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Rail Baltica – the project of the century

Rail Baltica is a greenfield rail transport infrastructure project aiming to integrate the Baltic States in the European rail network. The project includes five European Union countries – Poland, Lithuania, Latvia, Estonia and indirectly also Finland. Rail Baltica is the largest railroad infrastructure project – to be constructed – in the Baltic countries in the last 100 years. It will form a new economic corridor, which will closely connect the North East of the Europe with the rest of the European Union.

The idea of building a rail transport corridor in the Baltic Countries is nothing new. Already in the 30's XX. it was identified as a link of east and west, and alignment went to directly from Riga-Kaunas route to near of Königsberg (after II World War known as Kaliningrad) and continued thereafter directly to Berlin [4].

In the 90's XX, in connection with the ongoing works on improving the transport links of Eastern countries with Western Europe, pan-European transport corridors were designated. During the conferences in Prague (1991), in Crete (1994) and Helsinki (1997), the concept of 10 corridors was developed: I corridor linked Helsinki-Tallinn-Riga-Kaunas-Warsaw/Riga-Kaliningrad-Gdansk and IXB corridor linked Kiev-Minsk-Vilnius-Kaunas-Klaipeda/Kaliningrad (Fig. 2).

UIC as an organization of railways has already proposed in 1992 a long-term master plan for the development of railway and build the trans-European network including Baltic States [13].

The transport corridor running through the Baltic states (corresponding to the Rail Baltica route) on the initiative of the European Commission was also included in the Transport Infrastructure Needs Assessment (TINA) program. Its aim was to examine the modernization needs of infrastructure in Central and Eastern European countries candidates for EU, identification of common projects that allow the development of a multi-modal transport network between EU countries and candidate countries, as well as defining the financing possibilities for these projects [2].

In 2010, in the project of the new trans-European transport network, Rail Baltica was raised for the first time to the rank of its key element. In 2013, without major changes, the draft new transport network (TEN-T) was adopted by Regulation of the European Parliament and of the EU Council 1315/2013 [9]. At the same time, Rail Baltica was included in the priority corridor, North Sea - Baltic (Regulation 1316/2013) [10].

Rail Baltica is a priority project of the European Commission: international and cross-border with potential for not only Lithuania, Latvia and Estonia, but also Finland and Poland and is of great importance for the integration of the European Union.

Project realisation

In 28.10.2014 in Riga a joint venture of three Baltic States, RB Rail AS was established by the project's national implementing bodies in the three countries – Rail Baltic Estonia OÜ, SIA Eiropas Dzelzceļa līnijas, and UAB Rail Baltica Statyba. All cooperation partners are responsible for the implementation of Rail

Baltica project. The infrastructure included in the Rail Baltica line will remain the property of individual states within the borders. The line is put into operation in 2026.

Technical Parameters

The line will be used both in passengers and freight trains. Therefore, the technical parameters of the line are adequate to its purpose. Technical parameters comply with Technical Specification of Interoperability being in force in European Union (Tab. 2)



Fig. 1. Rail Baltica in TEN-N according to Regulation (EU) 1315/2013.

