



Visegrad Fund

# Multimodal terminals in Slovakia as a factor of the development of freight transport flows between Slovakia and Ukraine



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**Multimodal terminals on the territory of Ukraine and neighboring EU countries**

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## Introduction

- Increased intensity of cargo flows across the Ukraine-EU borders requires improvement in transport and border infrastructure of the border regions.
- The improvement of the infrastructure should include many measures, such as
  - increasing the capacity of border crossing points,
  - building missing sections of motorways,
  - developing a network of intermodal and transshipment terminals.
- Geographical position of the Slovak Republic predetermines and enhances importance of transit in direction west-east as well as north-south.



## Aims of presentation

- to discuss the notion of multimodal transport
  - Multimodal transport
  - Combined transport
  - Intermodal transport
  - Integrated transport
- to analyse multimodal terminals in Slovakia as a factor of the development of freight transport flows between Slovakia and Ukraine



## Multimodal / Intermodal freight transport

**MULTIMODAL FREIGHT TRANSPORT** (Glossary for Transport Statistics 2019)

- **Transport of goods by at least two different modes of transport.**
- **Is often based on a contract regulating the full multimodal transport.**
- **Intermodal transport is a particular type of multimodal transport.**

**INTERMODAL FREIGHT TRANSPORT** (Glossary for Transport Statistics 2019)

- **Multimodal transport of goods, in one and the same intermodal transport unit by successive modes of transport without handling of the goods themselves when changing modes.**
- **The intermodal transport unit can be a container, swap body or a loaded vehicle travelling on another vehicle.**
- **The return movement of empty containers/swap bodies and empty goods road vehicles/trailers are not themselves part of intermodal transport since no goods are being moved. Nevertheless, such movements are associated with intermodal transport.**



## Multimodal / Intermodal freight transport

- **Multimodal transport** (also known as combined transport) is the **transportation of goods under a single contract**, but performed with **at least two different modes of transport**;

The carrier is liable (in a legal sense) for the entire carriage, even though it is performed by several different modes of transport (by rail, sea and road, for example). The carrier does not have to possess all the means of transport, and in practice usually does not; the carriage is often performed by sub-carriers (referred to in legal language as "actual carriers"). The carrier responsible for the entire carriage is referred to as a multimodal transport operator (Wikipedia).

- **Intermodal freight transport** consists of transporting goods **in a single loading unit** (such as a container) **using a combination of modes of transport**: road, rail, waterways or air.

It has the potential to optimise the relative strengths of each of the modes in terms of flexibility, speed, costs and environmental performance (ECA 2023).



## Multimodal / Intermodal freight transport

- Both intermodal and multimodal transportation involve **moving cargo from origin to destination using more than one method of transport**. This can be truck, rail, barge, ship, or any combination of those. Both can also mean that several different carriers operate each leg of the journey.
- **The difference is in the contract.**
- **In multimodal transportation, one contract covers the entire journey.** One carrier takes sole responsibility and ensures door-to-door delivery is completed, even if other carriers are used in the journey.
- **In intermodal transportation, there is a separate contract for each individual leg of the journey.** This means that there is more than one responsible entity for the successful delivery of the cargo.

<https://www.containerships.eu>



## Multimodal / Intermodal freight transport

**The Concept of the Development of Intermodal Transport in the SR until 2030** - approved by the Government of the Slovak Republic on April 6, 2022 (Resolution of the Government of the Slovak Republic No. 254)

- There are more sources for interpretations of the terminology of combined and intermodal transport.
- Different degrees of interchangeability of both terms can be found in professional publications.
- A degree of interchangeability can also be found in the *Concept for the Development of Intermodal Transport of the Slovak Republic*, especially in cases where the Concept will work with this terminology referring to a certain source or certain data.
- **Combined transport** is intermodal transport where the major part of the journey is carried out by rail, inland waterway or sea transport and each initial and final part of the journey carried out by road transport is as short as possible.

