Breitspur Planungsgesellschaft

Final report – Web version

Pre-feasibility study for broad-gauge railway connection between Košice and Vienna

Vienna, May 2011 – Revised version

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Consortium and participants of the pre-feasibility study

The pre-feasibility study was conducted in 2010 by an **international consortium:**

Consortium lead, indicative realization plan

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Traffic forecast, Macroeconomic analysis

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Proposed technical realization, Environmental analysis

ATKINS sudop

Financial evaluation, Risk assessment

Deloitte.

Legal analysis

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Financing concept

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In addition, railway experts from the following railways contributed to the work of the pre-feasibility study:

ÖBB ŽSR

1. Introduction

It is intended to extend the 1,520 mm broad-gauge railway corridor currently terminating in Košice in Eastern Slovakia into the Twin City Region of Vienna and Bratislava. Overall motives for the extension are to establish a non-interrupted and efficient transport chain from Russia, China and other Asian countries to Central Europe, to create time-competitive alternative land-based Asia-Europe connection based on broad-gauge railway with up to 30 days transport time savings,[1] to benefit from the potential of the catchment area of the Twin City Region and connection of major economic regions with one of the longest transport axis of the future, to be able to connect to the Danube and the EU Danube strategy, as well as to position Vienna/Bratislava as a logistics hub for CEE, for connecting cargo to standard-gauge railways in the EU and to the dense EU road infrastructure.

The present **pre-feasibility study** aims at evaluating the pre-feasibility of the extension, at creating transparency on various aspects and perspectives of the project, and at preparing the ground for the next steps after finalizing the pre-feasibility study including a decision making process of BPG, its owners and relevant stakeholders. The study analyzed the intended broad-gauge extension from various perspectives in a structured, transparent and modularized way. **Key modules** are: A traffic forecast, a technical evaluation including evaluation of a potential itinerary, technical operational analysis and environmental analysis, a macroeconomic analysis, an economic analysis including a financial analysis, a risk assessment, a legal analysis, an analysis of a potential funding concept, and an analysis of an indicative realization plan.

1 : 15 days rail (objective) vs. 25 to 45 days sea journey.

2. Traffic Forecast

The traffic forecast is based on an overall country to country **forecast of volumes** until 2050, split by modes of transportation. Out of this, the relevant volumes for the project area were defined, followed by identifying the volumes for the new broad-gauge line in case of the project realization. The traffic forecast encompasses origins and destinations (O/D) relevant for the project, in total 33 countries in Europe and Asia, among them the project countries Austria, Slovakia, Ukraine and Russia. Between these O/Ds, the analysis was limited to volumes that will potentially be transported through the project corridor, i.e. through Slovakia were the major part of the extension would be built.

The traffic forecast was prepared for a future reference case scenario without the broad-gauge extension and a project case scenario with the broad-gauge extension. Applying **shift factors**, the "with project" case assumes that volumes are shifted from other modes of transport (mainly sea, standard-gauge rail, road) to the broad-gauge line. In general, these shift factors include shorter transport times, competitive/favorable prices,[2] reliability of the new line, frequency, and flexibility. In addition, the broad-gauge railroad benefits from further factors like its ability to carry heavier goods/volumes or its geographical coverage (especially in inner Russia). Furthermore, these characteristics will have different impact depending on transport distance or type of commodity. The attracted amount of volumes from other modes of transport, i.e. the level of shifts, depends on the ability of the new line to achieve these benefits. The shift is based on the assumption that the rail infrastructure is significantly improved throughout Russia, Ukraine and in Slovakia from the Ukrainian border to Košice in order to allow a total travel time of 15 days from eastern China to Vienna.[3] This time is considerably lower than that of more than 23 days by rail today and 25 to 45 days by sea.[4]

Overall transport volumes on the considered O/Ds are expected to grow with a compound annual growth rate (CAGR) of 1.7% (in real terms) between 2009 and 2050. Seaborne transport will achieve higher growth rates than land-based transport. The economic development assumptions reflected in the transport forecast represent a long-term average economic development, including individual years with strong growth and

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2 : Rail transports from Asia to Europe will mainly compete with sea shipping, i.e. will also compete with sea transport charges. Rail charges can, however, price the time benefit that customers will see in working capital savings from a business point of view. I.e. rail prices can be slightly higher than sea shipping prices if the economic value of working capital savings is reflected. In addition, rail prices will need to be flexible to a certain extent to compete with volatile sea shipping prices.

