is booming. The GVZ Großbeeren also profits from the growing transit transports to Russia and the CIS states. Depending on the volumes the OSTWIND runs as a standard train from Berlin to Moscow three to four times a week. It is a joint product of the railways of Germany, Poland, Belarus and Russia. The lead managing operator is Intercontainer Interfrigo Basel. The inflow consignments run in single wagon transports to Großbeeren. Around 2,000 target stations can be served within the CIS states. The running time to the CIS border (Malaszewicze/Brest) is around 16 hours. Mainly consumer goods, machines, chemicals and occasionally relief goods are transported.

**Fig. 11: Route "Ostwind"**

The transports by rail beyond the borders however prove to be a difficult undertaking. The route from Berlin to Frankfurt (Oder) is well developed. However, the first problems are seen with the border clearance already. For goods transport by rail the crossing of the border
means e.g. that the German locomotive with its driver is not permitted to drive to Poland owing to the different electricity systems. A Polish locomotive with a Polish driver takes over the train from the border.

The processing at the outer EU border Poland/Belarus is even more time-consuming. The whole clearance takes 28 hours. The containers have to be transhipped as the European gauge (1,435 mm) meets the Russian broad gauge (1,524 mm) here. In addition, intensive operational inspections, police controls and checks of the freight documents are necessary.

**Pilot train from Berlin to Moscow**

Four European railways gave the starting signal for an exceptional goods train at the goods station in Seddin near Berlin in November 2005. It should overcome the 1,800 kilometres between the German and the Russian capital in just three and a half days - and thus substantially quicker than by truck – and therefore considerably accelerate the goods flow between Germany, Poland, Belarus and the Russian Federation.

The train with a length of 600 metres, weighing around 1,600 tons and which reaches speeds of up to 100 kilometres per hour in the direction of Russia had a load of containers, cars and palleted goods. So far goods trains need up to ten days on this route. A truck manages it in four to five days.

The aim of the experiment was to create the bases for a future acceleration of all goods trains on the corridor Germany - Russia and thus the pre-requisites for a substantial increase in traffic volume in close cooperation between the DB goods railway Railion, the Polish PKP, the Belarusian BC and the Russian RZD. Previously the locomotive is changed several times on the route, moreover a lot of operation stays and buffer times are envisaged in the time tables – for example for the extensive customs formalities at the three border crossings. The flows are to be coordinated to an optimum extent IT-based and with electronic transmission of the freight documents in future and thus enable a substantial reduction in transport times.

The transport customers from industry, trade and the logistics industry will profit from this, which can expect new offers from one provider on this fast growing European transport axis and receive a reliable and fast alternative to trucks.\(^{14}\)

\(^{14}\) W. Klingberg and T. Altmann; 2005; Railion
3.6 Comparable analysis of the GVZ as well as of the ETTC

Fig. 12: Comparison of the Freight villages

<table>
<thead>
<tr>
<th>Location</th>
<th>GVZ Berlin West Wustermark</th>
<th>GVZ Berlin South Großbeeren</th>
<th>GVZ Berlin East Freienbrink</th>
<th>GVZ Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size of area (approx. in ha)</td>
<td>226.0</td>
<td>260.0</td>
<td>130.0</td>
<td>616.0</td>
</tr>
<tr>
<td>Gross</td>
<td>113.1</td>
<td>150.0</td>
<td>95.0</td>
<td></td>
</tr>
<tr>
<td>Net settlement area</td>
<td>10.7</td>
<td>150.0</td>
<td>95.0</td>
<td></td>
</tr>
<tr>
<td>Plus port</td>
<td>3.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net settlement area in total</td>
<td>127.2</td>
<td>150.0</td>
<td>95.0</td>
<td>373.2</td>
</tr>
<tr>
<td>Degree of development</td>
<td>Developed / marketable area in ha</td>
<td>110.0</td>
<td>150.0</td>
<td>95.0</td>
</tr>
<tr>
<td></td>
<td>Net settlement area in %</td>
<td>86%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Marketing status 08/2006</td>
<td>24.0</td>
<td>41 + 13 tenants</td>
<td>20.0</td>
<td>56 (incl. tenants)</td>
</tr>
<tr>
<td>Number of investors</td>
<td>65.5</td>
<td>117.6</td>
<td>19.2</td>
<td>242.5</td>
</tr>
<tr>
<td>Sold area in ha</td>
<td>60%</td>
<td>79%</td>
<td>62%</td>
<td>68%</td>
</tr>
<tr>
<td>Net settlement area in %</td>
<td>70%</td>
<td>79%</td>
<td>62%</td>
<td>68%</td>
</tr>
<tr>
<td>Jobs</td>
<td>Secured</td>
<td>1,564</td>
<td>3,680</td>
<td>1,170</td>
</tr>
<tr>
<td></td>
<td>Forecast until final expansion</td>
<td>3,000</td>
<td>4,500</td>
<td>2,000</td>
</tr>
<tr>
<td>Investment volume (in Mil. EURO)</td>
<td>Property development</td>
<td>95</td>
<td>86</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>Including subsidies after expansion</td>
<td>322</td>
<td>350</td>
<td>138</td>
</tr>
<tr>
<td></td>
<td>Investment by investors after final expansion</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: ipg mbH, 2006

**GVZ Berlin West Wustermark**

A total of 110 ha net settlement area is available in the GVZ Berlin West Wustermark. The location is particularly predestined for incoming traffic from the old federal states and West Europe to Berlin owing to its location and infrastructural connections. With regard to road links the GVZ is connected to the Berlin motorway ring road (A10) and to the four-lane national highway B5 and thus at the same time has a connection to the centre of Berlin. On the rail side the Freight Village is connected to the Berlin Außenring and thus to all main routes of the railway including the high speed route Berlin - Hanover.

The interchange of transport carrier “rail/road” is guaranteed by a terminal in the GVZ. The further expansion of the facility is currently planned by the private operators of the transshipment facility - BTS Kombiwaggon Service GmbH and Havelländische Eisenbahn AG. In the course of this measure the currently existing two transshipment tracks with a length of 700 m each will be extended to four and the previous mobile transshipment converted to loading and unloading by means of portal cranes. In addition, the GVZ has an internal track network.

Supported by the direct location next to the Havel canal and its expansion within the framework of the transport project “Deutsche Einheit [German Unity] No. 17” the trimodality of the transport carriers road, rail and waterway will be achieved in future with the construction of a public inland port. The construction measure for the port, which forms a functional unit with the GVZ, comprises the preparation of areas for the settlement of trade associated with a port besides the actual port with corresponding infrastructure such as mobile crane and conveyance systems.
Freight Villages in Brandenburg and Berlin –
Transport and logistical starting point of the railway link to the Baltic States,
potentials and requirements

**GVZ Berlin South Großbeeren**

A total of 150 ha net settlement area is available in the GVZ Berlin South Großbeeren. The layout of the property sizes is variable from 3,000 m² to 120,000 m² and is available both with and without railway siding. The Freight Village will be newly developed for road-based traffic through two junctions to the national highway B 101 expanded to four lanes, which guarantees the connection to the southern Berlin motorway ring road A10 in direction south (approx. 5 km) and to the north develops the urban area of Berlin. In addition to this there are connections to the state roads L 40 to Potsdam and L 76 to Berlin-Schönefeld Airport. The distance to the city limit of Berlin is 5 km, to Potsdam 15 km and to Berlin-Schönefeld Airport is also 15 km.

Besides this very good road connection the infrastructure of the GVZ comprises a direct connection with the main route of the railway in direction south (Halle/Leipzig-Nuremberg/Munich) and the Berliner Außenring. A terminal was put into operation by Deutsche Bahn AG on the site of the GVZ in 1998 already. The extension of the terminal was completed in October 2006. There are now 2 transhipment tracks available with a length of respectively 700 m and 2 tracks with a length of 350 m. The terminal has two portal cranes with a capacity of 100,000 loading units/year for the transshipment. The annual transshipment is expected to amount to 50,000 TEU for 2006. The facility is operated by the railway company subsidiary DUSS mbH. The Albatros Express of Transfracht currently runs with block trains between the GVZ and the seaports Hamburg, Bremen and Bremerhaven on six days. The Ostwind of Intercontainer runs 3-4 times a week in direction CIS (see Chapter 3.5) depending on the volume. BTS Kombiwaggon GmbH operates a Container Service Centre for Transfracht on a basic surface area of 10,000 m².

**GVZ Berlin East Freienbrink**

A net settlement area of 96 ha is available in the GVZ Berlin East Freienbrink, that has a direct connection to the eastern motorway ring road in Berlin. Thereof 67 ha are featured as industrial estate (GI) and 29 ha as industrial park (GE). If required the GVZ can be extended by a further 15 ha. Owing to the former military use the GVZ is located in an area with comparably low business settlement. The situation that no significant industrial and logistics companies have settled in this region so far is to be taken into account with the identification of industrial and trade real estates in the GVZ.

Owing to its location south east of Berlin and the proximity to the Polish border Freienbrink is suitable for logistics services which are oriented to the markets in Eastern Europe as well as in the Scandinavian and Baltic region as road transports do not have to drive around or cross the German capital. The newly built state road 38 in direction Fürstenwalde – Frankfurt (Oder) with two connections to the GVZ is an important pre-quisite for this.

The connection to Eastern Europe is also guaranteed by rail with a direct connection of the internal railway network to the main route of the railway (Berlin - Frankfurt (Oder) - Warszawa).

Transshipment between the transport carriers rail and road is currently not carried out in Freienbrink. An area with a length of 150 m as well as multitude of properties with railway siding is available for the transshipment with mobile appliances.
**Euro Transport & Trade Center (ETTC)**

The ETTC located near Frankfurt (Oder) is particularly suitable for the cross-border logistics with Poland and Central and Eastern Europe owing to its geographical location. The area that has a net area of 108 ha according to a decentralised concept, has a motorway connection and railway siding, container terminal and settlement areas. Direct transports by rail between the German seaports (Bremerhaven/Hamburg) connect international growth markets with the location of Frankfurt (Oder) and further in the road pre-flow and follow-up flow to Saxony, Brandenburg and Poland. A container depot is connected.

The following relations are planned:
- Frankfurt (Oder) - Brest
- Frankfurt (Oder) – Ruhr region/west ports
- Frankfurt (Oder) - Italy

The marketing status of the ETTC is unsatisfactory so far. Logistics companies, which are looking for a location near the border, have already settled in the vicinity (Jakobsdorf) or directly on the Polish side. The marketing strategy should therefore be redefined. A conceivable direction is a connection between production and logistics. The currently developing energy industry (Solar factories) could play a key role.

**City-GVZ Berlin west port**

Inland ports which were partly expanded and modernised in the last few years, develop large parts of Berlin and Brandenburg. The most important port in Berlin is the west port which is located on the northern border of the inner city and has a trimodal transport connection of waterway, motorway and rail. Over the course of the time and not least through the extension of the transshipment facility rail/road with a capacity of 50,000 loading units per annum it has developed from a goods traffic sub-centre to a City-GVZ. It can be used by large motor goods ships, is equipped for mass, heavy goods and container transports and offers both warehouse capacities as well as settlement areas.

Together with the major Berlin market located in the direct vicinity it forms the most important inner city logistics centre of the capital. Compared with the other afore-mentioned GVZ the areas for company settlements are limited, there are only a minimum of area reserves still available. The focus of the west port is thus placed on transshipment for ships and as a logistics junction for the transshipment rail/road. Thus, there are daily train connections to Hamburg (freight forwarder Zippel) and to Unna/Bönen (DHL train). The City-GVZ on the west port site is currently being expanded further. The trimodal container terminal (water, rail, road) is to have twice the capacity after completion of the construction work at the end of 2007.
**Berlin Brandenburg International Airport (BBI)**

A further logistics location which will play an important role in future is being developed with the erection of the BBI Airport. Large areas will be developed for the settlement of trade until the envisaged completion in 2011. The “airport logistics centre” will comprise an area of 40-60 ha.

