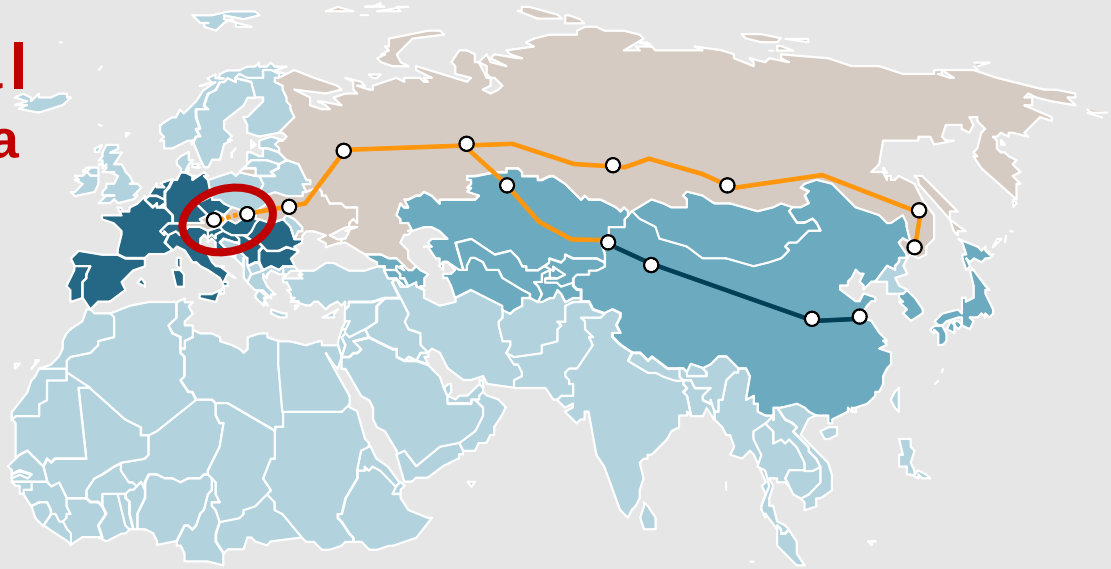
ÖBB HOLDING

Broad Gauge Potential

broad gauge line Košice-Vienna



Breitspur Planungsgesellschaft mbH.
Robert Kredig
Managing Director

11.07.2016

The Idea and The Motive Behind

continuous railway connection from Asia to the TWIN-City Region Vienna-Bratislava

direct connection of the broad gage Network (1520 mm) to the Trans-European Transport Network

reduction of transportation time between Asia and Europe

reduce transportation times to 15 days using rail, compared to the 35 days for the transportation of goods by ship.

significant macroeconomic benefits

chances for new markets, creation of employment and development of new businesses, sustainable influence on the Gross Domestic Product (GDP) of European and Asian countries