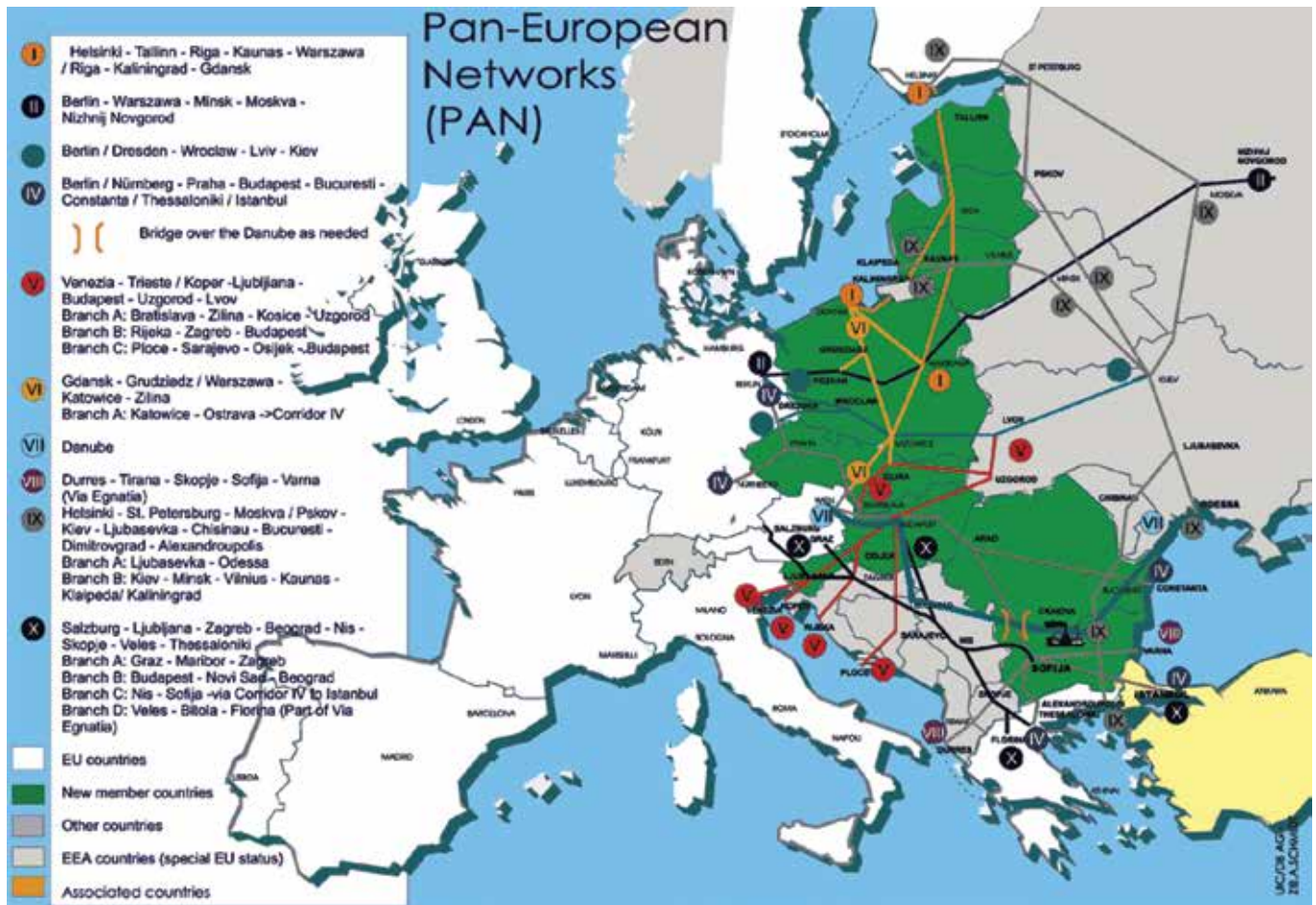


Fig. 2. Map of Pan-European Network [11, p. 8]