The following diagram gives an overview of the afore-mentioned logistics locations in the Berlin-Brandenburg region. All locations have a connection to the higher-level road and railway network. Besides the City-GVZ Berlin west port the GVZ Berlin West Wustermark will also have a third interface, a port transshipment in future, and will thus become the trimodal service provider of the region.

*Fig. 13: Logistics locations in Berlin / Brandenburg*

1. City GVZ Berlin west port
2. GVZ Berlin West Wustermark
3. GVZ Berlin South Großbeeren
4. GVZ Berlin East Freienbrink
5. Airport logistics centre BBI (planned)
6. ETTC Frankfurt (Oder)

Source: [www.login-bb.de](http://www.login-bb.de)
4 FREIGHT VILLAGES ALONG THE RAIL BALTICA

4.1 Geographical classification

The route is part of the Pan-European Transport Corridor II Berlin – Warszawa – Minsk – Moscow, defined by the European Commission to which a fundamental significance is attributed for the trading relations between the EU and the Russian Federation. The corridor II connects a large part of the industrial centres of the EU with those of the Russian Federation (Moscow, Nischni Nowgorod, Samara, Togliatti, Wolgograd and Swerdlowski). The route of the “Rail Baltica” is reached in Warszawa, where it branches off as a Pan-European Transport Corridor I. The diagram shows a possible route of the “Rail Baltica” from Helsinki to Tallinn – Riga – Kaunas – Warszawa to Berlin. As the railway link has not yet been clearly defined, the diagram includes arrows which symbolise a possible shift of the route.

Fig. 14: “Rail Baltica” – Berlin - Helsinki

Discussions are currently being conducted about the exact route of the “Rail Baltica”. One thing is certain is that the route will run from Helsinki/Tallinn to Riga, Kaunas, Bialystok and further to Warszawa and Berlin. However, it is unclear how the centres will specifically be connected. In Latvia the route will cross Riga – the centre, with the highest population density, whereas various routes are still being discussed in Estonia. Open to discussion are either the route along the Baltic Sea coast (Pärnu), the crossing through the inland region (Viljandi) or the expansion of the existing main route in the east through the town of Tartu.
A general consensus exists on the other hand in Lithuania. Here the route will cross Kaunas. However, it was not yet possible to clearly define the individual parameters of the routing from the border of Latvia to Kaunas. The transport ministries of Latvia and Lithuania merely agree on the possible border crossing (north of Joniskis). Contrary to this there are concrete ideas about the route section from Kaunas to the Polish border. An expansion or new construction of the “Rail Baltica” to the European gauge (1,435 mm) is envisaged with a maximum route speed of 160 km/h for this section. The border between Poland and Lithuania is considered to be the neuralgic point as this crossing represents the only railway link of the Baltic States with the heart of Europe. Significant problems however also crop up in Poland. Environmental political discussions are making the planning and implementation of “Rail Baltica” more difficult here as the section from Bialystok to Sokolka and Suwalki runs through a nature reserve.

The project of “Rail Baltica” was classified as a project with prior significance. Decisive for this are among others the sharp economic growth in the Baltic States and the accession to the EU in 2004. With regard to goods traffic the project should contribute to a substantial increase in capacity of the railway network, improve the potential of the intermodal traffic and thus promote trade with other European countries. With the connection of the Baltic States by rail Poland is also becoming more and more important within the Trans-European network. The Baltic States are given access to Germany and West Europe through the “Rail Baltica”.

**Fig. 15: Investments “Rail Baltica”**

<table>
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<tbody>
<tr>
<td>Warschau - Kaunas</td>
<td>Reconstruction / New development</td>
<td>437</td>
<td>2004 - 10</td>
<td>300</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Kaunas - Riga</td>
<td>Reconstruction / New development</td>
<td>283</td>
<td>2010 - 14</td>
<td>850</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Riga - Tallinn</td>
<td>Reconstruction / New development</td>
<td>470</td>
<td>2010 - 2018 (2016)</td>
<td>1,500</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1190</td>
<td></td>
<td>2,650</td>
<td>0</td>
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As can be seen from the diagram no investments were made in any of the priority route sections until 31.12.2004. The project “Rail Baltica” is still in the initial phase. Extensive studies and analyses on financing possibilities, the benefit and the routing are still required in order to begin with the actual realisation of the route. The problems regarding the routing and the respective positions of the individual countries concerning the project are presented in detail below.

**Warszawa - Kaunas**

- The official routing of the Polish part of the “Rail Baltica” Warszawa – Bialystok – Sokolka – Suwalki – Trakiszki – border. However, this route runs through a nature reserve. The expansion of the route thus proves to be difficult if not even impossible.

- Second variant: Warszawa – Bialystok – Elk – Olecko – Suwalki – border. This section does not lead to any conflicts with existing nature reserves. The section – Bialystok – Elk is in fact single-track, however an expansion is possible.

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15 TEN-V; European Commission; 2005
The route section from the Polish border to Kaunas has been analysed in detail (85 km length, 1,435 mm gauge, 160 km/h, for passenger and goods traffic)

Position Poland:
- Environmental associations favour the “Rail Baltica” compared with the road project “Via Baltica”. However, the government of Poland currently sees no need for action with the modernisation of the route section Warszawa / Bialystok, as this section already meets the West European standard and speeds of around 120 km/h can be driven here.  

Kaunas - Riga
Routing:
- The exact routing from the Latvian border to Kaunas has not yet been clearly defined. No detailed studies are available yet concerning a possible route
- A „Master plan of the Territory of Lithuania“ is available which includes the north section of Kaunas
- Four possible variants of the routing are being discussed:
  1. Via Radviliski/ west of von Kaunas
  2. Via Radviliski/ east of Kaunas
  3. Via Panevezys
  4. The existing route in corridor 1 (border to Latvia – Siauliai – Radviliski – Guzunai – Kaunas)
- Agreement exists between the Latvian and Lithuanian Ministries of Transport concerning a possible border crossing (north of Joniskis)
- From Riga to the border Latvia / Lithuania
  1. Riga – Jelgava – Eleja – Joniskis. The route exists already and is the most cost-effective.
  2. along the “Via Baltica”. Benefits: generation of positive intermodal effects
- The routing around and through Riga must also be discussed in detail still.

Positions Latvia / Lithuania
- Lithuania is main advocate of the project “Rail Baltica”. It is also the only country which has so far applied for financial support. Lithuania is urging that in particular the route section “Kaunas/Poland” will be modernised in the near future. For Lithuania this railway link means access to West and Southern Europe. The direct connection to Poland opens up manifold trade relations for Lithuania.
- Latvia supports the project of “Rail Baltica” from a political point of view. However, it is still too early for a financial participation. Alternative financing projects such as “PPP” (Public-Private-Partnership) are met with interest.

Riga - Tallinn
Routing:
- Tallinn – Tartu – Valga – Riga. This route is preferred by Latvia as it takes advantage of the existing infrastructure and affects large cities in Estonia and Latvia.
- Tallinn – Pärnu – Riga. This route is the shortest and runs directly next to the “Via Baltica”. Weak points: Construction of a new route section from Pärnu in Estonia to Saulkrasti in Latvia. This means land purchase. It is unclear whether the route from Saulkrasti to Riga can be used.
- Tallinn – Rapla – Pärnu - Moisakula - Saulkrasti – Riga. Route exists already. Unclear whether the section Saulkrasti - Riga can be used.
- The possible border crossing between Estonia and Latvia has not been determined yet. Therefore, close cooperation between both countries is necessary.

Position Estonia:
- Discussions are being conducted in Estonia still concerning the route of the “Rail Baltica” from Tallinn to the border of Latvia. The government would even be willing to accept the European gauge, however the private operator of the network, Eesti Raudtee (Estonian Railways) is opposing this.

16 Rail Baltica Report, EU-Commission; 2006
17 Rail Baltica Report, EU-Commission; 2006
18 Rail Baltica Report, EU-Commission; 2006
19 Rail Baltica Report, EU-Commission; 2006
4.2 Poland

With just under 40 million inhabitants the Republic of Poland has the eighth biggest population in Europe and the sixth biggest in the European Union. The population density is 127 inhabitants per square kilometre. Poland is an important transit country from North to Southern Europe and from West to Eastern Europe. Important trading routes led through the territory now known as Poland such as e.g. the Amber Road and the European section of the Silk Road in the ancient world and in the Middle Ages already.

The annual revenue of the Polish logistics market was put at around Euro 5.1 billion in 2003. Moreover, logistics services provide around Euro 5.4 billion. Market growth of 16 per cent is assumed in the whole logistics segment in Poland by 2007.

Railway network

The Polish railway network is very dense. The railway infrastructure has been managed by PKP Polskie Linie Kolejowe SA since 2005. The length of operated railway kilometres is subject to a systematic reduction. In the last 15 years the length of the operated lines has been reduced by 5,100 km to 19,500 railway line kilometres, i.e. by almost 22 %. The railway network corresponds with the European normal gauge with 1,435 mm. Important traffic junctions are Warszawa, Poznan, Gdansk, Szczecin, Wroclaw, Katowice and Cracow. The narrow (European) and the broad (Russian) track system meet each other in Poland. This makes Poland the hub of the east-west railway traffic. The east-west transit is primarily processed via the route Frankfurt (Oder) - Poznan to Warszawa. There the route branches off into the routes to Brest (- Minsk - Moscow), Suwalki on the border to Lithuania and Riwne in the Ukraine.

The liberalisation of railway transport is only progressing slowly in Poland. Since August 2003 alternative railway companies may no longer be blocked from commencing operation after receipt of a licence from the Department for Railway Transport (Urzad Transportu Kolejowego; UTK) with purely formal barriers. So far 77 licences have been granted. However, the competition is still thwarted by user fees for the railway network of which the PKP still holds the majority shares. Besides the track routes the rolling material is a restrictive factor for competition. Thus used locomotives are practically not available in Poland and have to be procured from Germany, Romania, Italy or Morocco.
Cargo transport by rail is the only transport carrier to generate profits with the state railway. However, the so-called last metre is missing when acquiring customers in remote areas, as these secondary routes were deserted to a large extent in the past. Today this action has proven to be the wrong decision. Railway transport continues to play a significant role in case of bulk cargo (e.g. coal, steel scrap) and industrial goods of mass production (e.g. motor vehicle, motor engines).

The most important development goal of the Polish infrastructure is the qualitative improvement of connections between important national business centres and the largest agglomerations. In addition, the Polish infrastructure is a part of the European railway network. For this reason the aim is pursued to restore the technical functionality of worn and out-of-date infrastructure elements, to successively realise the EU standards in order to enable an improvement in the flow of traffic.\textsuperscript{20}

\textsuperscript{20} PKP; annual report 2005
Logistics

The power of attraction of the Polish logistics market is increasing continuously. Poland has the largest market in the Eastern part of the EU. This makes the country particularly attractive for German industry and trading companies. New projects are being tackled in Poland for the erection of warehouses and sales as well as logistics centres. The trend is for the geographical focus to shift away from the capital. Today the logistics centres are primarily located in the hinterland of Warszawa, Poznan, in Silesia and the coastal region. Together Warszawa and the surrounding area have 3.5 million m² storage space, however only 1 million m² were produced in the last four to five years and thus satisfy modern demands. On the other hand there is a high need for modernisation of 2.5 million m².

