



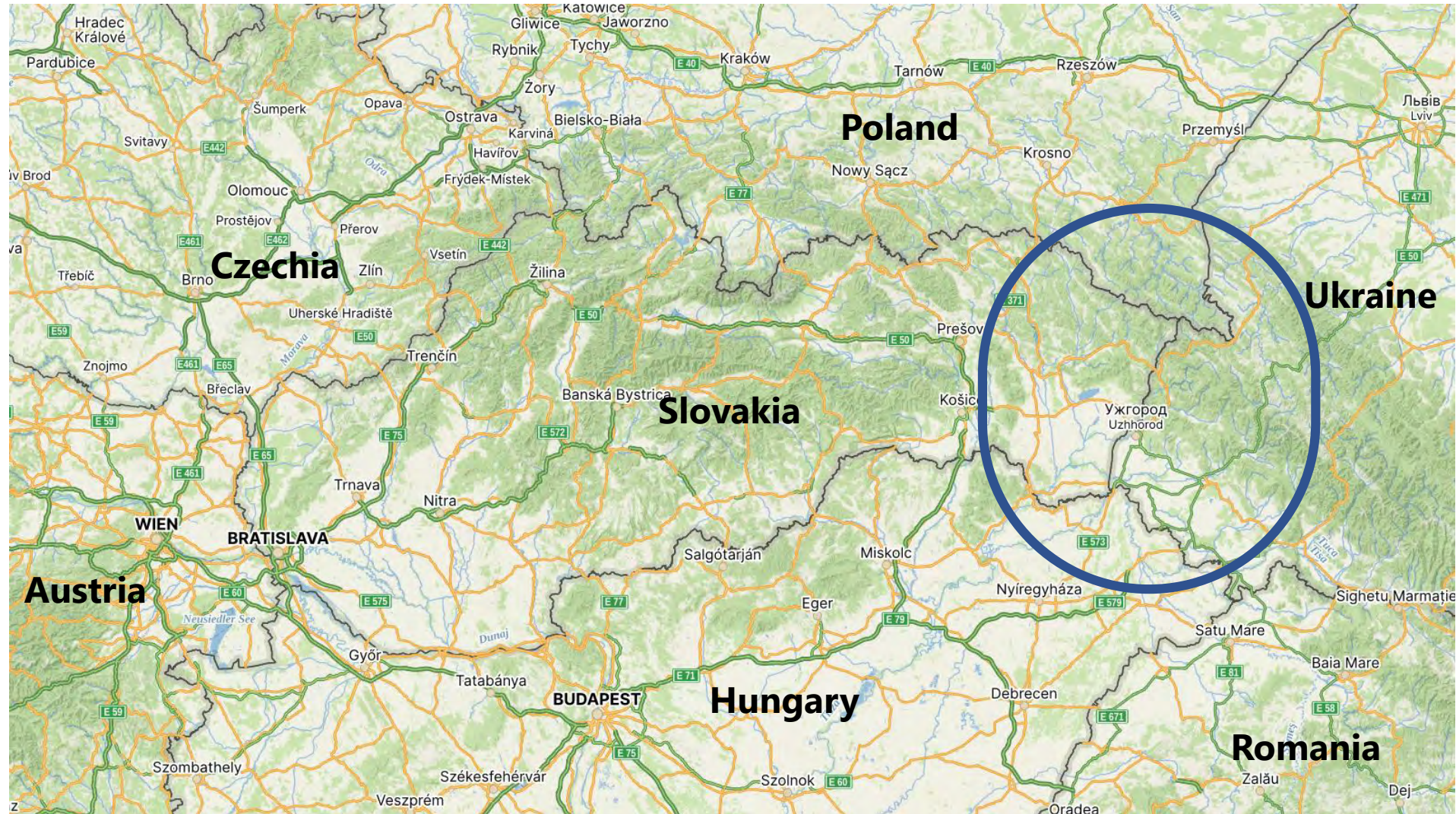
PROSPECTS OF BUILDING FREIGHT TRANSPORT INFRASTRUCTURE BETWEEN SLOVAKIA AND UKRAINE



AIMS OF PRESENTATION

- to introduce some **theoretical aspects** of a relationship between transport and regional development
- to introduce few remarks concerning **European transport policy** and **transport policy in Slovakia**
- to analyse **transport infrastructure in Slovakia** as a precondition for the development of freight transport flows between Slovakia and Ukraine
- to analyse **multimodal terminals in Slovakia** as a factor of the development of freight transport flows between Slovakia and Ukraine
- to present **possibilities for improvement** in transport and border infrastructure of the border regions

SLOVAK-UKRAINIAN BORDERLAND



- Geographical position of the Slovak Republic predetermines and enhances importance of transit in direction west-east as well as north-south.