Concept for the Development of Intermodal Transport of the Slovak Republic (2022)



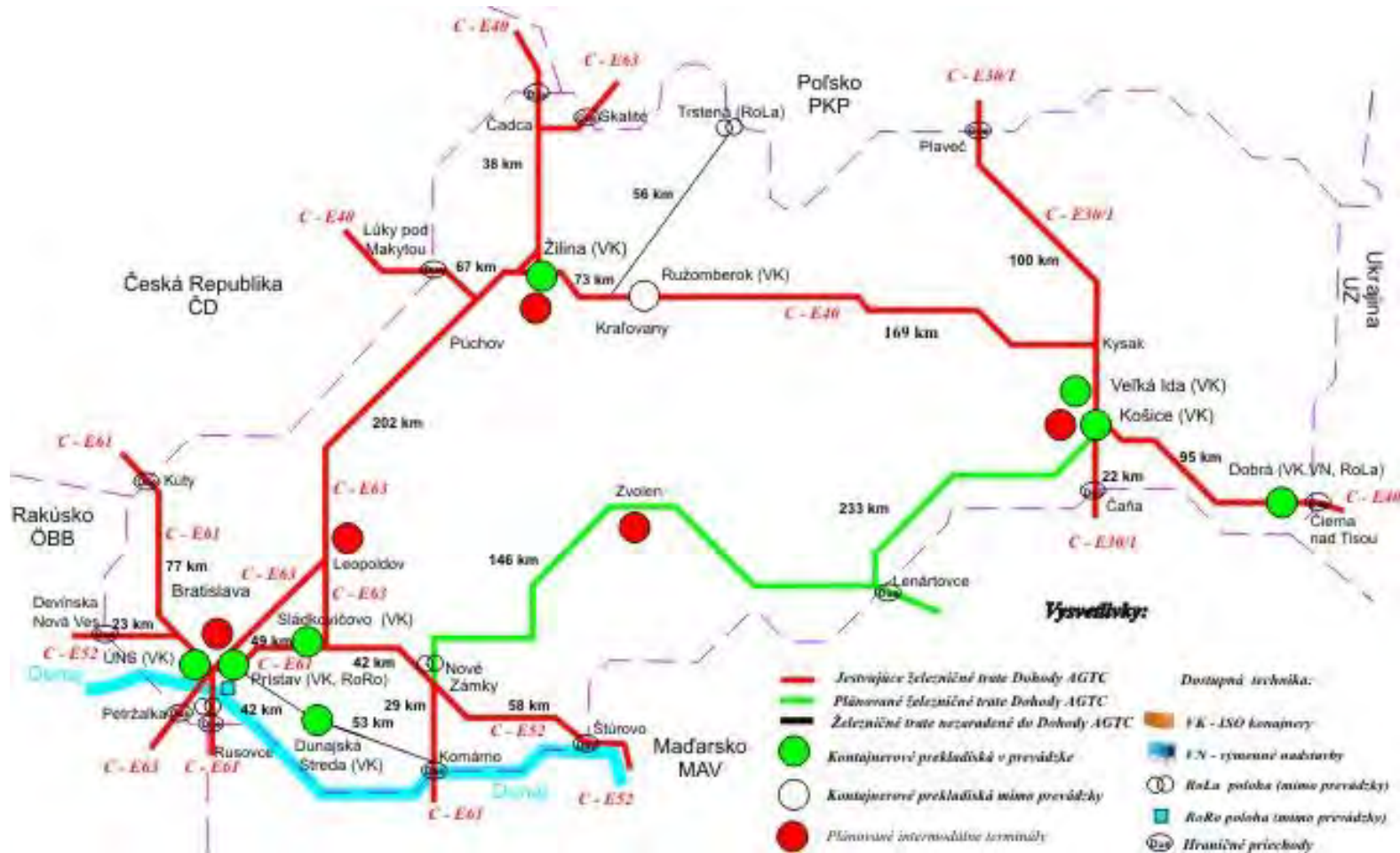
## Goals of intermodal freight transport in Slovakia

- Move 30% of road transport over 300 km to rail, or water by 2030 and, by more than 50% by 2050 (compared to 2005) - in accordance with the White Paper (2011),
- Long-term and systematic support and development of intermodal freight transport as an ecological and long-term sustainable mode of freight transport.
- Support for the interest of freight transport operators in the transfer of road freight transport to railways, or for intermodal freight transport, as well as preventing the further transfer of rail transport to the road.
- Increase intermodal freight transport's competitiveness and natural growth in the Slovak Republic.