3 : Some of the projects required are already pursued, especially by RZD.

4 : Depending on the specific origin/destination, routing and vessel speed.

those with decrease which, in total, smoothen the forecast. Analyzing the direction of traffic, westbound traffic will account for approximately 70% of all traffic in 2050, whereas eastbound traffic represents 30%. Regarding commodities, containers are expected to show strongest growth rates until 2050, compared to bulk and liquid.
In the "with project" case, it is assumed that the broad-gauge extension will be built. Based on the shift factors, freight is shifted from other modes of transport to the new broad-gauge line. The forecast results in a total of **16.1 million tons**[5] of freight that will be transported on the new broad-gauge line through Slovak territory to a terminal location in the vicinity of Bratislava (BGP East) in 2050, and 14.2 million tons on the route section from there to the Vienna region (BGP West).[6] These figures include all commodities and represent volumes in both westbound and eastbound directions for all relevant O/Ds.[7] The majority of the commodities on the new line will be containerized. These figures represent a base case scenario, considered to be the most realistic future scenario of the traffic forecast.

Regarding **terminals**, the terminal near Vienna is forecasted to handle 14.2 million tons in 2050 which is significantly higher than a forecasted 1.9 million tons for the terminal near Bratislava in the same year. The effects on the existing transshipment facilities in Čierna nad Tisou and Dobrá are an initial decrease of volumes because transit cargo will directly continue to the newly built terminals, but in the long term an increase of volumes compared to today due to the overall volume growth, i.e. the facilities in Čierna nad Tisou and Dobrá will need to handle higher volumes than today.

Alternative scenarios were defined as a best case and worst case scenario. For the **best case**, traffic volumes for the two new broad-gauge sections soar to 23.9 million tons (BGP East) and 21.9 million tons (BGP West) respectively. In the worst case, lower transport volumes for the two new broad-gauge sections of 12.3 million tons and 10.4 million tons respectively are forecasted.

These results are summarized in the following figure.

5 All volumes are expressed in net-net tons.

6 Note that the 14.2 million tons between Bratislava/Nové Zámky and Vienna region terminal are not on top of the 16.1 million tons.

7 I.e. it includes volumes from/to China, Russia etc. in the eastern countries, and from/to Germany, France, Italy, Austria etc. in the western countries.

TRAFFIC FORECAST	WORST CASE	BASE CASE	BEST CASE
Traffic volume 2050			
• Bratislava – Košice	• **12.3 m tons**	• **16.1 m tons**	• **23.9 m tons**
• Vienna – Bratislava	• **10.4 m tons**	• **14.2 m tons**	• **21.9 m tons**
Handled volume[1] 2050			
• Vienna region	• **10.4 m tons**	• **14.2 m tons**	• **21.9 m tons**
• Bratislava region	• **1.9 m tons**	• **1.9 m tons**	• **2.0 m tons**

1) Loading, unloading and transshipment (broad-gauge volumes only) 2) Assigning a corridor factor to Japan, i.e. counting Japan as a considered O/D (despite seaborne transport required)

~~Fig # fig~~Traffic forecast results

3. Proposed technical realization

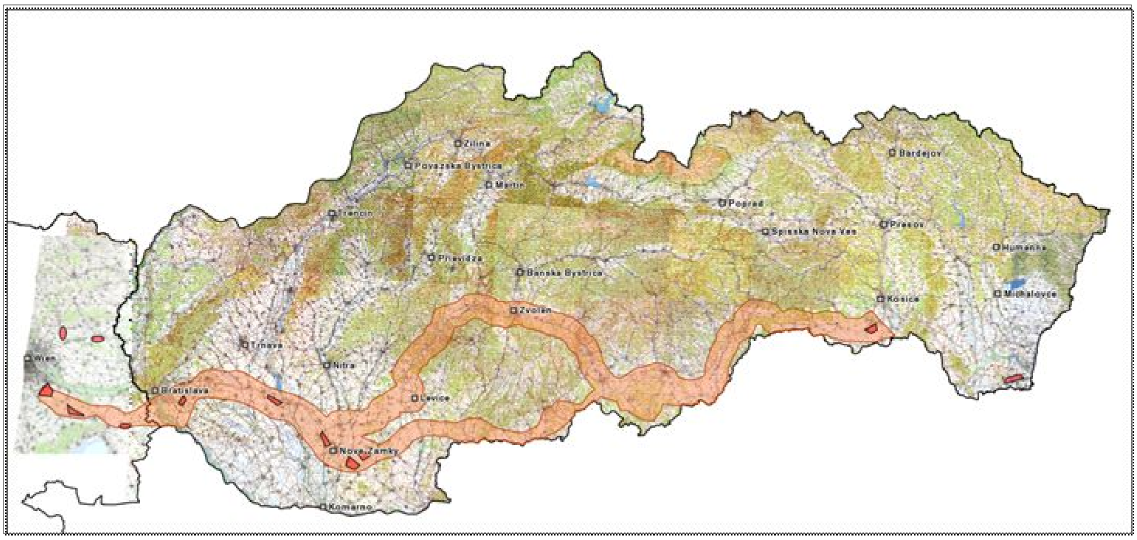
1. Itinerary and freight facility options