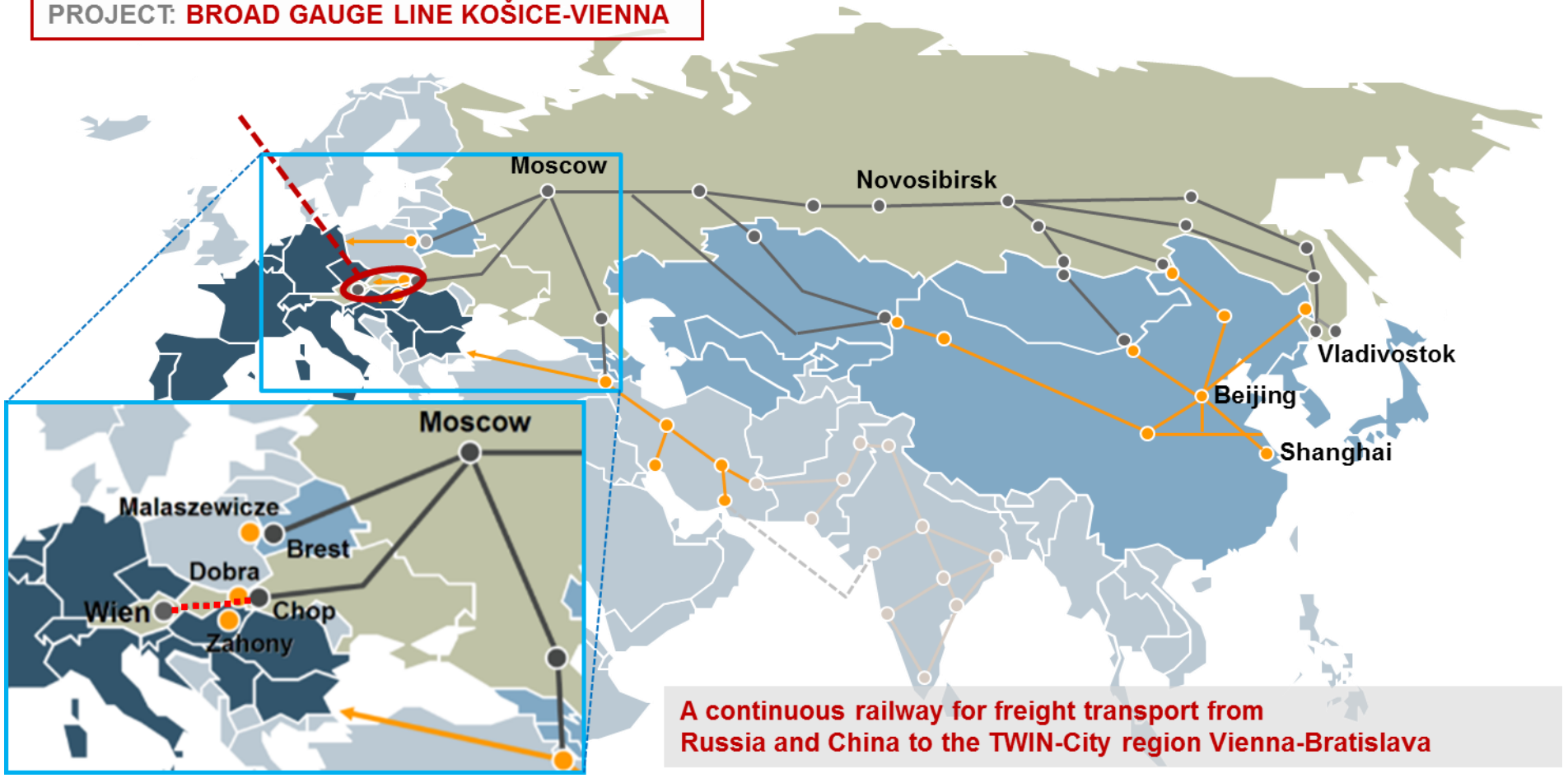
sustainable freight transport system

reducing CO_2-Emissions, strengthening the international railway system, shifting other modes of transport to the railway freight transport

Vision - „Corridor of Development“

freight corridor of more than 10.000km

PROJECT: **BROAD GAUGE LINE KOŠICE-VIENNA**



A continuous railway for freight transport from Russia and China to the TWIN-City region Vienna-Bratislava

Direct Connection to the TEN-T Core Network Corridors

The Project - Closing the Gap Between Two Powerful Railway Networks

- to create a corridor of development connecting the Trans Siberian Railway Network to the western European 1435 mm Railway Network
- the broad gauge connection Košice – Vienna (~ 400 km) is a consequent prolongation of the Trans Siberian Railway Line (~ 10.000 km) and closes the gap between two powerful railway networks

Project History

- 2006-2008: various studies and reports
- 2009: **Foundation of the Breitspur Planungsgesellschaft mbH (BPG)**