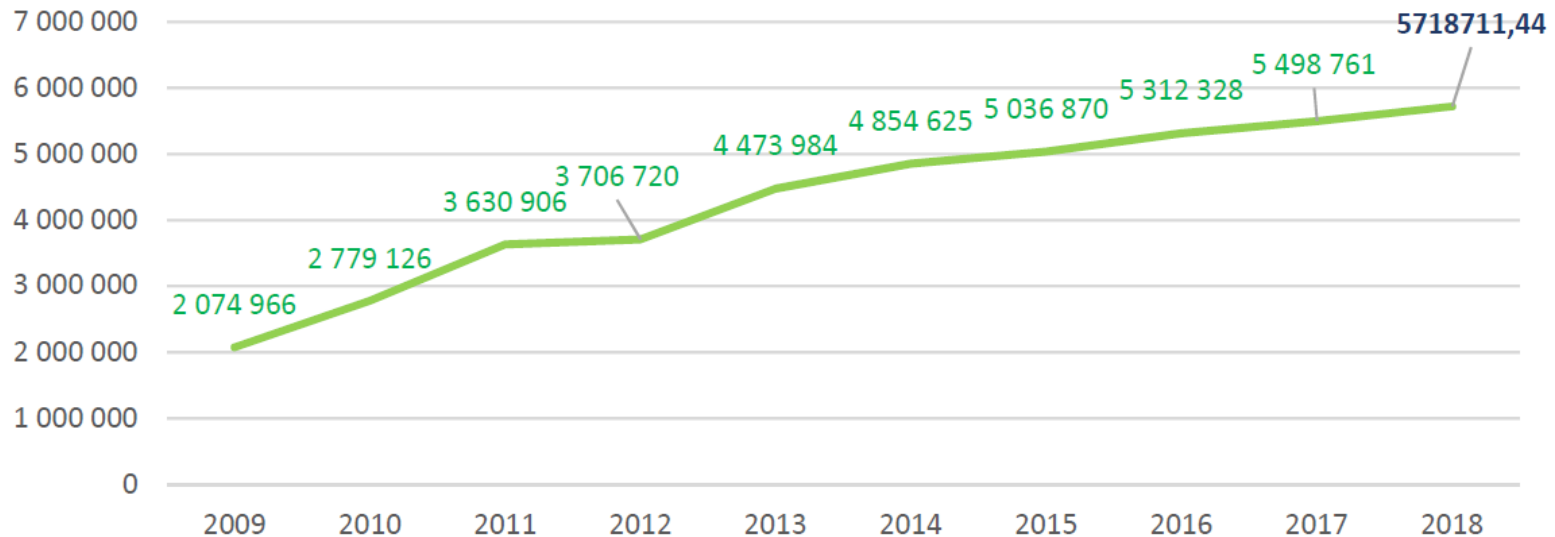


# Infrastructure of integrated transport



Source: <http://www.intermodal.sk>

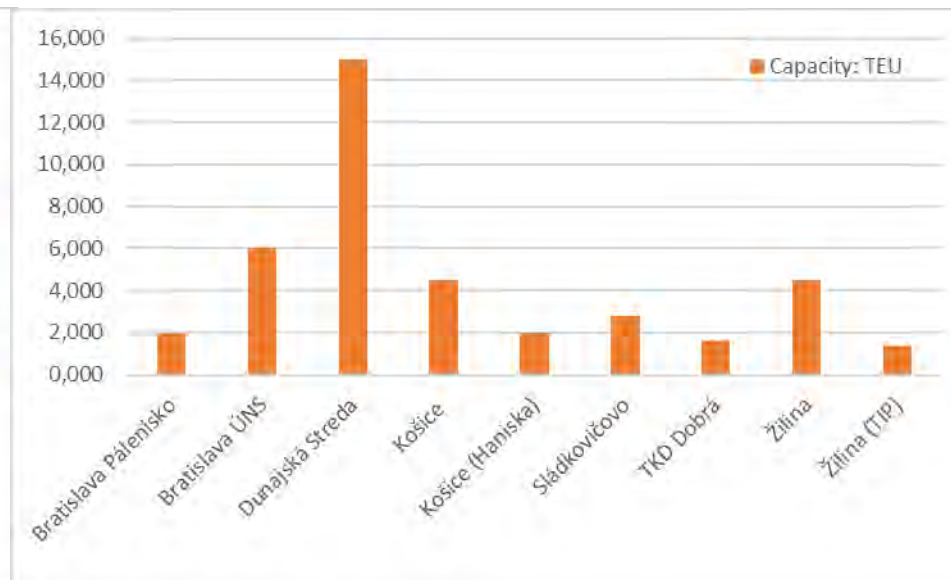
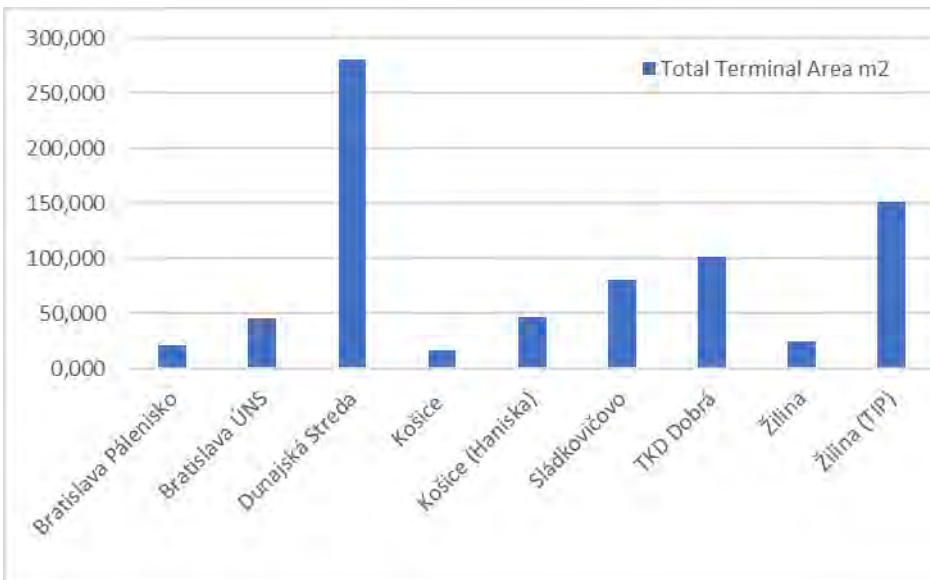
## Performance of combined transport in the