Fig. 17: Logistics centres in Poland

Source: Map PKP; own presentation ipg mbH
At present there is also increasing interest in projects in Upper Silesia, Wroclaw, Lodz and Gdansk. Approx. 3 million people live in Upper Silesia in a relatively small area and thus represent one of the largest regional consumer markets in the country. In addition, there is by all means high concentration of trading companies and production plants here which partially even serve markets in Slovakia and the Czech Republic. The territory around Lodz is particularly interesting for logistics companies owing to its central location and as a future junction of two planned motorways on the north-south axis from Gdansk to the Czech Republic (A1) and the east-west axis from Terespol to Berlin (A2).

The following statements give a general overview of possible locations of logistics centres along the “Rail Baltica”. Analysed are thus the logistics centre Poznan with the adjacent region Wielkopolska as well as the logistics centre around Gdansk.

**Wielkopolska logistics centre**

Studies prove that the demand for modern logistics centres by the Polish producers is very high. The non-availability of suitable logistics infrastructure is therefore proving to be more and more of a problem. The companies have so far settled more at random. Thus, numerous logistics locations emerged at favourable conditions, however there is a lack of all infrastructural equipment.

The idea to erect a logistics centre in Poznan and the region of Wielkopolska, is very old. The region of Wielkopolska is located directly on the main axis of the east-west as well as the north-south corridor. The region is said to have a high social and economic development potential. The economy is balanced in terms of structure and holds a top place in the country in many areas. Numerous large investments were made here during the period of the economic transformation of the country which substantially improved and consolidated the situation of the country. The number of companies operating here – 340,000, in which 1,300,000 persons are employed are also a testimony of the business activity.

**Logistics centre Poznan (Franow)**

The benefits of a logistics centre in Franow would be as follows:

- well-developed in terms of infrastructure
- railway links available
- location within the town borders, however outside of the city centre
- location directly in the intersection of the most important motorways E 30 (A2) and E 261

However, all attempts to erect a logistics centre in Franow have failed so far. The causes were often found in the non-existence of zoning maps, contrary interests of local authorities, insufficient financial resources as well as a lack of investors.
Logistics centre Konin

The project, the erection of the Wielkopolska logistics centre in Konin, was presented in 2002. The benefits of the location are:

- location directly next to the E 30 (A 2) and the national highway 25
- convincing zoning map
- the targeted area of 100 ha can be extended to 200 ha if required
- cooperation with the local authorities on a high level
- private investors available
- a Ltd.-company was created

Fig. 18: Wielkopolska logistics centre

The company was founded in 2001 with capital stock of 2.2 million PLN. This capital was used for investment in 4 ha land in order to trigger off the first construction process – the construction of the terminal. The first module of the terminal was completed in October 2003.

However, the Wielkopolska logistics centre also features essential disadvantages as a location. Thus, the railway line E-20 (Kunowice - Poznan - Warszawa - Terespol) runs in fact via Konin, however the connection is approx. 15 km away from the logistics centre. The transshipment terminal is in a very desolate condition and is therefore only suitable for Low-Cost-transshipments.

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21 www.inlog.info
Logistics centre Gadki

Gadki has excellent location benefits for the settlement of a logistics centre:
- only one owner
- very good infrastructural connection to road (E 30 / A 2) and rail
- container terminal of POLZUG Poland Ltd. in the direct vicinity with free capacities
- support by local authorities

Disadvantages:
- missing zoning map
- period of realisation unclear

The logistics centre features high potentials for Poznan and the region of Wielkopolska. It could play a superior role in future within the framework of the national and international logistics.

Pomeranian Logistics Centre (PLC)

The choice of the Pomeranian logistics centre is based on the assumption that one of the two logistics centres of the Polish coast should be settled on the TINA Transport Corridor VI. The European Transport Corridor allows the connection of land and sea and thus creates new possibilities for sea trade as well as new transport connections. The PLC is located on the terrain of the Gdansk-Gdynia port complex. The logistics centre cooperates both with existing multimodal terminals (Baltic Container Terminal in Gdingen, sea container terminal in Gdansk) as well as with the terminal located outside of the port in Gdansk.

The planned logistics centre is to primarily serve the processing of the seaport hinterland traffic. The port itself serves as interface for the following five transport carriers: water, road, rail, inland navigation vessels, pipelines. Gdansk played a central role as a port in the past and also proves its importance with regard to future transport trends. The role of the port is underlined by the constantly rising demand for container transports, the Ro-Ro transport and the necessity for multimodal transport systems.

The port of Gdansk is located at a junction of the European transport networks and has first class connections to Central, Eastern and West Europe as well as to Scandinavia. With an area of 657 ha and a 10 km long quay it holds a significant position within the Baltic Sea ports.

The cargo handling takes place in the inner port, along the port canal. The quay facilities of the port are designed to the extent that all types of cargo can be handled. The port can be broken down into two sections: the inner and the northern port. The inner port along the bank of the Dead Vistula and the Kasubian Channel has an area of 260 ha.

The container terminal in the inner port primarily serves feeder ships and short-haul sea transports. There is a connection to the road and railway network. The external port, also known as the northern port, with an area of 420 ha has direct access to the Gdansk bay. This port section has a modern infrastructure with a direct connection to the road and railway network. However, these have to be fundamentally renewed and expanded owing to the growing demand for transport. A processing of Ro-Ro transport is possible here.
There are manifold reasons for a settlement of the PLC on the port site:

- undeveloped area of 180 ha
- good development of the infrastructure including the five transport carriers
- direct proximity to the quay facilities
- 24 hour service
- creation of new jobs

The functions of the logistics centre were defined as follows:

- goods distribution: order, warehouse management, quality control, marketing, packaging
- transport: provision of cargo units, securing suitable transport technology, loading and unloading appliances
- support service: financing and insurance, consultancy.

**Problems**

The erection of logistics centres in Poland is impeded by numerous problems. With first logistics location concepts the state is in fact attempting to generate influence in terms of transport policies. However, owing to limited state financing funds concrete locations are so far only realised in “private” management, i.e. foreign investors develop and market the areas. One reason for the low number of modern properties is among others the partially desolate road and rail condition which deters potential investors. Poland is therefore obliged to urgently invest in the infrastructure in the next few years.

It is further recommended to begin with the location planning at an early stage. Strategic location decisions should not be made under time pressure as the selection, change and acquisition of property take at least two years. Exactly for this reason second or third class properties are often acquired in practice due to time pressure, which can subsequently prove to be a considerable competitive disadvantage from a logistics point of view. Moreover, routes of future roads and links must be taken into account in the planning in the long-term.

Further facts also have to be clarified in order to be able to realise the “Rail Baltica” in Poland. The north-east is in fact one of the poorest regions in the country, however numerous nature reserves and parks can be found here. Environmental associations favour the “Rail Baltica” compared with the road project “Via Baltica”. However, the government of Poland currently sees no need for action in the route section Warszawa/Bialystock as this section already meets West European standard and speeds of around 120 km/h can be run here.23

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22 Handbook for Logistics Centres in the Baltic Sea Region; 2003
23 Rail Baltica Report, EU-Commission; 2006
4.3 Lithuania

Lithuania is one of the three Baltic States besides Latvia and Estonia. The country borders onto the Baltic Sea in the west. Lithuania is a parliamentary Republic with a population of 3.59 million inhabitants. It is of very important as a transit country between Central and North Europe, between Kaliningrad and the Russian mainland as well as between Belarus and Scandinavia. Lithuania also has an important function as crude oil transit country. Owing to its proximity to the sharply sealed off outer EU border to Belarus, the capital Vilnius is located in a kind of “blind spot”. Therefore the second biggest town of Kaunas is more important for Lithuania than Vilnius from a transport planning point of view. Two of the ten Pan-European Corridors lead directly through Lithuania.

Economic growth in Lithuania proved to be stable with growth rates of around 6% in the last few years. The per capita GDP currently amounts to around Euro 4,200. It rose by 6.7% in 2002, driven above all by growth in the fields of transport, trade and building. In the first quarter of 2003 the GDP grew by 9.1%. Services account for more than 50%, industry and building industry for 27%, agricultural and forestry for 7% of the gross national product. The most important industries are mechanical engineering, metal processing as well as the textile, chemical, wood and paper industry. Besides machines and equipment above all high-tech products of communications engineering and electronics are exported.24

Railway network

Lithuania’s railway runs (as in the whole former Soviet Union and in Finland) on a gauge of 1,524 mm (Central Europe: 1,435 mm). The goods trains have to be reloaded in Šeštokai, the only border station to Poland. Travellers of passenger transport have to change trains. There is a small re-gauging facility for goods wagons in the neighbouring Lithuanian station of Mockava directly at the Polish border. However, there is only a small number of special goods wagons available for traffic from Poland to Lithuania (mainly for the boiler transport wagons for liquids and gases), which have a corresponding technology for changing the axle distances. The majority of the general cargo and containers have to be reloaded from goods wagon to goods wagon. The facility in Šeštokai has a low capacity. The Lithuanian railway network comprises 1,800 km, of which 568 km are double-track, 22 km Central European normal gauge and 169 km narrow gauge routes. The whole route network is not electrified.

Lietuvos Gelezinkelai (LG) is the biggest railway company in Lithuania and is owned by the state. With regard to passenger transport the LG only has an out-of-date and very unattractive stock of wagons, which were residual stocks from the Soviet Union. Modern sleeping cars with “Euronight quality” and the possibility of a re-gauging by exchanging the pivoted bogie, which also served the relation Berlin-Vilnius until 1995, are now the property of the Russian state railway company and today bypass the Baltic States in their operation to St. Petersburg. German organisers of rail cruises to the Baltic States also have to resort to special Russian trains so that a detour journey via the Belarusian border station Brest and the application of a Russian visa for each traveller are also necessary here.

24 EuropaService – Euro Info Centre
The railways in Lithuania are of major significance today in the goods transit traffic to Russia and (for the benefit of the private long distance bus system and the individual traffic) a sharply declining significance in passenger transport in the country.

In the years following its independence Lithuania, similar to the situation in the other former socialist states, recorded a sharp fall in goods traffic through the closure of unprofitable businesses. It is however remarkable that this was above all seen in road haulage. From 1999 road traffic levelled off at around 45 million tons. Transport by rail on the other hand remained constant at 30 million tons during this period of time. The jump forward was seen from 2001 to 2002, when it rose to 36.7 million tons. The railway was thus able to increase its market share from 35.8 % to 42.1 %; on the other hand the share of road traffic fell from 57.8 % to 51.7 %. The share of sea freight is still constant at approx. 5.5 %.

The focus of the wide-meshed railway network is placed on the south east of the country. International trains as well as trains on the coast to Klaipeda are mostly pulled by diesel locomotives. The most important international links run via Daugavpils to St. Petersburg. Only cross-border regional trains now run to Poland on the normal gauge route between Šeštokai and Suwalki in Poland. In addition, Lithuania is an important transit country for traffic from Russia via Belarus to Kaliningrad.

The remaining load traffic in the domestic country varies considerably in its development. LG still recorded 118 goods tariff points, thereof eight have been expanded to wagon loading junctions with maximum quality. The extensive local goods traffic can be found in the conurbations Vilnius, Kaunas and Siauliai. The stations Vilnius, Palemonas (Kaunas) and Siauliai perform the distributor function to main industrial tracks and connecting lines here.
Fig. 20: Transport flows by rail; 2005

Source: Ministry of Transport and Communication, Lithuania; 2005

Fig. 21: Transport flows by road; 2005

Source: Ministry of Transport and Communication, Lithuania; 2005
Experts assume that Lithuania will have a functioning, modern transport network in 2015. As this is part of the European transport system, the following parameters must be observed:

- compliance with the EU standards
- coordination/adjustment to the transport systems of the neighbouring states

The following measures are necessary in order to perform these tasks:

- liberalisation of the transport market
- free access for all operators
- essential development and modernisation of the infrastructure
- reorganisation of the railway
- marketing of international transport processes
- improvement of road safety
- reduction in negative external effects (traffic on environment, etc.)