At pre-feasibility level, several **route options** and **freight facility locations** were analyzed and compared. The analyses result in two potential route corridors which are both technically feasible and in which the actual final routing will most likely be located as well as in a number of potential terminal locations. The level of detail at this stage is appropriate for a pre-feasibility study. Therefore there remains some degree of uncertainty around the detail, but the high level conclusions are reliable.

Based on mapping, track data, on-site information and interviews the itinerary evaluation generated five route options for the central section of the route from Košice to Bratislava, and two options for the section between Bratislava and Vienna. They include two northern highland options, a route along the southern Slovak border, a Lowland option along the existing standard-gauge line, but then taking a direct way to Nové Zámky, and an option entirely in parallel to the existing standard-gauge line. The connection from Bratislava to Vienna can be made by a southern crossing of the Danube river or a northern crossing of the March river.

An initial high-level evaluation suggested that, in general, a southern crossing of Slovakia has more advantages than a northern (highland) crossing, and that the option along the southern Slovak border is disadvantageous because of its downside of permanent closure of many passenger routes. Therefore, the option in Parallel to existing and the Lowland option have been refined using more detailed data, and a vertical alignment was developed. Between Bratislava and Vienna a southern route, crossing the Danube river with a bridge, is preferred because it incurs lower construction costs and less environmental impact. The northern option, while technically feasible as well, is likely to incur significantly higher capital expenditures.

This route is around 400 kilometer long, maximum gradient reaches 1.0% and design radius is selected at 1,000 meters.


Zilina
Povazska Bystrica
Martin
Bardejov
Trencin
Poprad
Spisska Nova Ves
Presov
Prievidza
Banska Bystrica
Kosice
Michalovce
Zvolen
Trnava
Wien
Nitra
Bratislava
Levice
Nove Zamky
Komarno

2. Technical realization

The proposed new line is a **single track with** 12 **passing loops**. On about 80% of the line, trains will run at a speed of about 100 km/h, leading to an average speed of around 90 km/h. The technical parameters of the broad-gauge extension are generally in line with Russian standards.

Container trains have a maximum length of 1 km to keep transshipment terminal at a manageable length and can be pulled by one Co-Co locomotive. The average load of a container train amounts to 875 net-net tons, its gross laden weight to 2,045 tons. Bulk trains have an average (net) load of 4,438 tons, a gross tonnage of 6,000 tons and are pulled by two locomotives.

For traction power, 25 kV AC is proposed for the overall track length from Košice to Vienna. With this solution, the question of the three different types of traction power relevant to this project is resolved[8] so that the locomotives will not require dual/triple compatibility, which would in turn lead to higher CAPEX for rolling stock and OPEX. The broad-gauge extension will be equipped with a state-of-the-art signaling system, ERTMS Level 2, and with GSM-R communication.

The main point of integration between the broad-gauge system and the standard-gauge railway will be at the transshipment facilities. It must be taken into account that for every 3 trains 1,000 m long arriving from the east, it will require 4 trains 750 m long to transport the goods onwards.[9]

Another important **prerequisite** for the operation of the broad-gauge extension is adequate capacity on the feeding broad-gauge lines from Russia, Ukraine and Slovakia. For example, the existing broad-gauge connection from the Ukrainian border to Košice in overall length of almost 90 km was designed for a train speed of 60 km/h only.