Slovak Republic (gross tons)



Source: Concept for the Development of Intermodal Transport  
of the Slovak Republic (2022)



## Terminals of intermodal transport



Total Terminal Area (m²)

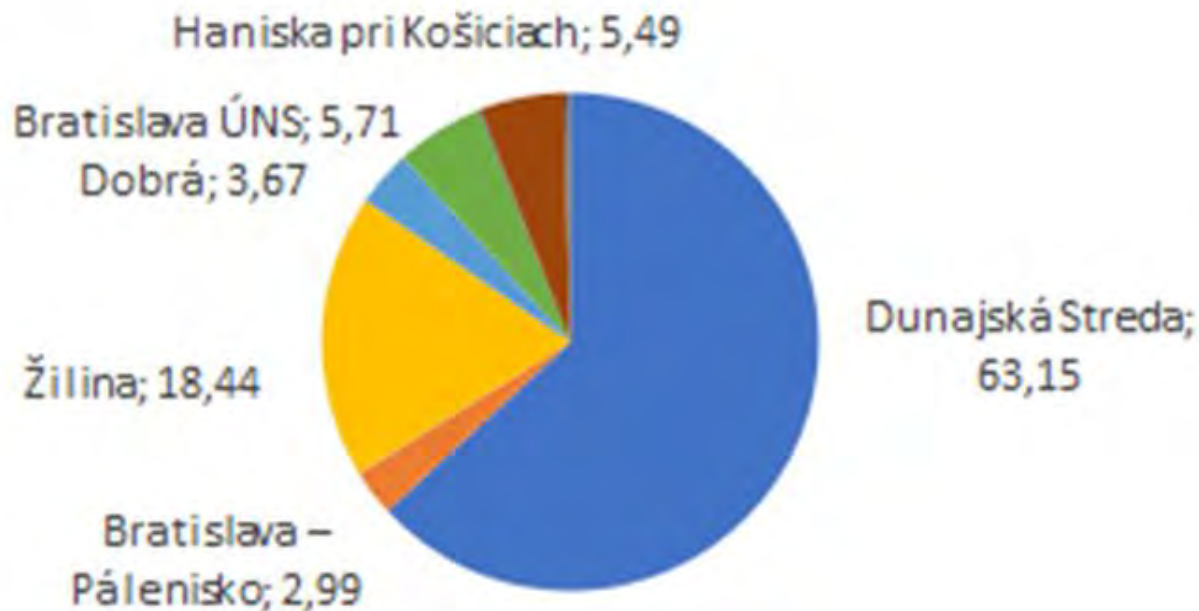
Capacity (TEU)