- 2010-2011: **Elaboration of the Pre-Feasibility Study**
  - Contractor: International Consortium under the leadership of Roland Berger (Progtrans, Deloitte, Atkins, i.a.)
- 05.07.2013: **Memorandum of Understanding**
  among the CEOs of the project partners:
  - to support the plans of the joint company BPG to further evaluate and detail the project and provide the funding within the next project phase
- 31.08.2013: the start of the EU-wide bidding for the Feasibility Study
  - **Feasibility Study** (technical and environmental part) including:
    - corridor and route selection,
    - documents for the execution of Strategic Environmental Assessments (SEA) in Austria and in Slovakia,
    - operational concept,
    - the selection of a terminal location
    - optionally: the pre-design.
- in addition: elaboration of **Business Models & Economic Analysis, and Traffic Forecast Update**

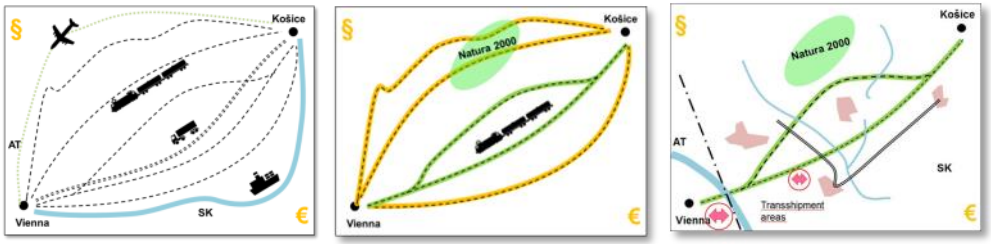
Pre-Feasibility - Results

- Track length (single track with passing loops; electrified):
  - Slovakia: **~400km**
  - Austria: **~20km**
- The preferred corridor is in the southern part of Slovakia, in Austria - depending on the terminal location
- Possible terminal location in Austria in a ~30km-Radius around **Vienna:**
  - In the East
  - In the North
- Terminal location for regional demand in the central part of Slovakia
- Area required:
  - **150-200ha**
  - Goal: modular development (capacity expansion on demand)
- Traffic forecast:
  - Broad Gauge 2030 (net): **12,8 Mio. t** per year
  - Broad Gauge 2050 (net): **16,1 Mio. t** per year
- Cost estimate for implementation (price basis 2010): **~6,7 bn €**

Feasibility Study – Current Project Status

- Aim of Feasibility Study:

- Generation of more detailed information for the overall decision making process of the project (e.g. alignment, costs)
- Reach first authority approvals in Austria and in Slovakia



- Project Phases Feasibility Study:

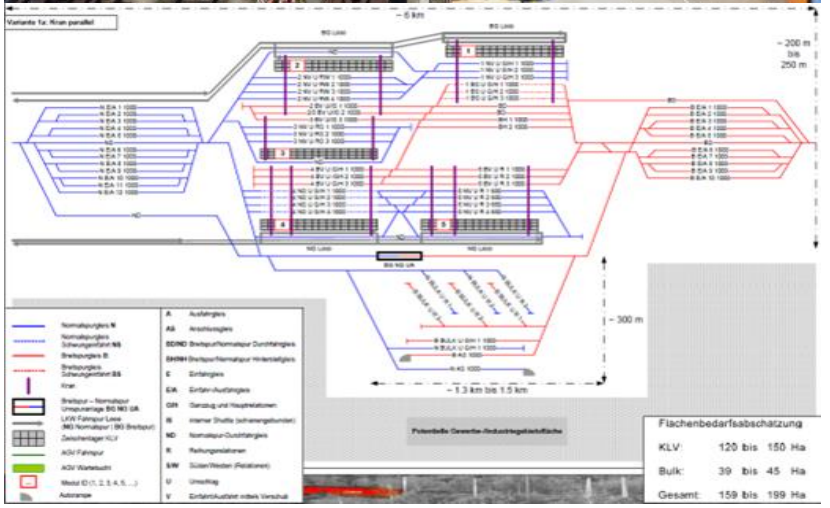
- Phase 1 - System development / terminal – space requirements
- Phase 2 - Corridor selection / possible terminal locations / documents for possible execution of a Strategic Environmental Assessment (SEA)
- Phase 3 - Route selection / terminal location
- Phase 4 – Pre-Design (optional)