RELATIONSHIP BETWEEN TRANSPORT AND REGIONAL DEVELOPMENT

- Transport and transport infrastructure plays an important role in the development of regions and centres.
- Infrastructure is only one of the instruments for improving the development of a certain region, but it is very important because it is the base of many other socio-economic activities in a country or region (Nijkamp 1986).
- Transport by itself is not a sufficient prerequisite for development. However, the lack of transport infrastructures can be seen as a constraining factor for development. A poor level of transport service can negatively affect the competitiveness of regions and corporations and thus have a negative impact on regional added value and employment (Rodrigue et al. 2013).
- Regions and locations with poor quality transport are at a competitive disadvantage. Transport infrastructure is only one of the factors, which influence regional development. For the successful economic development of a region, good economic and political conditions are also necessary (Banister & Berechman 2001).

EUROPEAN TRANSPORT POLICY

- Transport infrastructure has been the cornerstone of EU regional development policy for a long time. The EU has placed huge emphasis on transport infrastructure investment, with the aim of promoting territorial cohesion, reducing economic disparities, and promoting economic development (Crescenzi & Rodríguez-Pose 2012).
- Transport policy is one of the EU's common policies.
Its important aims are the opening up of transport markets and the creation of the Trans-European Transport Network and development of sustainable mobility.
- White Paper 'Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system' 2011
- Action Plan on military mobility: EU takes steps towards a Defence Union
- European Green Deal 2020
- Sustainable and Smart Mobility Strategy – putting European transport on track for the future 2020

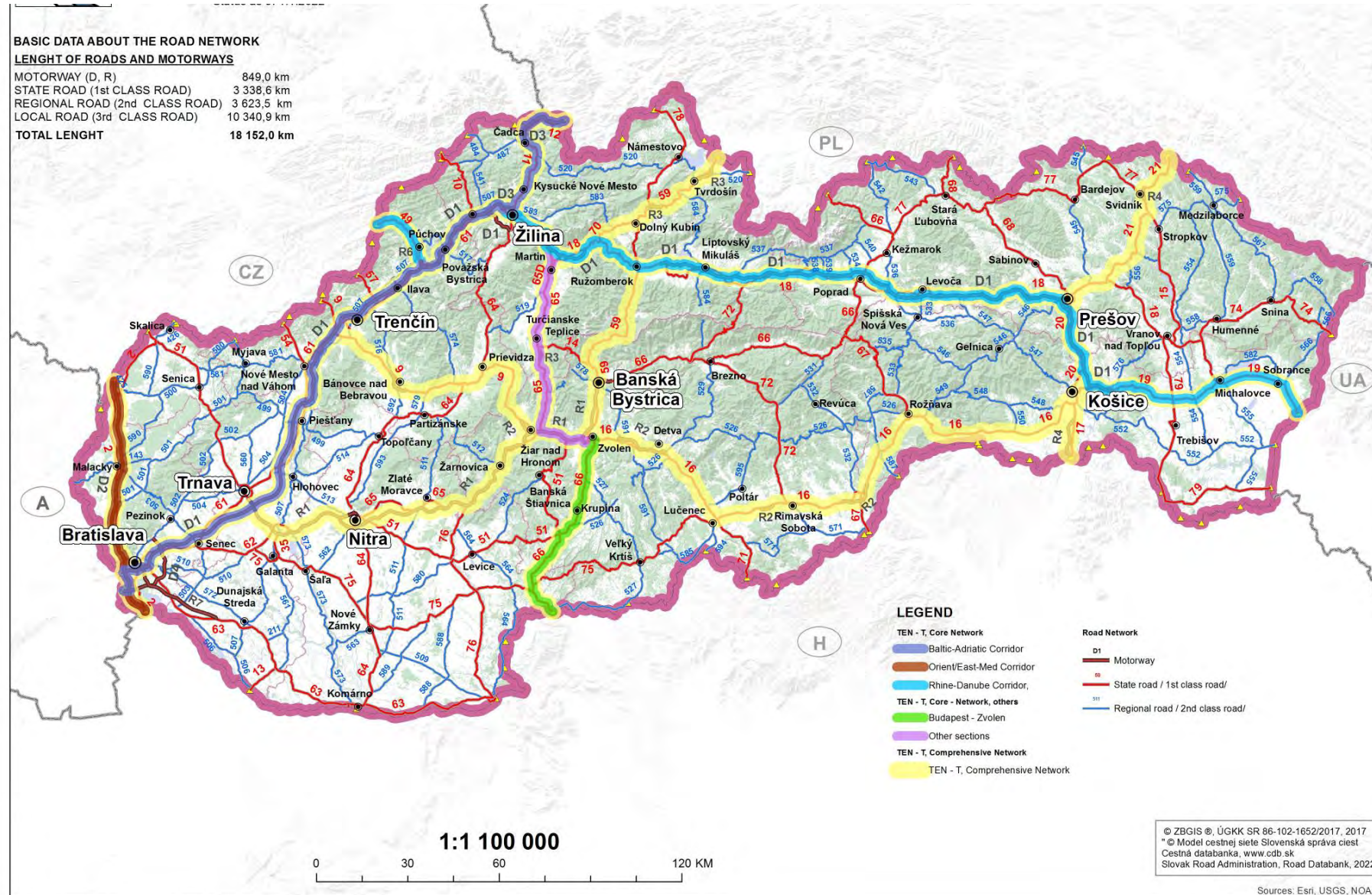
TRANSPORT POLICY IN SLOVAKIA

- Strategic Transport Development Plan of the Slovak Republic up to 2030 (2016)
- Strategy for a smart and sustainable mobility of Slovakia. A vision for the future direction of transport in Slovakia (2021)
- Long-term road transport and smart mobility challenge addressing plan 2021-2030 and Action plan for addressing road transport and smart mobility challenges 2021-2025 (2021)
- The Concept of the Development of Intermodal Transport in the SR until 2030 (2022)