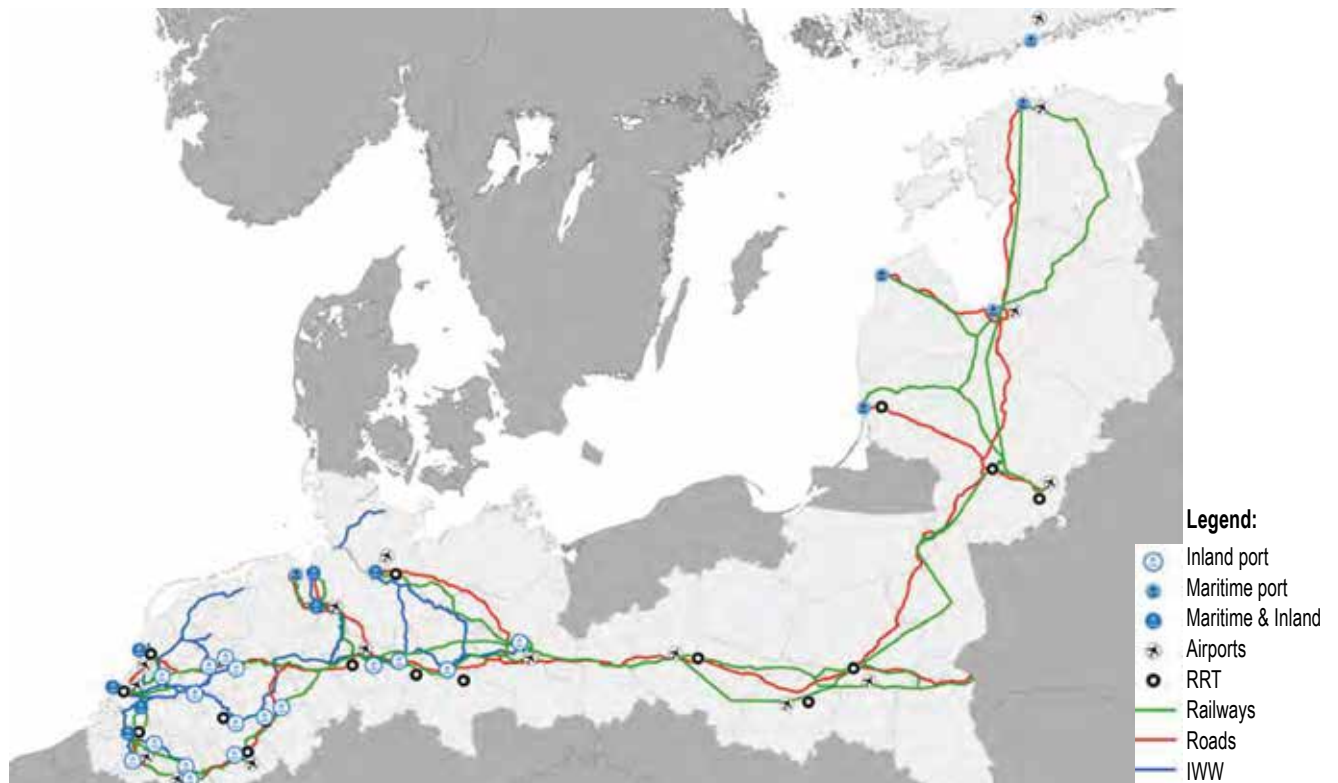


Fig. 3. Road, rail and the inland waterways infrastructure of the Rail Baltica [15]

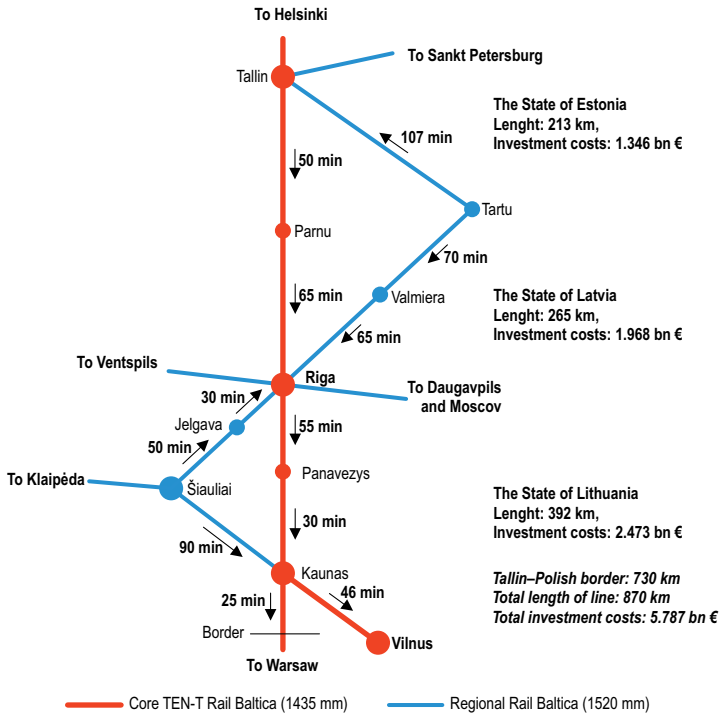


Fig. 4. Rail Baltica infrastructure shareholders [14]