The major investments in the expansion of the infrastructure can only be justified if goods and passenger traffic rises in Lithuania and the transport market is competitive compared with all other international transport markets. However, the figures of the last few years speak for themselves: transport and logistics accounted for around 9.4 % of the GDP in 2002. This was 1.6 times as much as in 1997. Significant infrastructural, administrative and organisational developments are necessary in order to meet the high demand for transport in Lithuania.\(^{25}\)

**Logistics**

The economic development of Lithuania creates excellent conditions for establishing logistics centres. With an estimated 6.9 % real economic growth in 2005 Lithuania remains on the path of success it has already started. In particular private demand has been making an essential contribution to the smooth movement of the economic motor for a long time already. The impulses for imports based on the uninterrupted consumer confidence of the population will bring two-digit growth rates for foreign suppliers in 2006. The export activities of the Lithuanian producers are hardly lagging behind the import business which is still running at high speed. All sectors have been equally affected by the "catch-up fever" which is also reflected by the growth rates of the GDP. A plus of just under 7% was recorded for the whole year 2005 following 6.4 % in the 1st six months and 7.2 % in the 3rd quarter.

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\(^{25}\) Lithuania – economic trends compact, Federal Agency for Foreign Trade; 2006
Klaipeda Logistics Center

Klaipeda in the west part of the country is by far the most important seaport in Lithuania. The port, which is mainly free of ice the whole year round, plays an important role in the shipment of Russian crude oil. Ferry connections also exist to Germany, Denmark and Sweden from this port. The planning of the logistics centre began in 1999. The first part of the project realisation will be implemented in 2007. The following goals are pursued:

- Improvement in efficiency with the transport processing
- Better capacity utilization of the existing infrastructure
- Improvement of transport qualities
- Use of modern information and communication technologies
- Improvement of transport conditions for small and medium-sized transport companies
- Physical integration of all transport carriers
- Short routes between administration and companies

The logistics centre will be erected in a suburb of the city centre on a total area of 92 ha in the direct vicinity of the port (5 km distance). The choice of location also guarantees a consistent connection to the higher-level road and railway network. As the logistics centre borders onto existing industrial estates housing quality will not be impaired through its erection.
Kaunas Logistics Centre

With around 360,000 inhabitants Kaunas is the second biggest town of Lithuania. It is located where the rivers Memel and Neris meet in the centre of the country - 100 km west of the capital Vilnius. A benefit of Kaunas is its location as the central (road) traffic junction of the country. Running from north to south the so-called "Via Baltica", which runs from Warszawa via Riga and Tallinn to Helsinki, meets the east-west main route, the route which is expanded as a motorway from and to Vilnius, which runs via Minsk and continues to Moscow. The location of Kaunas thus has far better transport connections than the Lithuanian capital Vilnius.

Kaunas station also has a location benefit in the railway network of the country compared with the capital Vilnius. There are connections to Vilnius and Warszawa. The corridor trains to Kaliningrad do in fact pass Kaunas station, however there is no possibility to get either on or off the trains. The high speed railway connection Warszawa – Kaunas – Riga – Tallinn promoted by the EU, the project "Rail Baltica", is in the planning phase (planned completion in 2016). As opposed to the very well developed Lithuanian express highways the railways, which run on Russian gauge, have even more backlog demand.

Kaunas can be reached by inland navigation vessels from Klaipeda via the Memel. However, inland water navigation does not play any significant role to date (other than during Soviet times). It is also a problem that the lower course of the Memel represents the EU border to Russia.

In November 2000 the first feasibility studies were conducted for erecting a logistics centre in Kaunas. In connection with the “Rail Baltica” it is planned to erect a transshipment facility, the “Kaunas Intermodal Terminal”. Kaunas will gain substantially in importance with this hub. The terminal is to serve the formation of shuttle trains both in south-north as well as in west-east direction. The goals of the project, for which a cost framework of around EUR 434 million is forecast, are as follows:

- Improvement of efficiency with the transport processing
- Better capacity utilization of the existing infrastructure
- Intermodal terminal
- Inland port
- Airport
- Kaunas as transport hub of international transports
- Establishment and development of logistics networks between transport and logistics centres both national as well as international
- Development of modern transport systems in Lithuania
- Creation of new jobs

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26 EU is examining the feasibility of “Rail Baltica”, DVZ No. 120
Panevėžys Logistics Centre

Panevėžys is a large Lithuanian city in the north of the country – respectively around 130 km distance from the two capitals Riga (Latvia) and Vilnius (Lithuania). As the fifth biggest town in the country it is the smallest large city in Lithuania. Panevėžys is connected with Kaunas and Riga as well as with the countries of Scandinavia and West Europe through the “Via Baltica”. An express highway leads to Vilnius. The logistics centre is to be erected in the north west of the town, in the near vicinity of already existing industrial estates with an area of 50-60 ha.

Benefits of the location are as follows:

- Panevėžys as transport hub at neuralgic traffic junctions
- Improvement of efficiency with the transport processing
- Better capacity utilization of the existing infrastructure
- Establishment and development of logistics networks
- Creation of new jobs

Vilnius Logistics Centre

Vilnius is the capital of Lithuania and of the district of Vilnius. With 553,000 inhabitants (2006) it is the largest city in the country. It is located at the estuary of the Vilnia to the Neris, only around 40 km from the Belarusian border. Vilnius station is an important transit station for the transit traffic Russia-Belarus-Kaliningrad, whereby it is not permitted to get on or off the corridor trains. In addition, there are railway links to Kaunas and to Klaipeda (Memel) via Siauliai as well as international railway links to Warszawa, Minsk and Riga. Express highways lead to Kaunas, from there a motorway to the Baltic Sea to the ferry port Klaipeda (Memel) and to Panevėžys respectively with connection to the “Via Baltica”. Highway connections lead to nearby Belarus and to Poland.

The logistics centre, which is being erected between Vilnius and Belarus, is to primarily contribute to reducing existing traffic problems in the region. In addition, as a modern, active town with a dynamic business environment Vilnius offers the logistics industry more than average possibilities. For this reason the location is above all preferred by business people and regional institutions. The following business goals and goals regarding traffic policies are pursued:

- Strengthening of Vilnius in the role as hub for strategically important transport corridors
- Improvement of efficiency with transport processing
- Better capacity utilization of the existing infrastructure
- Improvement of transport qualities
- Use of modern information and communication technologies
- Improvement of the transport conditions for SME
- Development of marketing strategies between the logistics centre Vilnius and Europe
- Improvement of “door-to-door” deliveries
- Reduction in/avoidance of traffic problems

27 Handbook for Logistics Centres in the Baltic Sea Region; 2003
Problems

The transport sector in Lithuania is growing continuously. Thus, Lithuania can show a rising number of transport companies which are developing as specialists within their industry. There is also increasingly the need for planned and coordinated transport service in the public sector.

Lithuania still acts as a transit country from Russia via Belarus to Kaliningrad. More than average transport flows from west to east and vice versa are compared with a low north-south demand. However, if road haulage is included in the analysis and assessment of the transport volumes, a substantially higher demand level can be determined in the north-south corridor. With the expansion of the “Rail Baltica” this share of freight volumes on road could be substituted by rail. The potentials exist, these just have to be used with the expansion of the infrastructure.

The logistics market of Lithuania is growing continuously. Progress is being made with the establishment of logistics centres. A key function is assumed by the town of Kaunas which as second biggest town in the country is the traffic junction of road and rail. A second essential logistics location is the ice-free port of Klaipeda. A large share of the exports and imports as well as the transit traffic from and to Russia are processed via this port. Owing to the daily ferry connections to Germany with travelling times of less than one day this transport channel should be taken seriously as a “competitor” to road and rail via Poland to the Baltic States.

Lithuania is the main advocator of the “Rail Baltica” project. It is also the only country which has applied for financial support so far. Lithuania is in particular urging that the route section “Kaunas/Poland” be modernised in real time. For Lithuania this railway link means access to West and Southern Europe. The direct connection to Poland opens up manifold trade relations for Lithuania.28

4.4 Latvia

The Republic of Latvia with an area of 64,589 km² is located in North East Europe, in the centre of the Baltic States. Latvia borders onto Lithuania in the south, onto Belarus in the southeast, onto Russia in the east, onto Estonia in the north and onto the Baltic Sea in the west. Historical trading routes cross in Latvia and since the beginning of time it has been seen as a bridge between West Europe and Russia. From a cultural point of view the country is above all influenced by Northern Europe; the old towns feature the typical elements which are widespread in the Hanse region. The capital Riga – founded in 1201 - is the oldest town in Latvia and besides Ventspils and Liepaja has one of the largest ports of the country. Important industrial branches are: mechanical and vehicle engineering (wagons, buses, washing machines), food industry, metals and metal products, textile industry, wood processing and paper, fertilisers.

28 Rail Baltica Report, EU-Commission; 2006
Latvia’s transport infrastructure is well developed. Besides an extensive railway network which is also directly connected with the railway system of the CIS and also with the Far East through the Trans-Siberian railway, Latvia also has well-developed road connections to the CIS states, the EU and the other Baltic States. In addition, there are two long distance lines for crude oil in Latvia.

Fig. 23: Geographical presentation Latvia

Source: www.fifoost.org

**Railway network**

The railway network connects Latvia with Russia, the CIS states, the neighbouring Baltic States and through Poland also with the rest of Europe. The largest railway company is the Latvijas Dzelzceļš (LDZ). It operates according to market economic principles and is focussed on the transport of goods (from Russia) to the Latvian ports. Local public transport by rail has lost in significance. Latvijas Dzelzceļš operates a 2,413 km long, star-shaped route network oriented to Riga. Suburb train traffic which is similar to the S-Bahn [Local train service] are served in the conurbation of Riga and the links via Daugavpils to Russia, Belarus and Lithuania with regard to passenger transport, there are several additional routes to Ventspils und Liepaja with regard to goods traffic.

Three quarters of the transports by rail are transit consignments, of which 90 % are transported from east to west. The local railway transport only accounts for 6 %. The goods structure is composed of oil, chemicals, fertiliser, metal, wood, sugar and cotton. The capacities for goods transport can be increased in the long term. The railway company LDZ would like to take even more advantage of Latvia’s position as transit country in the middle of the international transport corridor north-south in future. Among others it wants to profit from the Trans-European project “Rail Baltic”, that envisages the construction of a fast railway link between Tallinn, Riga, Kaunas, Warszawa and Berlin. St. Petersburg could also be connected to this route at a later date. The section Riga-Kaunas is to be completed in 2014. The
whole project costs between Euro 3 and 4 billion, according to the World Bank Euro 950 million relate to the Latvian section. The investments are to be financed by the countries concerned, the EU and private investors.\textsuperscript{29}

The gauge in Latvia is 1,524 mm as in Russia. However, this gauge is to be retained with future route expansions as the majority of goods transports come from the CIS region.\textsuperscript{30}

\textit{Fig. 24: Cargo volumes by rail}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{cargo_volumes_by_rail.png}
\caption{Cargo volumes by rail}
\end{figure}

\textit{Source: SJSC Latvian Railway}

\textbf{Logistics}

Many international logistics companies have established themselves in Latvia’s Transport-mark. They operate either in conjunction with local companies or as independent companies. There are more than 150 warehouses in Latvia which are primarily for the purpose of storing the transit goods as well as providing groupage freight to Russia. However, the local retail chains also use these warehouses.