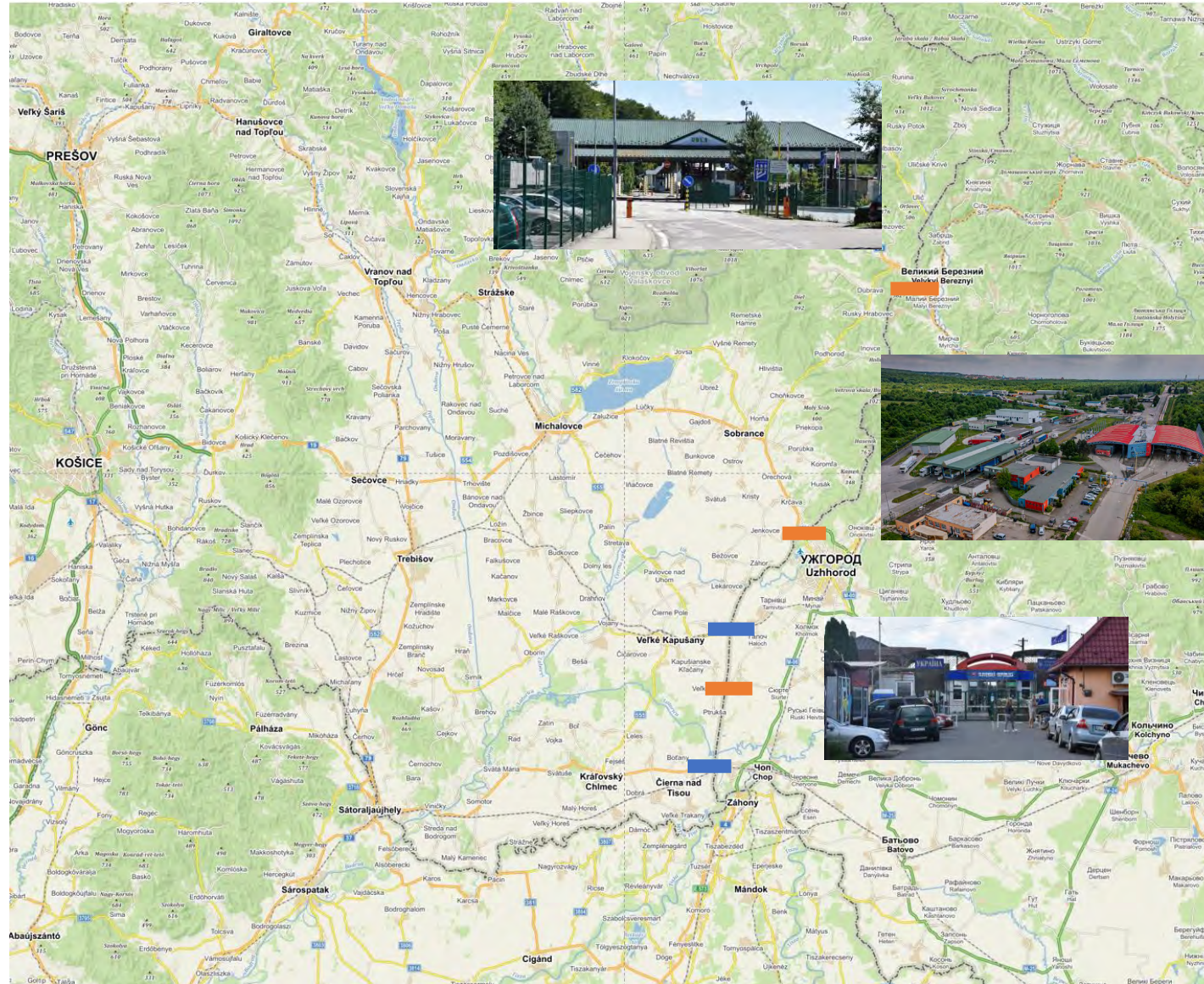
RHINE-DANUBE CORE NETWORK TEN-T CORRIDOR



TEN-T CORE NETWORK AND COMPREHENSIVE CORRIDORS IN SLOVAKIA



BORDER CROSSINGS SK - UA



road
railway

- Ubl'a - Malyj Bereznyj
- Vyšné Nemecké – Užhorod
- Maťovské Vojkovce – Pavlovo
- Veľké Slemence - Mali Selmenci
- Čierna nad Tisou - Čop