Terminal	Bratislava Pálenisko	Bratislava ÚNS	Dunajská Streda	Košice	Košice (Haniska)	Sládkovičovo	TKD Dobrá	Žilina	Žilina (TIP)	Lužianky (TIP)
Operator	SPaP a.s.	Rail Cargo Group	Metrans	Rail Cargo Group	Metrans	SCM Logistics, s. r. o.	Bulk Transshipment Slovakia a.s.	Rail Cargo Group	Metrans	ŽSR
Total Terminal Area m²	21,000	45,422	280,000	16,200	46,500	80,000	100,735	25,000	151,854	52,000
STACKING AREA m²	30,000	33,000	250,000	10,500	20,000	30,000	0,000	20,000	11,650	0,000
Capacity: TEU	2,000	6,000	15,000	4,500	2,000	2,800	1,630	4,500	1,368	0
Rail tracks	1 x 150 m, 1 x 300 m	1 x 350 m, 1 x 335 m	5x 650 m, 4x 550 m	2 x 180 m	2x 550m	1x 1000 m, ax 264 m	2 x 579 m, 2 x 594 m, 2 x 709 m, 2 x 807 m	1 x 425 m, 1 x 470 m	2 x 750m	2 x 700 m

Data source: own research (2023)



## Terminals of intermodal transport



Share of handled ITU (%) in 2018

Data source: Ministry of Transport (2020)



## Dunajská Streda intermodal terminal

- The Dunajská Streda HUB terminal has been in operation since 1999. Since 2007, the company has been operating in new premises, at **one of the most modern terminals in the Central and Eastern Europe region**, which was built as an **green field investment**.
- The investment in the terminal is one of the most significant private investments in the terminal infrastructure in the territory of Slovakia.
- Operated by METRANS /Danubia/, a.s.
- Terminal area: 280,000 m<sup>2</sup>
- Stacking area: 250,000 m<sup>2</sup>
- Rail tracks: 5x 650 m, 4x 550 m
- 9 trains simultaneously
- Capacity 15,000 TEU
- Direct trains to Koper 15 x / week, Česká Třebová 14 x / week, Košice 6 x / week, Krems 1 x / week, Hamburg CTA Terminal 5 x / week, Hamburg Eurokai Terminal 3 x / week, Hamburg Burchardkai Terminal 2 x / week, Bremerhaven 4 x / week



Source: <https://www.terminaldunajskastreda.sk/>





## TIP Žilina intermodal terminal

- TIP Žilina Ltd. was opened in 2017 in Teplička nad Váhom (near KIA Motors plant)
- As the operator of the combined transport terminal has signed a concession contract, in accordance with which ensures the operation of the terminal in Teplička for 30 years.
- Based on the concession contract, TIP Žilina Ltd. allows access to **open infrastructure for all users** on a non-discriminatory basis under transparent conditions.
- TIP Žilina Ltd. belongs to METRANS Group
- Terminal area: 151,854 m<sup>2</sup>
- Stacking area: 11,650 m<sup>2</sup>
- Rail tracks: 2 x 750m
- Capacity: 1.368 TEU



Source: <https://www.terminalzilina.sk>



## Košice intermodal terminal

- Terminal is located in **Haniska** near U. S. Steel Košice
- Operated by METRANS /Danubia/, a.s. since 2012
- Terminal area: 46,500 m<sup>2</sup>
- Stacking area: 20,000 m<sup>2</sup>
- Rail tracks: 2x 550m
- Capacity: 2,000 TEU



Source: <https://metrans.eu>



## Bratislava Pálenisko terminal (the port of Bratislava)

- The container terminal located at the port of Bratislava is the **only trimodal container terminal** in Slovakia.
- The port of Bratislava is located on the Danube river kilometer 1868. From the point of view of logistics, it has a **very advantageous location and connection to road and rail infrastructure**.
- Slovenská plavba a prístavy a.s. is active in the field of the river transport of bulk and piece cargo along the entire navigable stretch of the Danube and Main rivers.
- A warehousing area of 30,000 m<sup>2</sup> allows us to store up to 2,000 TEU.
- Regular rail connections to: Mělník (CZ), Bremerhaven (D), Rostock (D), Koper (SI), Budapest (HU), Tierste (I)
- Transshipment and warehousing of bulk cargo, steel products and oversized cargo.