High Tech Railway Terminal for Broad Gauge

- The European gateway for trade flow between Europe and Asia in the TWIN-City region Vienna-Bratislava
- Required area min. 150 – 200 ha, compared to the Railway Freight Center Vienna South with a total area of 55 ha
- Intermodal terminal infrastructure (broad to standard gauge)
- Modular layout 5 modules with storage area – allows expansion depending on the traffic volumes
- Maximal transshipment of 1.5 Mio TEU per year

Capacity design parameters:

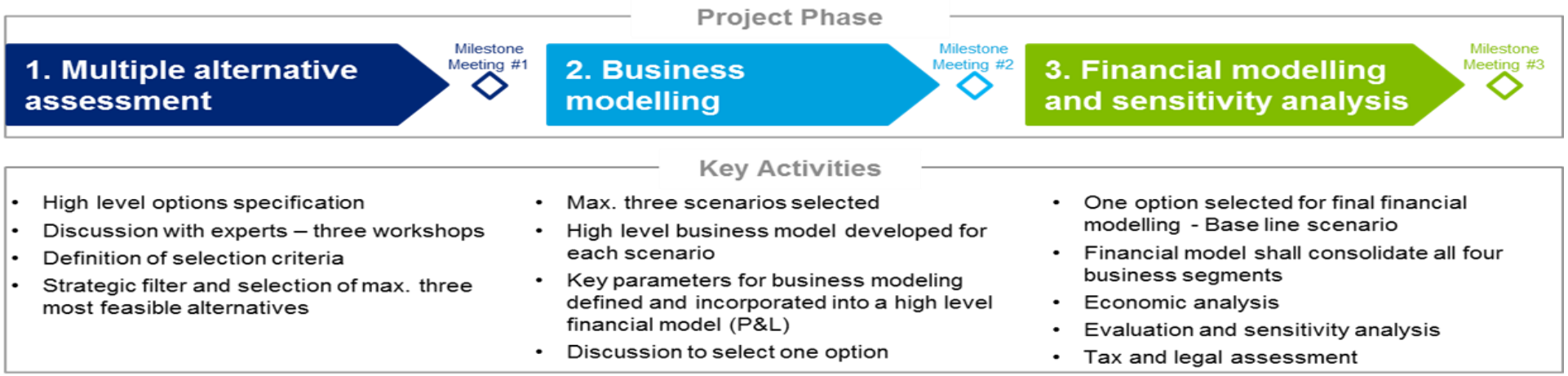
- Transhipment modules, sorting of containers, train composition
- shunting yards for broad and standard gauge
- maintenance and repair centre for container and for rolling stock
- transhipment area for bulk commodities and liquid goods
- Number of transhipment tracks for broad gauge: 12 tracks
- Number of transhipment tracks for standard gauge: 18 tracks
- At least 12 gantry cranes for transhipment of containers
- Broad gauge shunting yard with at least 10 tracks
- Standard gauge shunting yard with at least 12 tracks