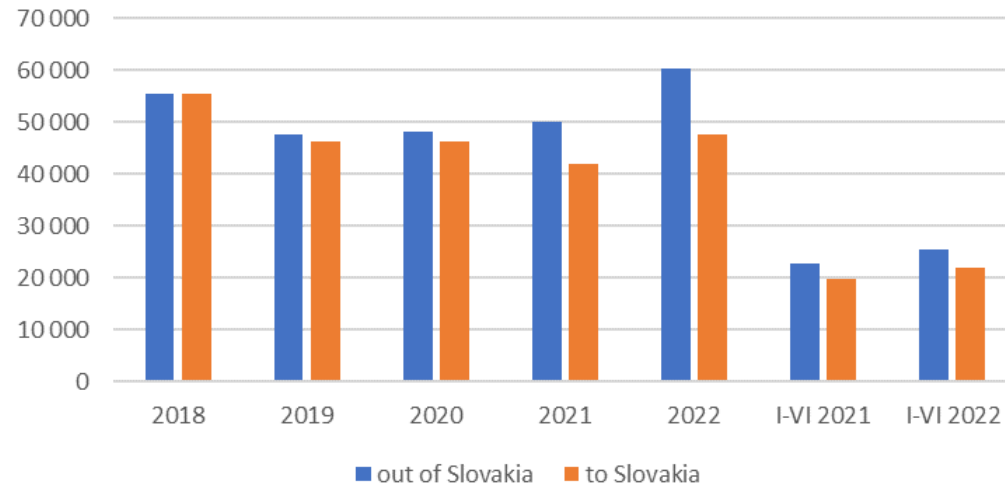
SLOVAK-UKRAINIAN ROAD CROSS-BORDER TRANSPORT INFRASTRUCTURE

Vyšné Nemecké – Užhorod/Ужгород

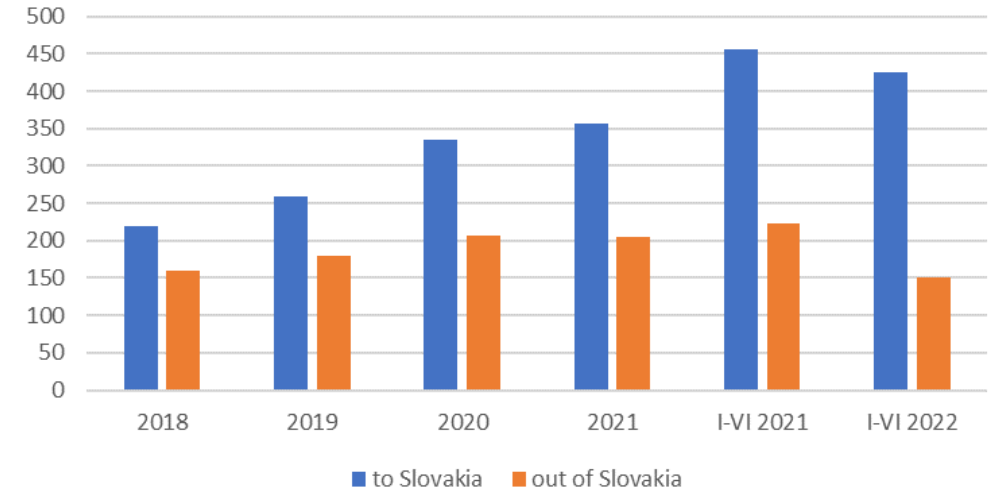
- Road I/19
- Capacity 125 trucks per day



Vyšné Nemecké - Uzhhorod (truck number)



Vyšné Nemecké - waiting times (min.)

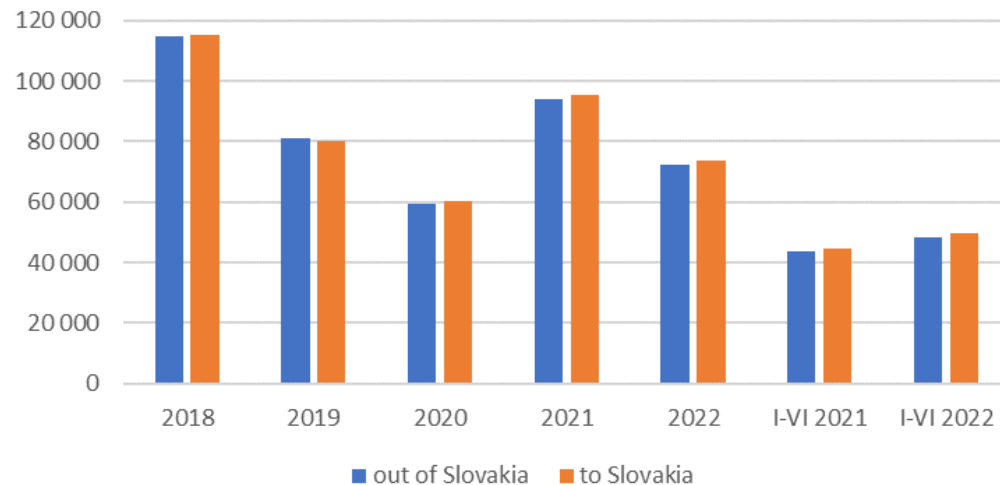


SLOVAK-UKRAINIAN RAIL CROSS-BORDER TRANSPORT INFRASTRUCTURE

Maťovské Vojkovce – Pavlovo/Палло

- the Užhorod - Haniska railway line is a broad-gauge railway track (1, 520 mm) from Užhorod to Haniska near Košice, mainly for the transport of iron ore to the East Slovakian ironworks. Operation started in 1966.