Finansowanie

Investment expenditures and operational costs on the Rail Baltica line together with the new section were updated in 2017 in a study commissioned by the European Commission. The total effort was estimated at € 5.788 billion (€ 6.652 million per 1 km), and the maintenance and operating costs of the 2030 accounting year are € 70.7 million (€ 81 thousand per 1 km), including the cost of technical maintenance 58,9 € million (67.7 thousand € per 1 km) [8].

In the analysis carried out, the benefits of the project were estimated at EUR 18.2 billion, including socio-economic at EUR 16.2 billion, and multiplier effects at EUR 2 billion. The benefits from the construction of the line are therefore more than three times higher than the costs of its construction.

Multimodality

The new line will have numerous connections with airports and the road network, and the system of new and reconstructed stations will contribute to increasing access to railway services. In the Baltic states, there are 5 seaports connected to the railway

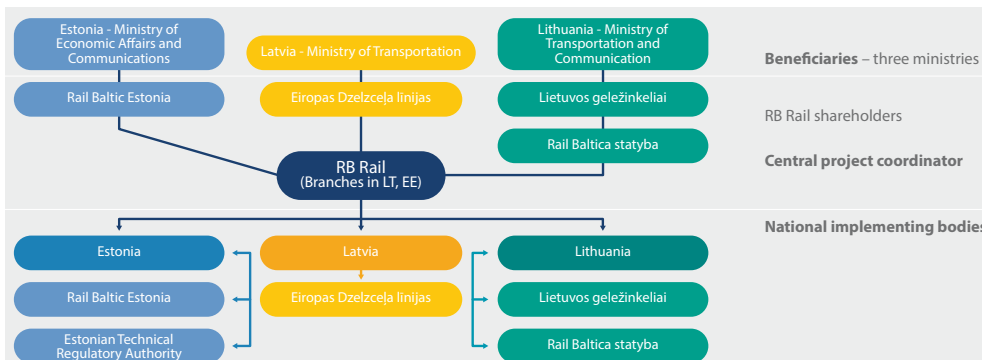


Fig. 5. Rail Baltica Project Governance Structure [14]

Tab. 1. Rail Baltica mile stones [7]

1991-1997	Presentation of the first ideas and proposals for the creation of a pan-European corridor at conferences in Prague, Crete and Helsinki
1994	Presentation of the concept of Rail Baltica as an important element of spatial development of the Baltic Sea region in a joint document Vision and Strategy of areas surrounding the Baltic Sea 2010
2001	Signing of a general cooperation agreement by the ministers of transport of Lithuania, Latvia and Estonia
2003	Putting the Rail Baltica on the list of priority projects that the European Commission submitted to the Council of the European Union.
2004	Entering the Rail Baltica project on the list of TEN-T priority investments
2005	The European Commission has proposed to co-finance the feasibility study for a new line with the EU funds
2006	Signing a letter of intent regarding Rail Baltica by the ministers of the five partner countries
2008	EC decision on co-financing (TEN-T) for projects in Lithuania, Latvia and Estonia
2010	Signing of a cooperation memorandum between ministries of transport in Poland, Lithuania, Latvia, Estonia and Finland
2011	Preparation of a feasibility study by AECOM
2013	Signing of a declaration of cooperation by the ministers of transport of Estonia, Latvia and Lithuania
2014	Signing of a cooperation agreement by the Prime Ministers of Estonia, Latvia and Lithuania Establishment of RB Rail AS
2015	Signing the first financing contract from CEF funds Signing of a declaration of cooperation between ministers responsible for transport of the Baltic States, Poland and Finland and Violetta Bulc, Transport Commissioner Detailed technical studies Confirmation of support for the project by Poland and Finland
2016	Signing the Rail Baltica framework agreement Signing of the second financing contract with CEF funds Signing of the inter-beneficiary agreement
2017	Completion of the cost-benefit analysis (CBA) Signing of intergovernmental agreement by the Prime Ministers of Estonia, Latvia and Lithuania Acceptance of the Rail Baltica Interreg IIIB application by the Steering Committee