The accession to the EU has brought more trade and competition. In particular the competition between the ports, rail and the road has increased significantly. The full integration into the European market gives Latvia essential benefits and no doubt boosts the transit sector. The focus on the field of transport and logistics also leads to far-reaching, positive changes on the labour market. Small and medium-sized companies in Latvia also profit from the innovation strengths and the thus associated dynamic of large international companies.

The transport and logistics market forms an essential focus in Latvian politics and for this reason is given priority. Transit, transport and logistics companies are given extensive support from the government. Thus, not least numerous investments were promised in the whole transport infrastructure.

There is at present no close network with the industrial parks in Latvia. Even the capital Riga and its commuter belt only perform insufficiently from this point of view. The industrial park balance outside of the Riga conurbation is extremely sparse. However, the managements of many industrial parks are trying more and more to convince companies, which are willing to settle, of their benefits with the help of advertisements in relevant business media. Parallel to

\textsuperscript{29} Latvian railway sector; Federal Agency for Foreign Trade; 2006
\textsuperscript{30} www.transport.lv
this initiators of new industrial parks are appearing in public with their proposals for projects. Besides a good infrastructural connection, which as a rule includes the connection to the road and frequently also to the railway network, among others the provision of a modern telecommunications infrastructure, of premises for production, warehousing and administration as well as of security services are also considered to be among the typical features of an industrial park in Latvia.

**Nordic Industrial Park (NIP)**

The NIP is located in the town of Olaine – at a distance of around 20 km south of Riga and covers an area with a size of 14 ha. Altogether 75,000 m² are available for production and warehousing purposes as well as office space and conference rooms. So far the operators of the NIP have succeeded in successfully marketing the trade location. Besides the fish processing company Baltic Seafood these include European Plastic Industries (EPI), Nordic Plast and MMT Industriala Plastmasa. Plastic tubes made of polyethylene (PE-HD) are produced at EPI, whereas Nordic Plast recycles plastic waste and processes these to plastic bags and sacks. MMT Industriala Plastmasa is a joint venture of the MMT Group with EPI, that produces various industrial and consumer goods from plastics using modern injection moulding and blow moulding machines. In addition, the NIP accommodates the metal-processing company TIPRO Baltic, behind which is TIPRO Invest from Norway. The substantially lower wage costs in Latvia induced the responsible persons in Norway to relocate a complete production line for radiators to Olaine in 1999 already.

**Nordic Technology Park (NTP)**

This industrial park is located in the urban area of Riga with a useable space of 7.5 ha. The tenant base, which amounted to around a dozen companies in the NTP at the beginning of 2004, uses approx. 25,000 m² of the premises, which cover in total 33,000 m², for production and storage purposes. The products of the companies range from furniture and other goods of wood processing to plastic products down to printing products. The completion of 9,000 m² office space was envisaged for 2004. Units between less than 40 and around 300 m² are available to interested tenants.

**Riga Industrialised Park (RIP)**

This park is another industrial park in the catchment area of the Latvian capital. A good handful of companies have settled there so far. To be emphasised are the central warehouse of the sales company of the soft drinks manufacturer Coca-Cola responsible for Latvia, SIA Coca-Cola HBC Latvia, the logistics centre of one of the largest retailers in the country, SIA Rimi Latvia. However, these settled companies only used around 6 ha of the altogether 20 ha total area of the RIP until 2004. However, it can be assumed that with the accession to the EU the interest in a settlement in the industrial park will increase.

**SIVA Ogre Industrialised Park**

The park which was only opened in the industrial town Ogre, located 40 km east of Riga, in the middle of 2003 is among the few industrial parks in the Latvian "province". The main initiator of the park is the state Norwegian business promotion agency SIVA. The industrial park
comprises a site of around 3 ha that can be expanded by neighbouring properties depending on the requirements. So far 18,000 m² have been prepared for production and logistics as well as 1,000 m² space for offices (Status 2004).

In addition, a host of other industrial parks are in the project management and construction stage nationwide. These include among others the Mersraga ostas industrialised park in the north west port town of Mersrags (district of Talsi) with a size of 20 ha, as well as an industrial zone with a size of 250 ha in Daugavpils, the second biggest town in Latvia. A former producer of land technology in Jelgava also appears to be developing more and more in the direction of an industrial park on the business site. The site with a total size of 12.4 ha of the RAF factory which was operated for the production of small buses during the Soviet Union era is also to be redesigned into the RAF Industrialised parks in Jelgava.

The Dambis company is planning to erect an industrial park on an area with a size of 10.7 ha in an industrial estate not far from the town centre of Riga. To be mentioned is also the Sleperi Gemstone Project in Babite, a suburb of the capital, where 48.4 ha are to be redesigned. The operator company of Riga Airport which is owned by the state intends to use around half of this area (24.7 ha) for its Rigas lidostas biznesa parks (Airport Business Park).31

Problems

The transport volume in Latvia has almost doubled in the last few years. A large share of the transports is however processed via the ports. Therefore the port of Ventspils on the Baltic Sea coast is also of considerable importance in the logistics sector.

Positive signals come from the railway company LDZ. This is endeavouring to achieve a more specific and more cost-effective use of Latvia as a transit country in the middle of the international transport corridor north-south. Latvia supports the project of “Rail Baltica” from a political point of view. However, it is still too early for a financial participation. Alternative financing projects such as “PPP” (Public-Private-Partnership) are met with interest.32

4.5 Estonia

Estonia, the most northern of the three Baltic Republics, is located next to the Baltic Sea with an area of 45,227 km² – with Latvia as neighbour in the south and Russia in the east. Finland is in the north, on the other side of the Gulf of Finland. Three quarters of the around 1.3 million inhabitants of Estonia live in towns. Almost a third of the whole population lives in Tallinn alone. The average population density is 33 inhabitants/km². In the conurbation of Tallinn and in the industrial region in the north east there are around 100 inhabitants/km², whereas the rural region located in the west as well as the numerous islands are not densely populated at all with 20 inhabitants/km².

31 Latvian industrial parks; Federal Agency for Foreign Trade; 2004
32 Rail Baltica Report, EU-Commission; 2006
The trade with raw materials and semi-finished products from the fields of wood, textile and metal represents the backbone of the Estonian economy. Around a third of the gross domestic product is generated here. The service sector is in particular gaining in importance in the industries of transport and tourism and contributes to the GDP with a share of 66.2%. The goods transshipment in the Estonian ports, particularly of the transit trade with oil from Russia as well as passenger traffic with Finland and Sweden, have substantially increased in importance. Agriculture on the other hand still only plays a more inferior role. Its share of the GDP is less than 4%. After Finland and Sweden Germany is the most important trading partner. Estonia exports above all wood, wood products, furniture, machines and electronic appliances. Germany supplies transport means, machines and plants, food and chemical products to Estonia.

**Railway network**

The railway network of Estonia comprises 1,026 km, of which 968 km are operated privately by Eeste Raudtee (EVR). The infrastructure as well as the operation were subjected to an extensive privatisation process. However, discussions are currently being conducted about a repurchase of the infrastructure by the state. A decision is to be made about a possible re-transfer at the end of 2006 or beginning of 2007. The financing of this repurchase intention is still not clear.

The railway infrastructure is based on the Russian standard and is primarily used for Russian goods transports from and to the ports and transshipment points. The shortest transport connection from Russia to West Europe runs via the Baltic Sea. 55% of the goods transports are processed by rail in Estonia. 57% thereof are transit goods. A total of 65.6 million tons of goods were transported by rail in 2004, whereby crude oil and mineral oil products alone accounted for a share of 30.8 million tons, followed by oil shale, coal, fertilisers and building materials.
Estonia does not have any own significant goods volumes. It is, like as Baltic States, a transit country, which is dependent on the goods transports of Russia to the ports. “Rail Baltica” and the improved connection to Finland should form a counterbalance to the dominating east-west traffic. This is only possible from an Estonian point of view if “Rail Baltica” is built with European standard gauge, which is operated independent of the Russian goods transports. Only this way can it be guaranteed that Russia does not intervene in the goods transport concerns of the Baltic States.

In order to guarantee efficient transport processing of the goods shuttle trains run on the route Tallinn - St. Petersburg – Moscow - Tallinn. The direct railway connection with Russia is one of the most successful connections of Eastern Europe. However, the maximum capacity utilization of the route will soon be reached so that extensive expansion work will be necessary. As the goods traffic volume is growing in particular in the port of Muuga, the railway infrastructure in the port was expanded further. The expansion phase covered from 2004-2005. The expansion now enables handling of trains with a length of 1 km. In total around 30 km tracks are available in the port.

The offer of passenger transport by rail is very limited. At present there is no cross-border passenger transport to Latvia. Therefore, the focus is placed on a direct connection from Tallinn to Riga with “Rail Baltica”.

**Logistics**

Owing to the geographical location Estonia has become an attractive location for foreign companies. The transport and logistics sector has constantly gained in importance and regularly generates more than 10 % of the GDP. Today Estonia is a transit centre for transports from west to east and from north to south and thus has the ideal pre-requisites for efficient transport chains.

Around 7.5 % of the working population are currently working in the transport or traffic sector. Substantial investments have been made and are being made here. The successful combination of transport services, transit trade, logistics centres and additional logistics services above all attracts major international companies. Foreign investments in this sector have continuously increased in the last few years. Low transit costs, qualified employees and a well-developed communications infrastructure create solid initial conditions for a settlement in Estonia.

The goods structure has changed significantly in the last 10 years. The transport carrier rail dominates in the modal split of the goods traffic. Around 70 % of national and international goods are transported by rail. The Trans-European Corridor No. 27 runs through Estonia, which connects Helsinki with Warszawa. Road transport dominates in passenger transport with around 90 %. Around 48 million tons of goods are processed annually on international transport relations. The annual transport growth amounts to around 1.2 %, with international transports even to 9.8 %.
**Tallinn**

The Estonian Schenker subsidiary AS Schenker put a new terminal into operation directly at the Tallinn location in November 2002. The facility extended the already available capacities by around 2,900 to a total of 14,000 square metres logistics area. One of the main reasons for extending the facility was to accelerate the handling of the goods and at the same time to further improve the quality of service. The terminal has 40 loading gates and an additional ramp, which enables the loading of trailers from the side. 900 pallet places in this new building part, which is also used for cross-docking tasks, offer additional capacity reserves. Schenker is one of the market leaders in the Baltic countries.

In addition, there are further small logistics branches located in and around Tallinn. However the location is dominated by the port which plays a superior role for transport volumes of all kinds.

**Maardu**

The town of Maardu in the north east of Estonia is located around 15 km from Tallinn on the Muuga bay. One of the largest and most modern ports of the Baltic Sea region is located in Maardu. This fast developing port belongs to the port of Tallinn and features the following characteristics:

- the port of Tallinn consists of four individual port facilities
- the total area of the ports is 607 ha
- 64 quay facilities
- total length of the quays 11.9 km
- maximum depth of 18 m
- 21 terminal operators
- 700 employees in total

The port has good hinterland connections. Three quarters of the goods volume consist of crude oil and oil products. In particular Russia and the CIS states use the port for their export and transit services, which illustrate the strong economic dependency on these services and its continued existence. Container and Ro-Ro activities are primarily carried out by the Muuga Container Terminal (MCT). The following diagrams shows that the container volume increased by more than ten times from 1994 to 2004, this corresponds with an annual growth rate of 26.9 %.