Source: <http://www.spap.sk>





## Bratislava ÚNS intermodal terminal

- Operated by Rail Cargo Group
- Terminal area: 45,422 m<sup>2</sup>
- Stacking area: 33,000 m<sup>2</sup>
- Rail tracks: 1 x 350 m, 1 x 335 m
- Capacity 6,000 TEU



- Direct trains TransFER to Vienna, Koper, Istanbul and Köseköy,
- Combination of TransFER connections  
Bratislava - Vienna - Budapest - China (Chengdu, Jinan, Xian)  
Bratislava - Vienna - Budapest - Malaszewicze - China (Chongqing, Wuhan, Zhengzhou)



## Žilina intermodal terminal

- Operated by Rail Cargo Group
- Terminal area: 25,000 m<sup>2</sup>
- Stacking area: 20,000 m<sup>2</sup>
- Rail tracks: 1 x 425 m, 1 x 470 m
- Capacity 4,500 TEU
- Renovation 2016



- The Žilina Terminal is located in the north of Central Slovakia and this makes it extremely **important for the automobile sector**, with its focus on trains to Kaliningrad in Russia and its connection to the Port of Koper in Slovenia.



## Košice intermodal terminal

- Operated by Rail Cargo Group
- Terminal area: 16,200 m<sup>2</sup>
- Stacking area: 10,500 m<sup>2</sup>
- Rail tracks: 2 x 180 m
- Capacity 4,500 TEU
- Renovation 2014



Source: <https://www.railcargo.com>



## Sládkovičovo intermodal terminal

- Operated by SCM Logistics, Ltd.
- Terminal area: 80,000 m<sup>2</sup>
- Stacking area: 30,000 m<sup>2</sup>
- Rail tracks: 1x 1000 m, 1x 264 m
- Capacity 2,800 TEU



**FOR SALE**



<b>HAMBURG</b>	EXPORT – 5x týždenne IMPORT – 4x týždenne
<b>BREMERHAVEN</b>	EXPORT – 3x týždenne IMPORT – 3x týždenne
<b>ROTTERDAM</b>	EXPORT – 2x týždenne IMPORT – 2x týždenne
<b>ANTVERPY</b>	EXPORT – 2x týždenne IMPORT – 2x týždenne
<b>KOPER</b>	EXPORT – 5x týždenne IMPORT – 3x týždenne
<b>TRIESTE</b>	EXPORT – 5x týždenne IMPORT – 3x týždenne

Source: <https://www.scmlogis.sk>



## TKD Dobrá intermodal terminal

- Located is on the international combined transport route entering the Schengen area
- Operated by Bulk Transshipment Slovakia a.s.
- Connected to the railway network of normal (NR-1435 mm) and wide gauge (W - 1520 mm)
- Rail tracks: 2 x 579 m, 2 x 594 m, 2 x 709 m, 2 x 807 m
- Terminal area: 100,735 m<sup>2</sup>
- Capacity: 1,630 TEU