Furthermore, the route is in relatively bad shape due to insufficient maintenance in the past and there are several sections with reduced train speeds to 20 km/h only. This is why the capacity of this line would currently not meet the needs of the broad-gauge extension even in the first year of operation. Therefore, a complete modernization or reconstruction would be necessary.

Also in the Austrian normal-gauge network some adaptations are could be necessary and must be determined in the next project stage.

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8 : a) 3000 V DC on existing broad-gauge into Slovakia, b) Mixture of 25 kV AC and 3000 V DC in use in Slovakia, c) 15 kV $16^2/_3$ Hz in Austria.

9 : For both container as well as bulk trains.

3. Resulting capital expenditures requirements (CAPEX)

The CAPEX calculation represents the most accurate figure available for the broad-gauge extension project so far because it takes a **comprehensive perspective** on the whole railway system consisting of infrastructure, terminal operations and railway undertaking, and is based on a complete evaluation of all CAPEX items. It includes both baseline cost items (such as track works, structures, buildings, etc.) as well as indirect costs (e.g. project management, design, planning, preliminaries, etc.).

The **Parallel to existing route** option is estimated to incur **CAPEX of EUR 6.36 billion**.[10] In addition, investments for the two terminal facilities and rolling stock (locomotives, engineering trains and shunters) are required.

4. Economic feasibility

1. Financial evaluation

The financial evaluation was done with a **classic business planning approach**. It considered an overall evaluation period from 2011-2054 with a preparation and construction phase from 2011-2024 and 30 years of operations (2025-2054). Reference price levels are as of 2010;[11] indexation is applied on CAPEX, revenues and cost side (i.e. all figures are stated at current prices). The financial evaluation covers Slovakia and Austria. Furthermore, it considers three business components: The infrastructure management case (IMC), the Railway undertaking case (RUC), and the Terminal operating company (TOC). The businesses are both evaluated individually and in a consolidated financial statement. The latter was also used as basis for quantification of cash flows to the shareholders and (theoretically) cash flows to third party investors including financial institutions. The NPV of the project was quantified based on net cash flows forecasted until end of the evaluated period, i.e. 2054. Beyond that horizon, a terminal value of the project was taken into account.

As basic **inputs**, the business plan is based on the base case of the traffic forecasts.[12] CAPEX are taken from the technical analysis. The revenues from infrastructure charges are calculated based on the proposed price levels for Slovakia for 2011. Track renewal is considered after 850 million gross-tons transported. As a reference price for calculating RUC's revenues prices of Rail Cargo Austria 2010 reduced by 25% were applied. The costs of the RUC are based on the technical and operational parameters as stated above. The prices for goods handling in the terminals are based on ZSSK

10 : This and all subsequent CAPEX figures are stated at constant prices of 2010.

11 : Unless otherwise stated.

12 : Unless otherwise stated.

Cargo tariffs 2010. Bulk charges are not included because it is assumed bulk will be transported in special rolling stock with gauge change capability and thus be forwarded without transshipment.

Consolidating the three entities yields in the base case a positive EBITDA margin of 60% in year 2030, and 55% in 2050, as shown in the following figure. The EBIT margin amounts to 48% in 2030 (46% in 2050). Free cash flow is generally positive during the years of operations. However, the large CAPEX in the construction period have to be taken into account as well.