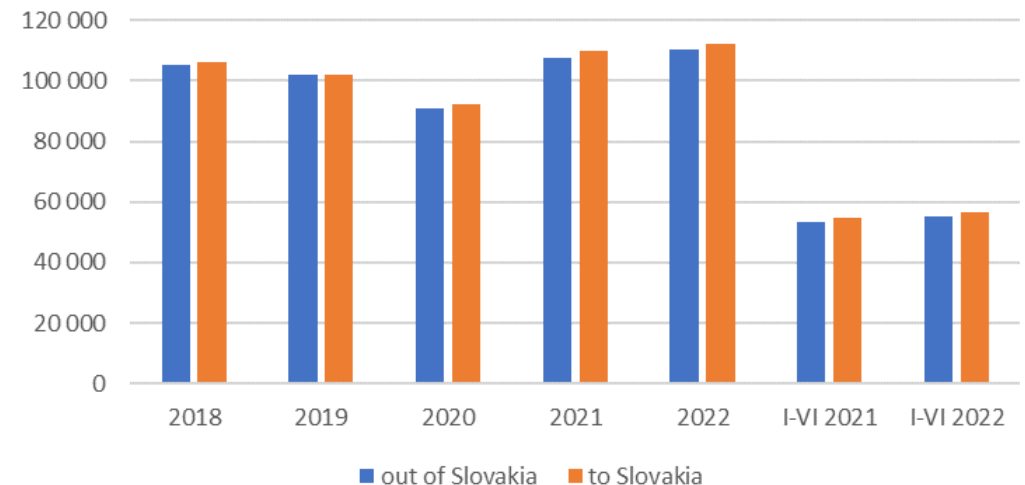
Maťovské Vojkovce - Pavlovo (wagons number)