An extension of the port is aimed at in order to expand the competitive edges again. Distribution centres and production plants are to be erected especially for this on an area with a size of around 70 ha. The aim is to have a logistics and industrial park in order to meet the requirements of the demanding, mainly foreign companies. Primarily goods from Russia and the CIS states, which are determined for the European market, will be transhipped within this park.\(^3\)

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\(^3\) INLOG; Work Package 2 Report; 2006
Problems

With the expansion of the port infrastructure and the increase in goods transshipment Estonia has an excellent position within the Baltic States. However, only 1/6 of all goods transport, which cross the Baltic States, are processed via the ports in Tallinn and Muuga. A serious problem, which the port could face in the near future, is the fact that the Russian government is endeavouring to expand own port infrastructures in order to no longer be dependent on the transit traffic in particular the oil exports through the Baltic States. This reorganisation of the Russian transport chain would mean a fall in demand and thus a reduction in the transshipment quantities. In order to counteract this at an early stage the port management has begun to generate new ideas. Thus, more focus is to be placed on container transshipment in future as substantial potentials are also seen worldwide in this sector. Little was undertaken by the government so far.

Problems are also caused by the road infrastructure of the country. The technical conditions still do not correspond with those of western standards so that it is only possible to drive on the roads with a speed limit. This is however partly compensated for through the relatively empty roads. One can expect a fast expansion of the road infrastructure in the long term.

The railway infrastructure does not correspond with the western standard either. Slow travelling routes are necessary in order to guarantee safe transport. As the majority of the railway lines in Estonia have been privatised and only 34 % are still owned by the state, essential improvement is not expected in the near future.

The railway connection from Muuga to the main network could be overloaded in future owing to rising transport volumes. A further railway connection would be conceivable here.

“Rail Baltica” is among the higher-level infrastructure projects of Estonia. The former connection between the Baltic States with Central and West Europe is to be restored with this project. The most important principles were recorded in the “Estonia 2010 National Spatial Plan”. Discussions are currently still being conducted in Estonia concerning the route of the “Rail Baltica” from Tallinn to the border of Latvia. The government would even be willing to
accept the European gauge however the private operator of the network, Eesti Raudtee (Estonian Railways) is against this. The modernisation of the route according to the European standard is seen as uneconomical.  

4.6 Finland

With an area of 338,144.53 km² Finland is the seventh biggest country in Europe. Located between the 60th and 70th latitude it is among the most northern countries on Earth. It is only connected with the Scandinavian peninsula in the north. Finland has a 580 km long border to Sweden in the north west and a 716 km long border to Norway in the north. The longest state border is that to the Russian Federation in the east with 1,270 km. Finland is one of the most thinly populated countries in Europe. The population density is 15.5 inhabitants per km² with a population of 5,249,034 (2005). The population is concentrated above all on the south of the country.

Fig. 27: Geographical presentation Finland

Source: www.landkarte-online.net

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34 Rail Baltica Report; EU-Commission; 2006
Finland is a highly developed industrial country whose per capita GDP income is slightly above the EU average. After the growth of the Finnish gross domestic product (GDP) with 5.1% in 2000 was still around twice as much as the average in the Eurozone, economic growth merely amounted to 2.8% in 2005. The economic research institutes have now increased the forecasts to 4.9% for 2006.

Since 1991 Germany has been Finland’s most important trading partner both with imports as well as with exports. The Finnish statistics recorded imports of EUR 7 billion (share of 14.9%) from and exports to Germany of EUR 5.6 billion (share 10.6%) in 2005.

85% of the goods reach Finland by sea. Just under half of the growing transport requirements are a result of the transit traffic to Russia. The transit goods are stored provisionally in Finnish ports or reloaded onto trucks and rail.

**Rail**

The railway network with a length of 5,741 km is operated by Ratahallintokeskus (RHK). 2,619 km are already electrified. The transports are provided by the VR Group. The largest towns are served with high-speed train which reaches speeds of up to 220 km/h. Goods transports are carried out with a speed of 120 km/h. Night travel trains and car transport trains connect the large conurbations in the south with the northern regions of the country. International railway links only exist to Russia.

Finland will make substantial investments in its railway network in the next few years. Modernisation measures for the municipal and national track systems are planned besides large projects in the Helsinki region. A track construction project in the conurbation of Helsinki relates to the conventional railway network: an underground route with a length of 18 km is to be built under the airport.

The travelling time on the route Helsinki - St. Petersburg is to be reduced from currently 5.5 to 3.5 hours. A Finnish-Russian joint venture was founded to this end which acts as owner of this railway transport service. A multitude of modernisation and improvement measures are necessary both on the Finnish as well as on the Russian side. In addition, it is planned to purchase new train types, which are suitable for the different electricity systems of both countries. This way the change of locomotives which was required in the past will no longer be necessary. At present there are a total of two daily connections between Helsinki and St. Petersburg with the Finnish train "Sibilius" and the Russian train "Repin". Around 270,000 passengers are transported each year. As soon as the travelling time has been reduced to the envisaged extent the number of train connections is to be increased.

**Logistics**

From an economic point of view Helsinki is the most important region of the country with around 1.4 million inhabitants. Finland’s exports are to a large extent processed through the ports. Finland’s most modern freight port will be built in Helsinki in the next three years. The prime aim of the project is to increase the freight capacities for the growing goods volume in Baltic Sea freight transport. At the same time new housing and business complexes are to be built at the location of the old port facilities which are close to the inner city.
Thus, one of the most modern ports in the Baltic Sea region will be built in Helsinki with the "Vuasaari Harbour" by 2009. Extensive logistical freight structures such as terminals, warehouses and customs points will be set-up in various construction stages besides the actual port facilities and the port entrance in the next three years. At the same time access routes will be created by road and rail. According to the information provided by the port administrative authority the investment volume amounts to a total of Euro 317 million. The project is carried out in cooperation with port administrative authority, national shipping authority, the railway as well as the road building authority.

The new port is to cover a size of around 150 hectares with quay facilities with a length of 3.6 km. It should be possible to handle both Ro-Ro- as well as crane-based LoLo-containers. Depending on the type and length of the vessels the port offers space for an additional 10 to 15 cargo ships. The port will be connected to the road via a newly built access road with connection to Helsinki’s ring road. A new track route will be laid between the port terminal and one of the regional main routes for access by rail. In addition to the port facilities a business park is to be erected on or with a direct connection to the port site. This is to offer space for the offices of the shipping companies and logistics service providers as well as for shopping and other service facilities.

The expansion of the port will be necessary among others owing to the sharply growing freight volume in Baltic Sea transport. The main reasons for this are the increasing transit deliveries via Finland to Russia. Their value corresponds with 42 % of the total Finnish exports. The growth in these transit deliveries is also expected to continue unchanged in the next few years. On the one hand it is forecast that Russian imports will double by 2015. On the other hand there are no alternatives to the Finnish route among others due to the fact that the Russian or Baltic Sea ports cannot cope with the rise in imports in terms of volumes alone despite expansion measures.

A further significant logistical fact is that the Finnish railway uses the same gauge as Russia. Transports to the east are cheaper and easier from Finland than from any other EU country.

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35 Load on / Load off
36 Finland’s capital is investing in ports; Federal Agency for Foreign Trade; 2006
Finland’s railway network and in particular its connection to Russia and other CIS countries is an important factor, which speaks in favour of a logistics centre in the Helsinki region. Asian and European freight forwarders save three weeks on this Trans-Siberian route compared with the route by sea and deliveries to and from China are up to six weeks quicker. Helsinki-Vantaa Airport is an important modern intersection. Together with the port of Helsinki it serves numerous domestic and international companies.\footnote{Ideopolis; City of Helsinki; 2004}

**Problems**

Finland is in fact a safe and reliable trading partner between east and west and has in addition excellent railway connections to Russia. However, the railway network is out-of-date in many places. Modernisation and extension measures are required in order to further stimulate the railway traffic. Although Finland is not planning any investments in the “Rail Baltica” project both the political developments as well as the integration of the three Baltic States are watched with interest. The state supports the project to the extent that the railway connection represents an alternative transport route also for Finland.\footnote{Rail Baltica Report; EU Commission; 2006}
5 SUMMARY AND OUTLOOK

5.1 Summary

The establishment of the north-south railway connection in the Eastern European transport and economic region should contribute to supporting and strengthening the development and diversification of the Baltic economy. “Rail Baltica” underpins the necessity for the three Baltic States to be allowed access to the West European markets via Poland and Germany. The business location Poland also gains in significance with “Rail Baltica”, not just as a transit country.

With the enlargement of the European Union by ten new countries on 1 May 2004 the centre of the EU shifted to the east. Germany moved into the centre of Europe. Characteristic for this are the more than average growth of the logistics sector and the increasing significance of an efficient transport infrastructure. The growing logistics market is now the fourth biggest business sector in Germany with annual revenue of EUR 150 billion and 2.7 million employees. A positive and by all means dynamic development is recorded in this connection by the Freight Villages of the Berlin-Brandenburg region. In particular the GVZ Berlin West Wustermark and Berlin south Großbeeren achieve top standards when compared on an international level. The Freight Villages act as hub for international transports today already. The relocation of transports from road to rail will be pressed ahead with further in order to reinforce the intermodal transport. The Freight Villages in Berlin as well as the GVZ in Frankfurt (Oder) still have free terminal capacities.

The positive economic developments in Poland are mainly a result of the growing transport and logistics sector. New major investments are increasingly recorded in Poland, which demand logistical solutions within a pretty under-developed logistics and transport infrastructure. 70 % of the exports went to West Europe, thereof more than 40 % to Germany in 2005. The development of the logistics market is primarily proving to be a problem for small and medium-sized companies as suitable logistics locations are often missing. However, with 16 % market growth and revenue of EUR 8.8 billion in the logistics industry in 2005 more and more companies are risking the step over the border.

The transport and logistics sector has constantly gained in importance in Lithuania. A new record was generated in the exchange of goods with overseas countries in 2005 with a total value of EUR 21.9 billion. This represented an increase of by 25.9 % compared with the previous year. Lithuania is one of the main advocators of the “Rail Baltica” project. The town of Kaunas will become a strategic logistical junction with the realisation of the route. The transport flows from west to east and south to north meet here. Transports by rail are mainly made on the east-west axis - the export, import and transit routes of Russia. The transports in north-south direction are primarily processed by road.
Latvia has a well-developed transportation network. The transport and logistics sector has constantly increased in significance and regularly generates around 10% of the GDP, above all in transit traffic. 75% of the transports by rail are transit traffic, thereof around 90% relate to the east-west relation and vice versa. The transport and logistics market forms an essential focus in Latvian politics and for this reason is given priority. Transit, transport and logistics companies are given extensive support from the government. Thus, numerous investments were not least promised in the transport infrastructure.

The transport and logistics market in Estonia is also marked by substantial growth. The goods transshipment in the Estonian ports, particularly the transit trade with oil from Russia, has substantially gained in importance. Today Estonia is the transit centre for transports from west to east and from north to south. The transport carrier rail dominates in the modal split of goods traffic. Around 70% of the national and international goods are transported by rail. The essential logistics locations are Tallinn and the town of Maardu with the port of Muuga. The road and rail infrastructures have to be considerably expanded in order to meet western standards and satisfy the future transport volumes.

An essential pre-requisite for an efficient economy in Finland is the free access to a well-developed transport infrastructure. Both the national as well as the international transport connections are important here. 85% of the goods reach Finland by sea. Just under half of the growing transport requirements are a result of the transit traffic to Russia. The transit goods are stored temporarily in Finnish ports or reloaded to trucks and rail. From an economic point of view Helsinki is the most important region of Finland. Finland’s most modern freight port will be built here in the next three years.