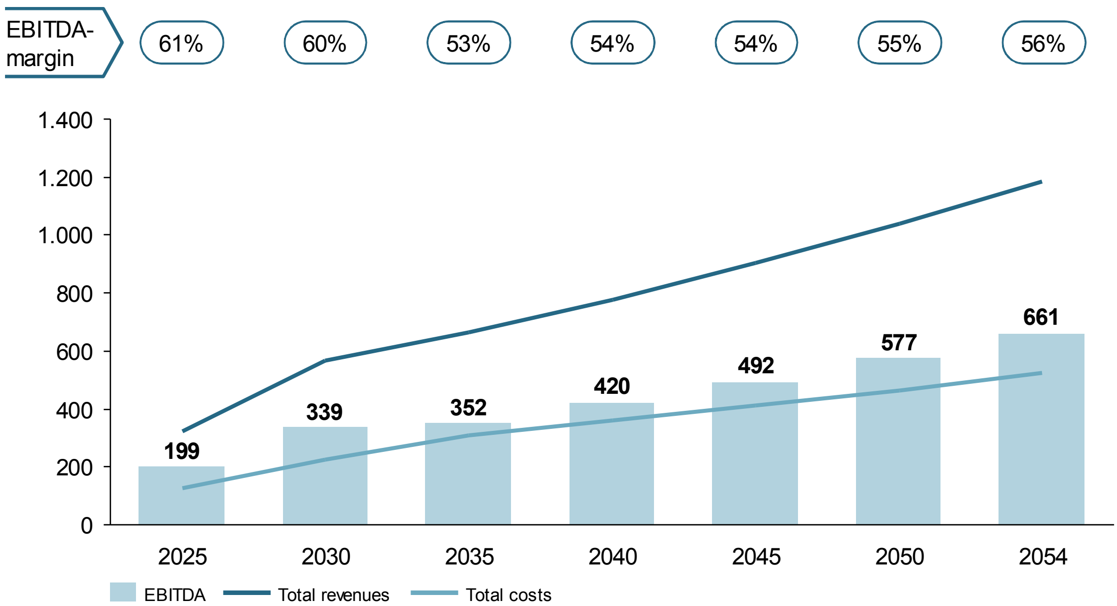

Figure 7: EBITDA consolidated, base case [EUR m]

In order to determine the **attractiveness of the project to its investors**, an NPV to the sponsors (governments) was calculated for different financing options. With Public financing, the NPV amounts to EUR -2.2 billion, with Project finance to EUR -2.5 billion, and in a Public Private Partnership model to EUR -6.8 billion. Public financing yields the highest NPV. With the other financing options, the investors require higher rate of returns, especially equity investors in a PPP. Applying best case traffic forecast figures leads to a positive NPV of EUR 0.3 billion in Public funding. In the base case, the project would reach an NPV of zero and thus will earn the cost of capital of the sponsors if EU funds (TEN-T budget and Cohesion funds) of EUR 0.5 billion are granted and CAPEX is decreased to 56% of initially considered level (in principle comparable to irretrievable subsidies of approximately EUR 3.6 billion of one to four from the countries involved).[13] It

13 Magnitude of EU contribution calculated as 10% of CAPEX, capped at EUR 700 million, with the assumption of decreased CAPEX in this scenario, EU contribution decreases to EUR 0.5 billion, which is in line with the principles applied to the financial model.

needs to be analyzed if the subsidies can be argued as a result of the significant macroeconomic benefits of the project.

2. Risk assessment

Relevant risks were identified by conducting workshops with experts in all pre-feasibility study modules as well as with experts from railways. Risks were quantified with probability distributions by assessing the probability of occurrence and the impact on budget/schedule in the case of risk occurrence. Monte Carlo simulations calculated the joint impact of all risks on important parameters as realization time, cost, etc. Finally, risk mitigation measures were defined.

The main **budget risks** for the broad-gauge extension are rising total cost due to both baseline cost uncertainty and event cost risks. Based on the risk analysis, the most probable construction cost[14] amounts to EUR 6.0 billion at constant prices. Adding escalation and budget impact of schedule delays leads to most likely cost of EUR 9.0 billion at current prices.[15]

As to importance of risk factors, cost escalation/uncertainty, track work and Danube crossing are the risks with the highest impact on base construction cost. The probability distribution of construction costs for the alternative route option is very similar to that of the preferred option. **Risks of delays** associated with the indicative realization plan indicate that the most probable start of operations is end of 2028 rather than 2024 or 2025.

In addition to budget and time risks, risks related to the parameters in the financial model were analyzed regarding their potential impact on the project performance (NPV). The most critical risks affecting the project's viability include change in container transport charges on the broad-gauge railway, change in traffic shift factors, construction cost of infrastructure, interest rate movement, transport growth rates, etc.

In addition, a qualitative assessment of non-quantifiable risks was carried out. These include predominantly political risks. Environmental concerns of the Austrian government and/or institutions are a noteworthy risk. Additionally, a possible withdrawal of one of the sponsoring countries from the project would be correlated with the structure and share of financing. In the case the participating countries have to contribute a substantial amount of money from the state budgets, their attitude towards the project implementation may turn negative.

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14 Infrastructure and terminal baseline construction costs.