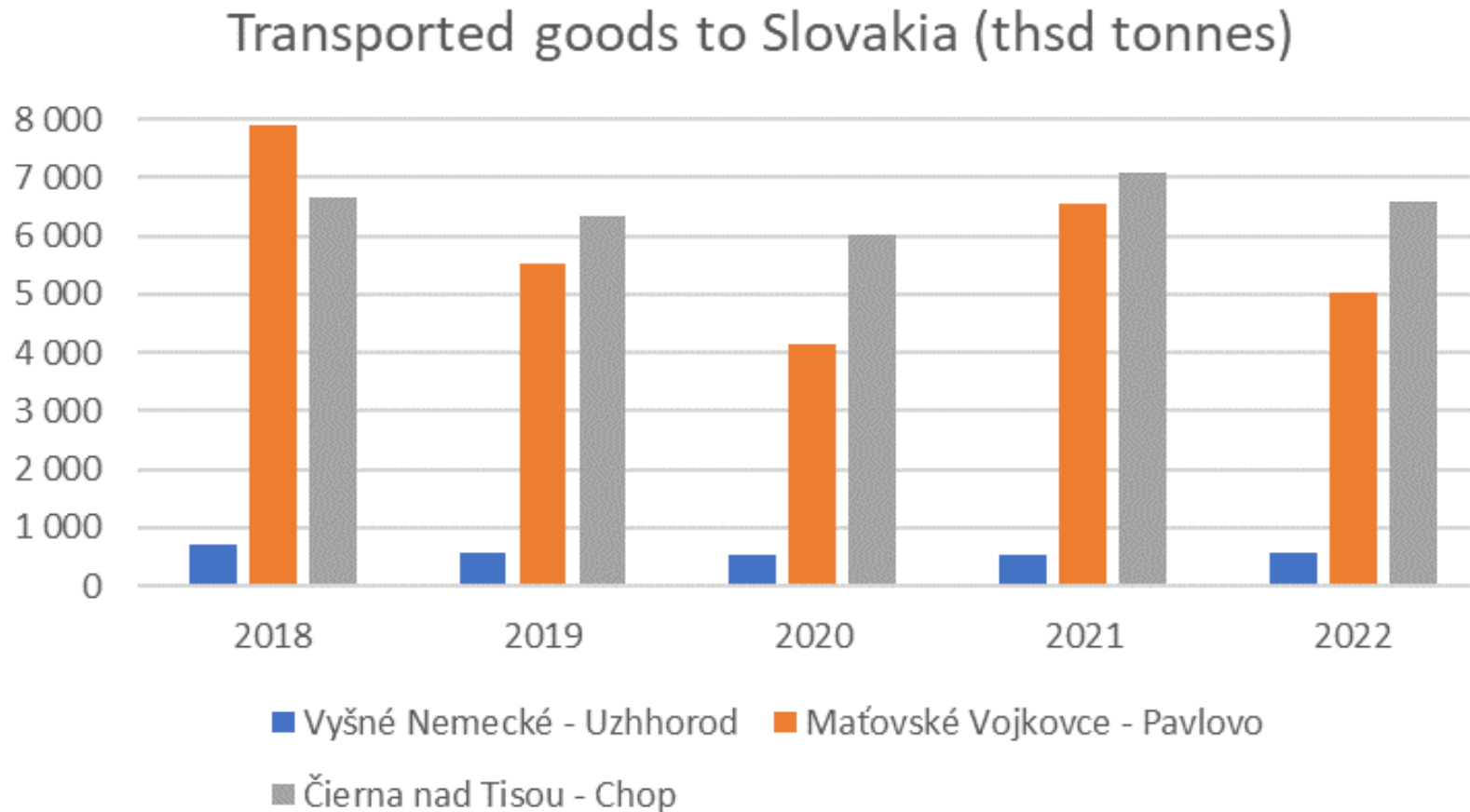
Čierna nad Tisou – Chop/Чоп

- The broad-gauge track was built on the basis of the agreement on the mutual connection of railways between the former Czecho-Slovak and the Soviet Union, adopted in 1946 in Moscow. With this agreement, Czechia-Slovakia undertook to build a transshipment station in Čierna nad Tisou.

Čierna nad Tisou - Chop (wagons number)



SLOVAK-UKRAINIAN RAIL CROSS-BORDER TRANSPORT INFRASTRUCTURE



Data source: Colný úrad Michalovce (2022)