5.2 Development trends and conclusions for Rail Baltica

Important planning details are still to be examined in advance in order for the railway connection to the Baltic States to achieve the necessary economic and political success. Although the project was included in the list of urgent TEN projects, it was not yet possible to finally clarify the exact routing, nor was it possible to find a joint consensus about the various gauges to date. The network planned so far has no access to the national railway network and a connection to the most important ports was disregarded. If “Rail Baltica” were to be put into operation with the European standard gauge corresponding terminals would be necessary in order to change between the existing track systems in the individual countries.

The increasing competition of goods transports to the Baltic States and to Russia by sea should not be ignored. With the relocation of the production locations in the course of globalisation the goods have to be transported to the consumer via long distances today. The relocation to water is increasingly gaining in significance with the use of alternative transport carriers. Shipping still has free capacities and does not know either tailbacks or toll charges. Merely the port infrastructures and the hinterland connections have to be expanded.

As the transit traffic to Russia and the CIS states are marked by a great deal of hurdles Deutsche Bahn is intending to make a detour around Poland and Lithuania by ship in future. From December 2006 railway wagons will run regularly by ship from Sassnitz on Rügen to Baltijsk. The ferry “Vilnius” will depart once a week in each direction in future. The ship has a capacity of 90 Russian railway wagons or 108 truck trailers.
There is more than one reason for making a detour around Poland and Lithuania by ship. Goods exchange between Germany and Russia has more than tripled since 1998. Trucks and wagons are in short supply and the Polish railway network is overloaded. It is becoming more and more unbearable for Russia to be totally dependent on the small neighbours. Therefore 1.5 billion Rouble were invested in expanding the port infrastructure in Baltijsk and the Russian state railway is also modernising its lines for five billion Rouble. A further transport route to St. Petersburg is planned for 2007.

The ferry port Sassnitz-Mukran is profiting from these plans of Russia. The port has a connection to the Russian broad gauge railway network and is thus the most western terminal station of the Russian railway system. A total of five separate halls, four free crane facilities and a transshipment facility are available on the station site of Sassnitz-Mukran with a size of 340 ha, fitted with together around 40 km broad gauge and 70 km normal gauge track systems, for reloading the various goods into the Russian broad gauge wagons. Intermodal ferries with a capacity of 103 Russian railway wagons run three times a week in both directions on the axis between Sassnitz-Mukran and the Lithuanian port of Klaipeda. The travelling time is respectively 18 hours. All requested consignees in Russia, Belarus, Ukraine, Kazakhstan, Uzbekistan, Turkmenistan, Azerbaijan, Tajikistan, Kyrgyzstan, Mongolia and North China are reached quickly via the reliable ferry connection Sassnitz - Klaipeda with prompt wagon throughput through Lithuania.

The largest German Baltic Sea port, the port of Lübeck, is to be included in the overall considerations. In the new Europe it is the central logistical link between Scandinavia, Finland, Russia, the Baltic States and Poland and the large European business centres. Ferries depart the port in the direction of Finland, Estonia, Latvia and Russia several times a week. The uncomplicated transport by sea as well as the relatively low travelling time are highly appreciated by the customers.

“Rail Baltica” could experience an increasing competitive situation from a possible withdrawal of Russia from transports via the Estonian port of Muuga. Should Russia process its transports via its own port in Baltijsk in an effort for independency substantial free capacities would be available in the port of Muuga, which would have to acquire orders on the transport market.

Important for future developments are also the recent activities of Deutsche Bahn AG with regard to the set-up of a rail-based land bridge Berlin - Beijing. Transports, according to the considerations, will reach the destination much quicker by land via Russia than by sea. Around 12 days are calculated for the transport by rail. The ship needs around 30 days from Hamburg to Shanghai. The CEO of Deutsche Bahn AG, Hartmut Mehdorn, is also hoping for “endless business opportunities” in Eastern Europe. The Deutsche Bahn AG intends to closely accompany its German industrial customers on this expansion field in future. It is already working on developing marketable offers.
These activities will among others substantially strengthen the “Ostwind” with the destination/starting point GVZ Berlin South Großbeeren. Therefore, the logistics centres on the “Rail Baltica” have to react to this trend in time. Therefore, “uncoupling” the branch “Rail Baltica” would have fatal consequences.

Parallel to the Interreg IIIB-Project “Rail Baltica” the EU project “Alpine Freight Railway - AlpFrail” (also Interreg IIIb) deals with the cross-country re-organisation of the goods traffic by rail in the region of the Alps in order to relocate more road haulage to rail. Decisive here was also the increase in goods volume owing to the single European market which has grown through the EU Eastern enlargement. The product “rail” is missing in the cross-border transports as is customary in road haulage. Similar to the situation with “Rail Baltica” the railway network is to be connected in an intelligent manner in order to guarantee an optimum exchange of goods. Therefore, a network of the players with exchange of experiences is to be recommended.

5.3 Outlook and recommendations

As described in Chapter 5.2 there are international development trends which – if either no or insufficient measures are taken – will impede, and allow to stagnate, the future economic and logistical development along the “Rail Baltica”. Therefore, the authors consider it essential for the Baltic States to submit a uniform and coordinated development strategy together with Poland and Germany to the EU with regard to the technical parameters and the financing capability. The potentials in goods and passenger traffic which no doubt exist should be used in order to develop attractive offers for the transport carrier rail.

The positive experience of the GVZ development in Germany and in particular in the Berlin region could also give new impetus for “Rail Baltica”. Therefore, it should be examined whether a continuous institutionalised transfer of know-how can be set-up for the planning and realisation of logistics centres. This transfer of know-how should not just include the customary consultancy and lecture services. Rather so-called expert internships (2 to 4 weekly reciprocal exchange of experts) could be integrated. Thus on the one hand the Baltic as well as partly the Polish experts can profit from the experience gained on the German side in the development and operation of Freight Villages, on the other hand internships of the German experts in the Baltic states are of significance with regard to investigation of the market and market integration.

The authors further consider it very important that interest structures will develop for Freight Villages both in the Baltic States as well as in Poland. Reference can be made here to the successful model of the German GVZ-Gesellschaft DGG (www.gvz-org.de) as umbrella association and lobbyist of the German Freight Villages. The DGG supports and advises among others the federal government (Federal Ministry of Transport) in important matters relating to transport policies such as development strategies in goods traffic (Masterplan Goods Traffic and Logistics) and in promotion in intermodal transport. Further the DGG represents the German GVZ in the European umbrella association Europlattform (www.Freight-village.com), through which the European network and the European know-how transfer is also ensured.
These structures can of course only develop over the course of the development processes, however they should be initiated as early as possible. Initiators could also be the business and entrepreneur associations of the respective countries besides the regions and towns concerned.

The following recommendations are given below specific to the country:

**Germany**

1. Owing to the excellent development of the Freight Villages in the Berlin-Brandenburg region an expansion should be planned and carried out in line with the needs with the aim of attracting the settlement of further well-known international logistics companies.

2. An airport logistics centre BBI with a size of 40 to 60 ha should be included and developed in the GVZ system. Logistics companies will settle there in future which are seeking locations near air traffic.

3. The existing and planned capacity reserves for the transshipment fields of the intermodal transport in the Freight Villages Wustermark, Großbeeren and Frankfurt (Oder) should be used to initiate a marketing offensive for intermodal traffic. Therefore, it is suggested to network the corridor studies which are being conducted at present (east/west, north/south). The players should exchange the results.
   The planned land bridge in the Asian region is an important development opportunity in particular for the Freight Village Großbeeren ("Ostwind").

4. A new marketing concept has to be developed for the ETTC Frankfurt (Oder), in particular the logistical guarantee of the solar industry which is emerging there is of major importance.

**Poland**

5. The realisation of the GVZ master planning is to be pressed ahead with. Based on the German experience the control and promotion of the processes should be undertaken by public decision-makers. The initiatives from the private sector are to be included in a balanced manner.

6. The expansion of the transport infrastructure in the road and railway network must be continued consistently.

7. The trains are driving through from Poland to Kaunas today already. A smooth border crossing is to be guaranteed in order to avoid unnecessary overruns in travelling time.
Baltic States

8. A uniform and coordinated strategy of the Baltic States is necessary in order to press ahead with “Rail Baltica”. Besides a feasible financing concept (own shares of the 3 states) a decision has to be promoted on the technical parameters. The stipulation of the gauge holds a key position here. The Central European gauge (1,435 mm) is to be given priority from the point of view of the author. This way transit traffic (Russia/CIS) as well as regional traffic along the “Rail Baltica” could be compiled and reloaded in the Freight Villages which are to be developed and subsequently pass the border to Poland quickly as half- or block trains without any further handling and be discharged into the Central European network (time and cost benefits).

9. Further joint strategies are to be developed against the outflow of the afore-mentioned transit traffic. The following development processes are seen:

- The infrastructural connections to “Rail Baltica” in west-east direction (Russian border) or east-west direction (Baltic ports) may not be neglected and have to be pressed ahead with parallel.

- The development of efficient logistics centres as Freight Villages with hub function at the intersections of “Rail Baltica” and the east-west connections has to be enforced (Tallinn, Riga, Kaunas). An uninterrupted connection of the rail must be guaranteed here.

- Terminals with re-gauging possibilities have to be created in these centres, presuming that “Rail Baltica” is built with a gauge of 1,435 mm.

- When the afore-mentioned infrastructural pre-requisites have been satisfied an active marketing of the intermodal traffic should be initiated. One possibility would be to set-up shuttle connections in direction Poland/Warszawa in order to reinforce the “Ostwind” here or other connections in the West and South European region.

- Apart from the Freight Villages with hub function logistics centres in line with the needs are to be developed in the larger cities for the logistical supply and disposal according to the tried and tested principles of the GVZ planning system described in the previous chapters (e.g. Vilnius, Klaipeda, Maardu).
Fig. 29: Possible logistics locations with hub function

To summarise it can be determined that “Rail Baltica” has chances for the future with regard to goods traffic and especially intermodal transport if the afore-mentioned principles are followed. The land-based goods traffic by rail will be just as important as transport by sea which is pressed ahead with by the Russian government and Deutsche Bahn AG. Altogether one can expect a continuous rise in goods traffic by rail both due to a further economic consolidation of the countries of Poland, Latvia, Lithuania and Estonia as well as through the development of new markets in Asia.
ANNEX

Modal Split in goods traffic 1950 – 2008 according to tonnage

Modal-Split im Güterverkehr 1950-2008 nach Tonnage

Quellen: DB, Berlin; In: München, Stadtliches Bundesamt, Westboden Progress/FragTrans, Basel, BGL-Berichterstattung
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Modal Split in goods traffic 1950 – 2008 according to tonnage

Modal-Split im Güterverkehr 1950-2008 nach Tonnenkilometern

Quellen: DB, Berlin; In: München, Stadtliches Bundesamt, Westboden Progress/FragTrans, Basel, und Berechnungen des BGL
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## Goods traffic in Germany according to transport carriers

### Changes in 2005 compared with 2004

<table>
<thead>
<tr>
<th>Transport carrier</th>
<th>Goods quantity</th>
<th>Transport output</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In million t.</td>
<td>In billion tkm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Railways 3)</td>
<td>310,3</td>
<td>306,7</td>
<td>-1,1</td>
</tr>
<tr>
<td>Inland water navigation Road haulage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>German companies 4)</td>
<td>2755,1</td>
<td>2748,0</td>
<td>-0,3</td>
</tr>
<tr>
<td>Commercial traffic</td>
<td>1576,6</td>
<td>1652,8</td>
<td>+4,8</td>
</tr>
<tr>
<td>Works traffic</td>
<td>1178,5</td>
<td>1095,2</td>
<td>-7,1</td>
</tr>
<tr>
<td>Local traffic 5)</td>
<td>1622,9</td>
<td>1585,8</td>
<td>-2,3</td>
</tr>
<tr>
<td>Regional traffic 5)</td>
<td>542,8</td>
<td>55,3</td>
<td>+2,3</td>
</tr>
<tr>
<td>Long-distance traffic 5)</td>
<td>589,4</td>
<td>606,9</td>
<td>+3,0</td>
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<tr>
<td>Total goods traffic 6)</td>
<td>3301,3</td>
<td>321,5</td>
<td>-0,3</td>
</tr>
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</table>

### Notes
1) Traffic output in the Federal Republic of Germany
2) The change rates are calculated from the multi-digit original values and not based on the rounded table values
3) The results contain – as well as the annual results since 1998 – sub-entries in combined traffic in the amount of around 3.8 million tons a year, which were incurred through faulty reports of a company. From the reporting month January 2006 the Federal Statistical Office will proof corrected results and as with other transport branches covert to a gross-gross proof (incl. container weights) in combined traffic. The annual publication 2005 will contain results both in the sub-entered as well as in the new delimitation.
4) Inland and cross border traffic, without cabotage.
5) Commercial goods traffic and works traffic together
6) Without road haulage of foreign companies; statistical details are not available.