15 These figures do not include preliminaries and admin, ancillaries, management, cost of land and locomotives, induced investments and contractor’s construction contingency.

A number of risk mitigation measures has been defined, including intensive dialogue with affected communities, thorough planning, professional conduct of the approval processes, efficient cost management, and others.

5. Externalities, external influence

1. Environmental and regional impact analysis

The environmental impact of the new line and potential major constraints were analyzed within the work conducted for the route and the technical evaluation of the intended project.[16] In addition to environmental considerations, regional impacts as well as health and safety issues were assessed.

In general, the broad-gauge link can be routed so as to **avoid any significant environmental impacts** that would pose a severe threat to the realization of the project. The project has the potential to impact upon the local environment, notably from increased noise levels, vibration levels, the direct and indirect impacts on ecology, water resources, archaeological and cultural resources, soils, air quality and the landscape. The **Slovenský Kras National Park** section and the **Danube river crossing** constitute route elements with specific environmental challenges.[17] However, while impacts to the environment may not be avoidable, it is expected that the majority can be minimized through the careful planning and design and the implementation of recommended mitigation measures and monitoring programs.

Regarding the environmental appraisal of the potential freight facility sites, in both countries, at three out of five locations, no potential significant environmental impacts which cannot be mitigated or compensated have been identified. The excluded sites were too close to environmentally protected areas, interfered with other infrastructure projects or required increased mitigation efforts.

The route is expected to have regional impacts as well. Mitigation measures can be realized to lower their significance. As potential security threats, an initial overview identified vandalism and theft of property, derailment of trains, flammable or reactive chemical substances being transported in adjacent containers, human trafficking and terrorist activities as potential security threats.

In one of the **next stages**, an Environmental Impact Assessment (EIA) will have to be conducted in order to comply with regulatory requirements for such a large project.

16 : This evaluation, however, does not constitute a full Environmental Impact Assessment (EIA).

17 : Both the preferred as well as alternative route run in these section in the same alignment.

2. Macroeconomic analysis

In general, the broad-gauge extension, like almost any infrastructure investment, will imply **significant macroeconomic benefits** in all project countries, i.e. Austria, Russia, Slovakia, Ukraine and beyond, and can therefore be viewed as attractive from the macroeconomic perspective. Most of the effects will be generated automatically by both construction and operation activities. Therefore, this section analyzes macroeconomic parameters in order to provide a comprehensive overview of all implied effects. The analysis emphasized five focus areas: Creation of additional direct and indirect employment, creation of new logistical businesses within or close to the new terminals, development of new businesses along the new railway line, impact on GDP, and finally increased tax revenues. Although the used methodology differs among focus areas, it was based mainly on multipliers, i.e. defining the employment and monetary effects as a multiplier of investment volume.

Creation of additional employment in the operating phase as well as value added generated in the operational phase are the major value contributors. The project will create 642,000 additional employment years, thereof about 370,000 in Slovakia, 131,000 in Russia, 96,000 in Austria and 45,000 in Ukraine between 2011 and 2054 (14 years of construction from 2011 to 2024 and 30 years of operation from 2025 to 2054). On average, some 11,500 employment per year will be generated by infrastructure, terminal and train operations. The broad-gauge extension will generate a positive impact of EUR 23.1 billion at constant prices for the same period. The majority of this effect will be generated in Austria (52%), followed by Slovakia (36%), Russia (10%) and Ukraine (2%). These effects include creation of new direct and indirect employment, creation of new logistical businesses within or close to the new terminals. Increased tax revenues amount to EUR 6.8 billion of which EUR 3.5 billion will be paid in Austria, EUR 2.5 billion in Slovakia, EUR 0.6 billion in Russia and EUR 0.1 billion in Ukraine (all at constant prices).

Effects of secondary importance (e.g. reduced revenue from fuel taxes and lower road maintenance costs due to shift of freight transports from road to rail, loss of employment in sea transportation, etc.) are expected to have minor or notional impacts or are expected to be more than off-set by other, more significant effects. Intangible effects relate to the broader impacts of the project on subjects such as improved political position of the region, offering a new rail bridge for boosting ties of Western Europe with Russia and Asia, knowledge transfer to other projects as well as increasing attractiveness for foreign direct investment (FDI).