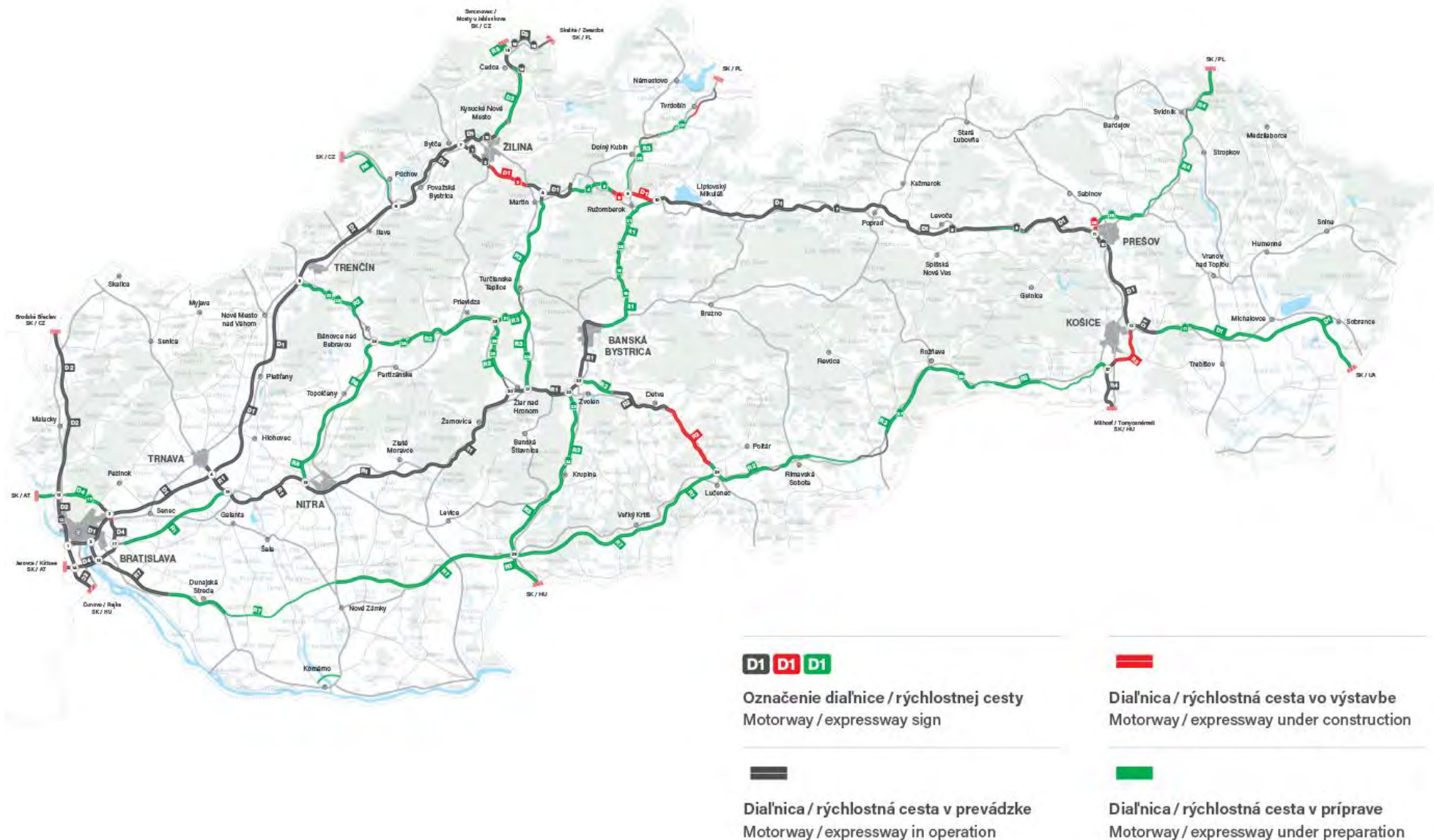
BOTTLENECKS IN SLOVAKIA-UKRAINE RAIL/ROAD CONNECTIVITY

- The main problems connected with **road freight transport** at the Vyšné Nemecké – Uzhhorod checkpoint are insufficient infrastructure and long border crossing times (average waiting times are 200-350 min). Possibilities of improvement are in the organisation of checkpoint.
- What concerns **rail freight transport**, the main problem is a technological incompatibility of transport systems.
 - Standard-gauge tracks (1,435 mm) in Slovakia, versus a broad-gauge system (1,520 mm) in Ukraine requires replace the wagon carts or to reload cargo from the wagons of one width to another. Building transshipment stations or terminals of combined transport are necessary to overcome this incompatibility.
 - Slovakia and Ukraine use different wagon widths. Ukrainian wagons are broader and can also carry more load.
 - Slovak railways have a lower capacity. Congestion on the Ukrainian side, e. g. at the end of July 2022, more than six thousand wagons were waiting at the Chop station and around 900 wagons at the Uzhgorod station in Ukraine (Kosse 2022).

IMPROVEMENT OF FREIGHT TRANSPORT BETWEEN SLOVAKIA AND UKRAINE

- Increased intensity of cargo flows across the Ukraine-EU borders or its potential increase in the future 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 and improvement of organisation of border crossing points,
 - building missing sections of motorways,
 - developing a network of intermodal and transshipment terminals

MOTORWAYS AND EXPRESSWAYS NETWORK IN SLOVAKIA



SLOVAK-UKRAINIAN ROAD CROSS-BORDER TRANSPORT INFRASTRUCTURE

Vyšné Nemecké – Užhorod/Ужгород

- Multimodal feasibility study
Bidovce – state border SK/UA
(I/19 Bidovce – Vyšné Nemecké)
- Five sections:
Bidovce – Dargov (12,6 km),
Dargov – Pozdišovce (18,18 km),
Pozdišovce – Michalovce (10,05 km),
Michalovce – Sobrance (15,81 km),
Sobrance – state border SK/UA (15,48 km),
- Building of the motorway from the border crossing – using finances from CEF