The current Project-Phase

Business Models & Economic Analysis

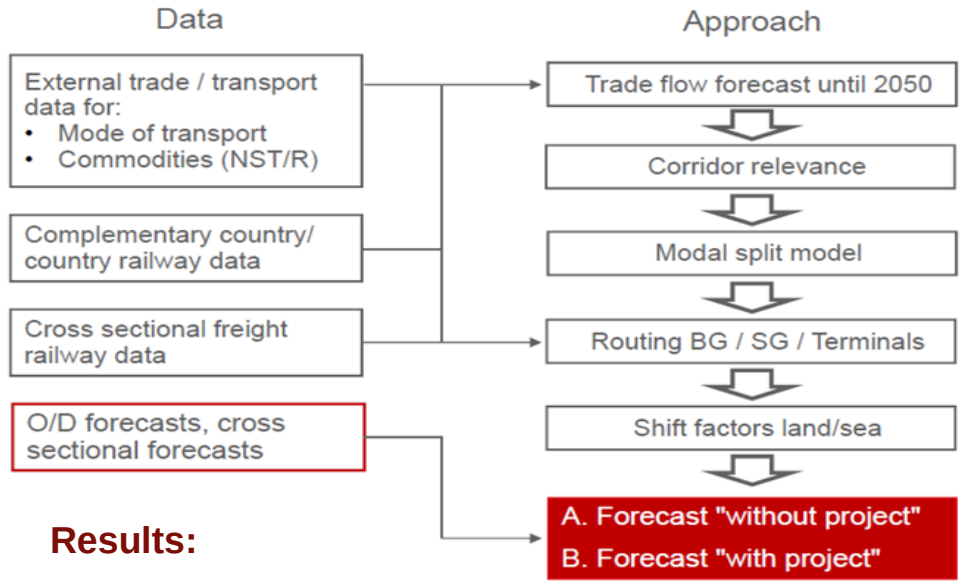
- **comprehensive business and financial models** for the project on the basis of current economic analysis data
- possible variants for **ownership & financing structure and operating models** for the different business sectors - infrastructure, terminal, rail transport companies, logistics companies/freight forwarding, etc
- possibilities of **co-financing by third parties**, **subsidies** and **grants** for the investment and the operation
- **budget effectiveness** (macroeconomic, financial, socio-economic and ecological) for each of the four countries participating in the project (Austria, Slovakia, Ukraine, Russia)
- **sensitivity analysis** according to key parameters influencing forecast financial results of the project
- **comprehensive legal analysis** within the frame of regulatory economics, considering national and European laws
- **Potential impact of context projects** on state budgets (subject to inputs from technical experts)



The current Project-Phase

Updates of Traffic Forecasts of the Pre-Feasibility Study

- Up-date and forecast of the **underlying economic data base** - current economic data, GDP-forecasts, trade data (country / country) and economic / transport background information of Austria and Slovakia
- Up-date and forecast of **model input transport data**
  - freight railway traffic and hinterland O/D in the catchment area of the planned terminals (Twin City Region and Slovakia)
- Transport forecast – **Approach**
  - trade flows (country to country) of about 35 countries
  - Corridor factors - the share of transport volumes for the BGP
  - Mode share – considering trade development and further transport infra-structure development



New elements:

- detailed analysis of the transport flows handled in the planned terminals with regard to the final origin / destinations and the mode choice (road / conventional rail)
- detailed analysis of selected potential commodities – market analysis
- Impacts of new railway infrastructure projects on the transport demand of the broad gauge project
- Risk Analysis

Results:

- Annual transport volumes until 2030/2050
- Commodities: Container / Dry Bulk / Liquid Bulk
- Directional transport volumes for westbound and eastbound sections of the broad-gauge railway line
- Origin / destination (O/D) by countries and transshipment volumes in terminals (on the Slovakian and Austrian side)
- Linkage of broad-gauge line with existing transport infrastructure (standard gauge, road, inland waterways)

Summary

Russia, China and other Asian countries are important trading partners for die European countries und a great opportunity for the economic development of the European Union

The major part of the freight transport between Asia and Europe is currently being carried out by sea (30-45 days transport time)

Transport by rail reduces considerably the transport time (down to 15 days) and ensures an attractive alternative for freight transport, especially of capital intensive goods

A continuous railway connection from Russia, China and other Asian countries to central Europe offers a new dimension of time-competitive, cost-effective and sustainable rail transport in Eurasia.

A significant intersection of three Core Network Corridors of the TEN-T is situated in the Twin-City Region Vienna-Bratislava and provides a unique opportunity for a direct connection with the Asian railway network and for the realisation of an important transport hub and a gateway for west bound and east bound trade flows between Europa und Asia.