It needs to be noted that the resulting national net benefit must take the national level of project investments (or subsidies) into account as well. Therefore, the question of financing and the sources of funding play a key role in the regional or geographical distribution of macroeconomic impacts.

6. Legal analysis

The legal analysis of the project took a very **wide approach** considering the early stage of the project with still a lot of unknowns regarding the final structure, the high level of uncertainty and the long time perspective of the potential realization. It analyzed potential legal issues from all major legal disciplines relevant for the project and identified key issues. Once major decisions regarding the realization of the project will have been taken more specific legal analyses will need to follow.

In general, the project is **feasible with regard to the relevant legal matters** (application of technical rules, environmental laws, health and safety regulations, expropriation, antitrust regulations, funding restrictions, international treaties/transport regimes and applicable contractual relationships). No issues were identified that would materially adversely affect or hinder the realization of the project.

Among the most critical aspects to be considered from a legal point of view is the **applicability of technical rules**. The applicability of European technical specifications of interoperability (TSI) were neither clearly confirmed nor clearly rejected by European Commission and European Railway Agency at this stage of the project. In addition, the **inclusion of the new line in TEN-T** Conventional Network will depend on political will and is likely to trigger review of compliance with TSIs.

In Austria, the Nature Conservation Laws of Lower Austria and Burgenland prohibit interference into nature conservation areas unless a special permit is granted in the case that public interest in the project exceeds public interest in conserving nature. Environmental issues are also likely to face resistance of public opinion, a transparent permission process and an in-depth EIA is required. In Slovakia, general health and safety regulations need to be followed in absence of specific health and safety regulations for railways.

Different transportation regimes currently apply, obstructing the fluency of freight transport as the consignment note has to be re-issued at border crossings between Russia, Ukraine and the EU. Therefore, aiming at the extension of the applicability of CIM/SMGS consignment note and mandatory use by all parties involved is needed. Finally, harmonization and coordination of all upcoming contractual relationships across all jurisdictions, especially when referring to regulations on conflict of laws, carefully needs to be considered as the project spans four different jurisdictions.

The most significant consequence of legal issues that might arise during realization of the project is a delay of project activities. The potential for delays is greatest in the areas of environmental impact assessments, national expropriation procedures as well as in the case of archeological findings and impacts on military areas as all of those involve specific permissions to be issues by the respective state authorities.

7. Financing concept

In general, **three distinct basic financing options** can be considered for large infrastructure projects: Project finance, Public Private Partnership and public finance. The project finance model is based on a long-term off-take agreement between the project company (special purpose vehicle, SPV) and a customer (off-taker). The off-taker has to be a creditworthy party capable to guarantee the project revenues over extended periods. At present stage of the project, availability of such contract and/or guarantor is uncertain. Nonetheless, if such guarantor emerges in the future the project finance could become a feasible option. A Public Private Partnership (PPP) model of funding is based on concession agreements with governments. The whole demand risk has to be entirely covered by the governments, whereas the lenders perceive an arrangement like “quasi-sovereign” risk. Using public financing is a relatively economical option due to strong creditworthiness of borrowers (AAA to BBB ratings for the countries involved). But it has simultaneously a negative impact on public finances, i.e. increased deficit of government budgets.

Selection of financing option and suitable organization structure is mainly defined by the project's characteristics, market conditions and legal considerations. The former are elaborated in previous chapters. Market conditions pose a challenge for the project, however clear and simple project structure promises successful fund raising from market perspective. From legal perspective, all organization options are feasible, although some financial support variants might be subject to approval by relevant authorities.

Under the base case assumptions the **public finance** model would produce the best results for the project stakeholders from the financial point of view. Public finance structure is the most suitable based on the forecasted project cash flow and risk profile. Under the public finance model the NPV of the project’s future cash flows to the government is estimated at minus EUR 2.2 billion i.e. this can be interpreted as total government subsidy requirement calculated in present value terms. In the best case of the traffic forecast, public financing yields a positive NPV of EUR 300 million. Other financing options have been considered as well.

Potential next steps of the project would need to include a project company setup, including the setup of legal framework, partner identification, detailed road map for the project realization, clarification of sponsors rights and duties, etc. Once these activities are implemented, an information/offering memorandum for approaching investors can be elaborated. The project/financing schedule needs to account for a due diligence/project evaluation process by funding partners and negotiations before the actual financial closing.