Sources: Statistical notifications of the federal department for goods traffic and the Federal Office for Motor Traffic
Goods traffic of railways according to main transport links in the years 2004 and 2005

<table>
<thead>
<tr>
<th>Main transport link</th>
<th>Goods quantity in million tons.</th>
<th>Changes in %</th>
<th>Transport output in billion tkm</th>
<th>Changes in %</th>
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<tr>
<td></td>
<td>2004</td>
<td>2005</td>
<td>2004</td>
<td>2005</td>
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<tr>
<td>Inland transport</td>
<td>200,1</td>
<td>198,6</td>
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<td>39,9</td>
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<tr>
<td>Shipment overseas</td>
<td>46,1</td>
<td>45,0</td>
<td>- 2,2</td>
<td>19,2</td>
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<tr>
<td>Receipt from overseas</td>
<td>51,3</td>
<td>48,6</td>
<td>- 5,3</td>
<td>18,4</td>
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<tr>
<td>Transit</td>
<td>12,8</td>
<td>14,5</td>
<td>+ 13,2</td>
<td>8,8</td>
</tr>
<tr>
<td>Total</td>
<td>310,3</td>
<td>306,7</td>
<td>- 1,1</td>
<td>86,4</td>
</tr>
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1) The results contain – as well as the monthly and annual results since 1998 – sub-entries in combined traffic in the amount of around 300,000 tons monthly or 3.8 million tons a year, which were incurred through faulty reports of a company. From the reporting month January 2006 the Federal Statistical Office will proof corrected results and as with other transport branches covert to a gross-gross proof (incl. container weights) in combined traffic. The annual publication 2005 will contain results both in the sub-entered as well as in the new delimitation.

2) The change rates were calculated based on the multi-digit original values.

Source: Federal Statistical Office, specialist series 8, row 2

Cross-border goods transport broken down according to regions in 1,000 tons.

<table>
<thead>
<tr>
<th></th>
<th>Deutschland</th>
<th>PL</th>
<th>CZ</th>
<th>H</th>
<th>SK</th>
<th>SLO</th>
<th>LT</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Insgesamt</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2001</td>
<td>Empfang</td>
<td>47,177</td>
<td>9,104</td>
<td>6,656</td>
<td>1,081</td>
<td>448</td>
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<tr>
<td></td>
<td>Versand</td>
<td>41,264</td>
<td>2,088</td>
<td>2,726</td>
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<td>Insgesamt</td>
<td>88,441</td>
<td>11,192</td>
<td>9,382</td>
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<td>1,204</td>
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<td>2002</td>
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<td>0,892</td>
<td>5,397</td>
<td>1,097</td>
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<td>2004</td>
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<td>914</td>
<td>908</td>
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<td>Versand</td>
<td>46,063</td>
<td>2,507</td>
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<td>1,227</td>
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<td>6,567</td>
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<td>Empfang</td>
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<td>1,396</td>
<td>817</td>
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Anmerkung: PL - Polen, CZ - Tschechische Republik, H - Ungarn, SK - Slowakische Republik, SLO - Slowenien, LT – Litauen
Quelle: Statistisches Bundesamt, Fachserie 8 / Reihe 2 Eisenbahnverkehr.
Freight Villages in Brandenburg and Berlin – Transport and logistical starting point of the railway link to the Baltic States, potentials and requirements

Goods transhipment of German ports according to operating territories since 2001

**Table 5: Güterumschlag deutscher Häfen nach Fahrtgebieten seit 2001**

<table>
<thead>
<tr>
<th>Fahrtgebiet</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>I.-III.Q.05</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in 1,000 t</td>
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<tr>
<td><strong>Insgesamt</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Polen</td>
<td>6,267</td>
<td>6,458</td>
<td>8,052</td>
<td>6,626</td>
<td>5,141</td>
</tr>
<tr>
<td>Litauen</td>
<td>2,795</td>
<td>2,285</td>
<td>3,063</td>
<td>3,084</td>
<td>2,124</td>
</tr>
<tr>
<td>Lettland</td>
<td>7,603</td>
<td>6,168</td>
<td>5,984</td>
<td>6,231</td>
<td>4,042</td>
</tr>
<tr>
<td>Estland</td>
<td>2,835</td>
<td>3,227</td>
<td>2,322</td>
<td>2,438</td>
<td>1,872</td>
</tr>
<tr>
<td><strong>Empfang</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polen</td>
<td>4,955</td>
<td>4,990</td>
<td>6,490</td>
<td>5,167</td>
<td>3,697</td>
</tr>
<tr>
<td>Litauen</td>
<td>1,868</td>
<td>1,460</td>
<td>2,119</td>
<td>1,999</td>
<td>1,275</td>
</tr>
<tr>
<td>Lettland</td>
<td>7,116</td>
<td>5,567</td>
<td>5,244</td>
<td>5,479</td>
<td>3,466</td>
</tr>
<tr>
<td>Estland</td>
<td>2,447</td>
<td>2,847</td>
<td>1,880</td>
<td>2,001</td>
<td>1,463</td>
</tr>
<tr>
<td><strong>Versand</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Polen</td>
<td>1,312</td>
<td>1,468</td>
<td>1,563</td>
<td>1,781</td>
<td>1,443</td>
</tr>
<tr>
<td>Litauen</td>
<td>927</td>
<td>825</td>
<td>944</td>
<td>1,085</td>
<td>849</td>
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<tr>
<td>Lettland</td>
<td>487</td>
<td>602</td>
<td>741</td>
<td>752</td>
<td>576</td>
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<tr>
<td>Estland</td>
<td>388</td>
<td>380</td>
<td>442</td>
<td>437</td>
<td>409</td>
</tr>
</tbody>
</table>

**Table 6: Containerumschlag in deutschen Häfen nach Fahrtgebieten seit 2001**

<table>
<thead>
<tr>
<th>Fahrtgebiet</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
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<tbody>
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<td>in 1,000 TEU</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Polen</strong></td>
<td>162</td>
<td>191</td>
<td>230</td>
<td>310</td>
<td>283</td>
</tr>
<tr>
<td><strong>Litauen</strong></td>
<td>42</td>
<td>55</td>
<td>73</td>
<td>107</td>
<td>103</td>
</tr>
<tr>
<td><strong>Lettland</strong></td>
<td>50</td>
<td>65</td>
<td>85</td>
<td>96</td>
<td>77</td>
</tr>
<tr>
<td><strong>Estland</strong></td>
<td>41</td>
<td>42</td>
<td>52</td>
<td>61</td>
<td>k.A.</td>
</tr>
</tbody>
</table>

**Container transhipment in German ports according to operating territories since 2001**

**Table 6: Containerumschlag in deutschen Häfen nach Fahrtgebieten seit 2001**

<table>
<thead>
<tr>
<th>Fahrtgebiet</th>
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<td>41</td>
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<td>61</td>
<td>k.A.</td>
</tr>
</tbody>
</table>

**Quelle:** Statistisches Bundesamt, Fachserie 8 / Reihe 5 Seeschifffahrt.
Ferry connections from Germany to Russia and to the Baltic States

**Freight Villages in Brandenburg and Berlin** – Transport and logistical starting point of the railway link to the Baltic States, potentials and requirements

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**Sassnitz - Baltijsk - St. Petersburg**

2 x per week respectively Thursdays and Sundays

---

**Ship owner:** [TransRussiaExpress](http://www.faehrhafen-sassnitz.de)

**Ships:**
- MS "Translubeca"
- MS "Finlandia"

**Capacity:**
- Loading metres 1700 /
  approx. 125 trailers
- Loading metres 2100 /
  approx. 155 trailers

**Travelling time:** 48 hours

Source: [www.faehrhafen-sassnitz.de](http://www.faehrhafen-sassnitz.de)
**Sassnitz - Klaipeda**

Departures 3 x per week Tue., Thu. and Sat.

*MS "Klaipeda"*

**Ship owner:** DFDS LISCO

**Ship:** MS "Vilnius"

**Capacity:**
- Railway wagons: 90
- Truck trailers: 108
- Passengers: 132

**Travelling time:** 18 - 20 hours

Source: [www.faehrhaven-sassnitz.de](http://www.faehrhaven-sassnitz.de)
Sold areas to investors 2007
Sold areas to investors 2007

Freight Village Berlin East Freienbrink

overview of companies
1. EOSKA (Verkehrsunternehmen) 165,394 m²
2. Rheinair GmbH & Co.KG (Logistik) 94,118 m²
3. EKL 57,481 m²
4. cotrain Logistik AG 54,802 m²
5. Meier Logistik (Verkehrsunternehmen) 16,871 m²
6. Stabilis (Bau- und Landwirtschaft) 21,905 m²
7. Axpo AG (Energiebetrieb, Wasserversorgung) 14,210 m²
8. Wulf GmbH & Co. (Montage und Vertrieb von Forstgeräten) 18,077 m²
9. Cps-Steinbrecht & Partner GmbH (Verkehrsunternehmen) 8,729 m²
10. RZJ Adams GmbH & Co. KG (Vertrieb von Sonderfahrzeuge) 5,725 m²
11. Holzforschung & Partner GmbH (Zellstofffabrik) 14,117 m²
12. Loeser (Verkehrsunternehmen) 5,402 m²
13. S & B Rail (Maschinenbau) 5,737 m²
14. Bascon (Bau- und Holzhandel) 5,200 m²
15. Tereosc (Verkehrsunternehmen) 2,200 m²
16. Volkan-Öko Stiftung (Verkehrsunternehmen) 2,200 m²
17. MAN Verkehrsunternehmen (Transportunternehmen) 17,000 m²
18. Logistik-Service-GmbH (Verkehrsunternehmen) 10,000 m²
19. Deutsche Regiobahn 4,010 m²
20. BMB Industrie Service GmbH 8,610 m²

Legend:
- Sold estates
- Rented area
- Industrial area
- Business area
- Extension area
- Conference centre
- Development plan boundary
- Estate boundary
- Construction boundary
- Roads
- Projected road junction of the motor-service-court
- Green areas
- Woods and publicly-owned
- Water
- Rails
- Projected road junction of the rail track

Prepared by: Stolle
Date: 2007
Project: GVZ Ost
Scale: 1:10,000
Sold areas to investors 2007