Tab. 2. Rail Baltica characteristics

Gaugage	1 435 mm
Length	730 + 140 km
Max project speed	
- for passange trains	249 km/h
- for freight trains	120 km/h
Number of tracks	Double track
Electrification	2x25 kV AC
Axle load	25 t
Min. length of station track	400 m
Max. length of freight trains	740 m
Traffic management	ERTMS level 2
Environmental protection	- noise protection barriers - animal passages
Cross roads	All bi-levels

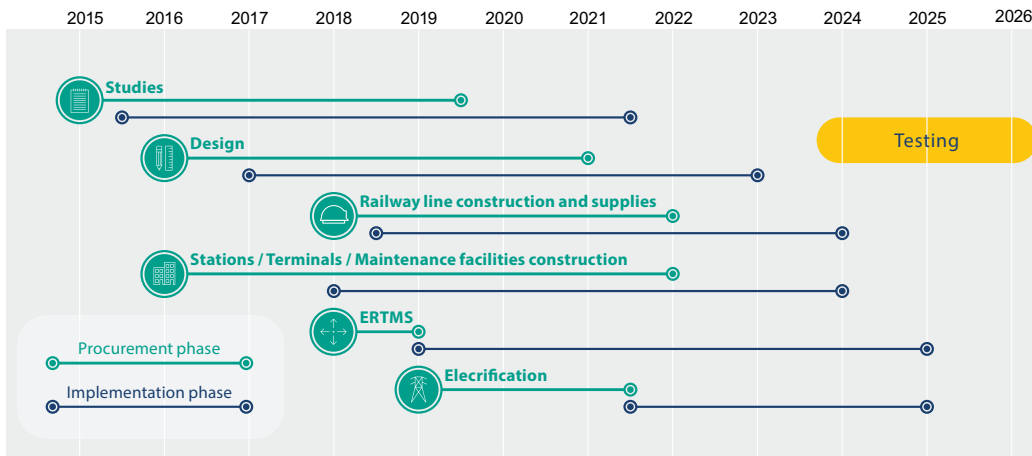


Fig. 6. The Rail Baltica Global Project Procurement Plan [14]

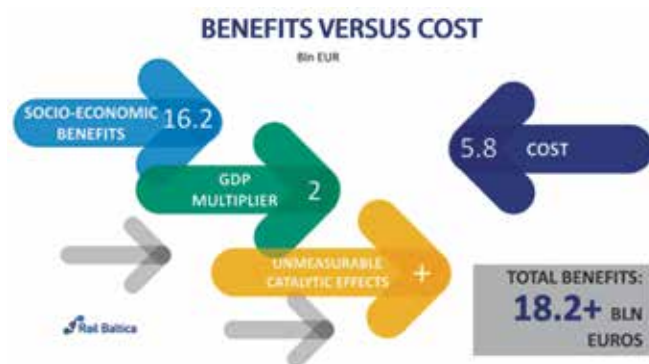


Fig. 7. Cost-benefits comparison [12]

network, including Riga and Tallinn, which will be directly incorporated into the new line service. Rail Baltica will also be connected by the 1 520 mm system lines from Russia and Belarus to ports on the Baltic Sea. Kaunas will have a special role in this system, which will be a node at the intersection of corridors north-south and east-west. The port in Klaipeda will be the point of transshipment of goods from the east to the Scandinavian countries, including Ukraine and the Black Sea region through the Viking corridor (the electrification ended in 2017). 7 passenger stations are planned for Rail Baltica: Tallinn, Pärnu, Riga Central, Riga Airport (RIX), Panevėžys, Kaunas, and Vilnius, which will be reconstructed or built from scratch. The railway junction in Riga will undergo a major reconstruction. The construction of additional stations for passenger traffic of regional significance is also considered.

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