Source: <https://www.btslovakia.sk/>



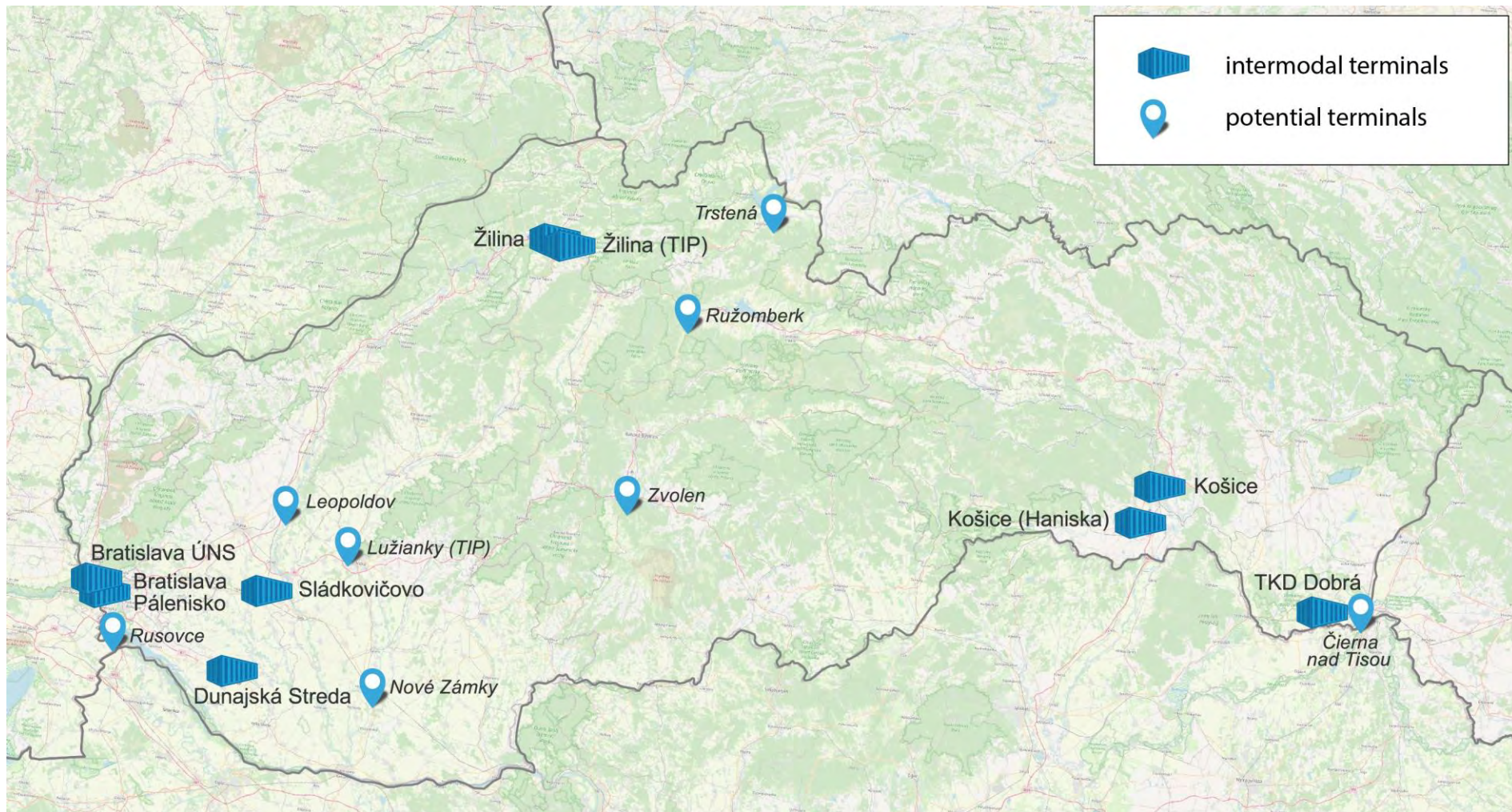
## Lužianky TIP terminal

- The terminal is part of the strategic Nitra industrial park in close proximity to the construction of the Land Rover Jaguar plant
- Operated by Železnice Slovenskej republiky (Railways of the Slovak Republic)
- Rail tracks: 2 x 700 m equipped with a double-deck loading ramp for transport of new cars
- Terminal area: 52,000 m<sup>2</sup>
- Without container terminal
- Opened in 2018





## Intermodal terminals in Slovakia



Data source: own research





## Rhine-Danube core network TEN-T corridor



Source: <https://transport.ec.europa.eu/>





## Conclusions

- There are nine intermodal terminals in Slovakia.
- The most important terminal is located in Dunajská Streda.
- The main operators are Metrans and Rail Cargo Group.
- Many potential places for the development of multimodal transport but moving of freight transport from road to railway is still a challenge.
- Intermodal terminal TKD Dobrá is important for development of freight transport between Ukraine and the EU.
- There is also potential to develop river transport on the Danube river.





**Thank you very much for your attention**

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