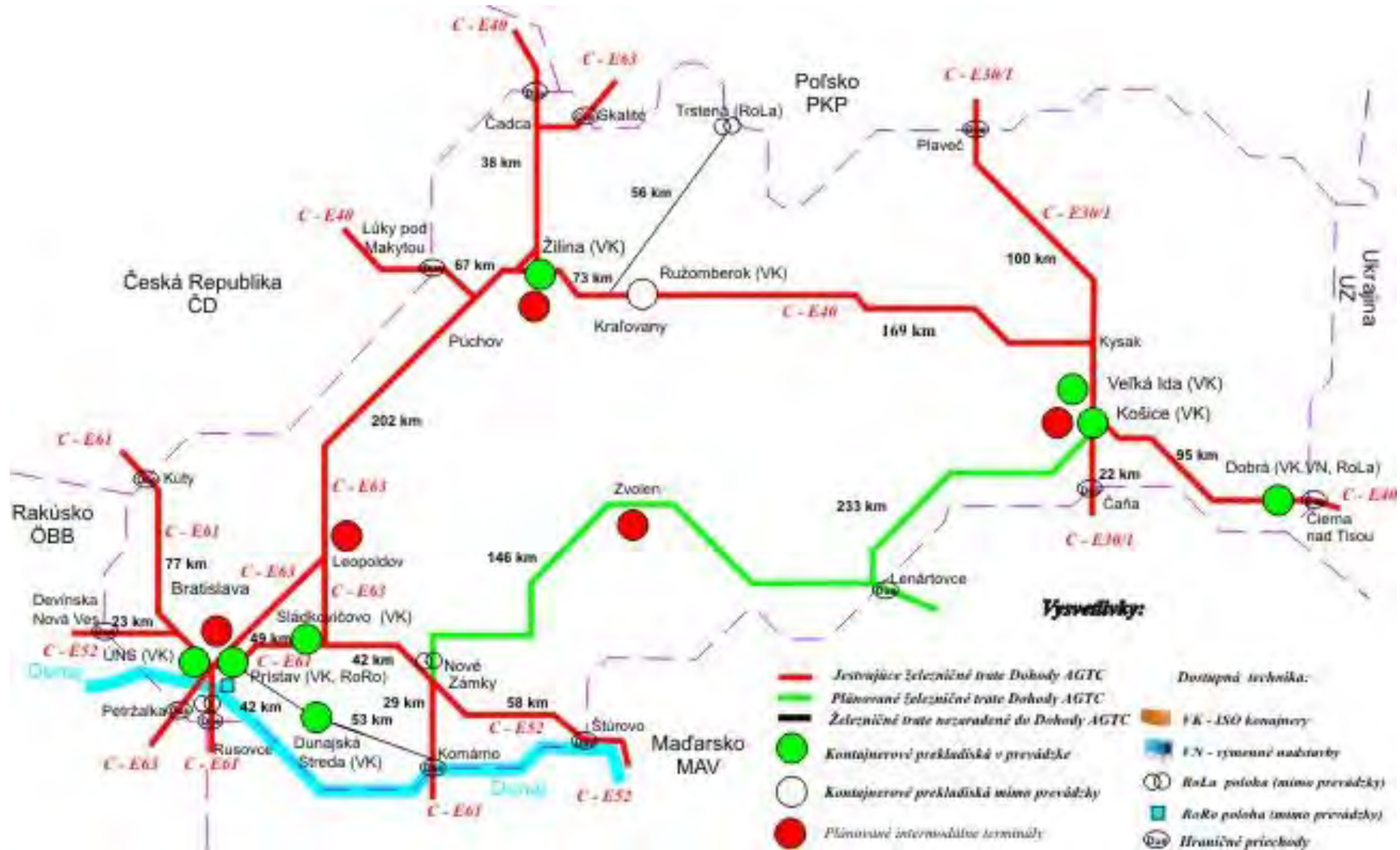


GOALS OF INTERMODAL FREIGHT TRANSPORT IN SLOVAKIA

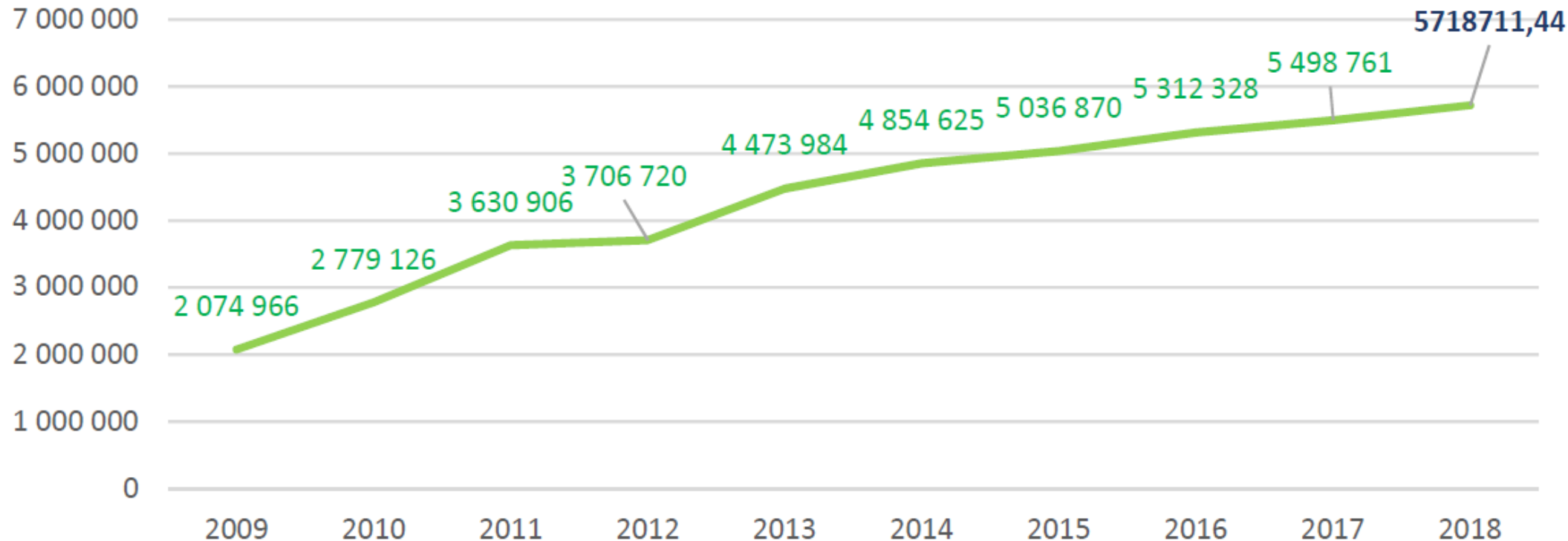
- Move 30% of road freight transport over 300 km to rail, or water by 2030 and, by more than 50% by 2050 (compared to 2005) - in accordance with the White Paper (2011),
- Long-term and systematic support and development of intermodal freight transport as an ecological and long-term sustainable mode of 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.

The Concept of the Development of Intermodal Transport in the SR until 2030 (2022)

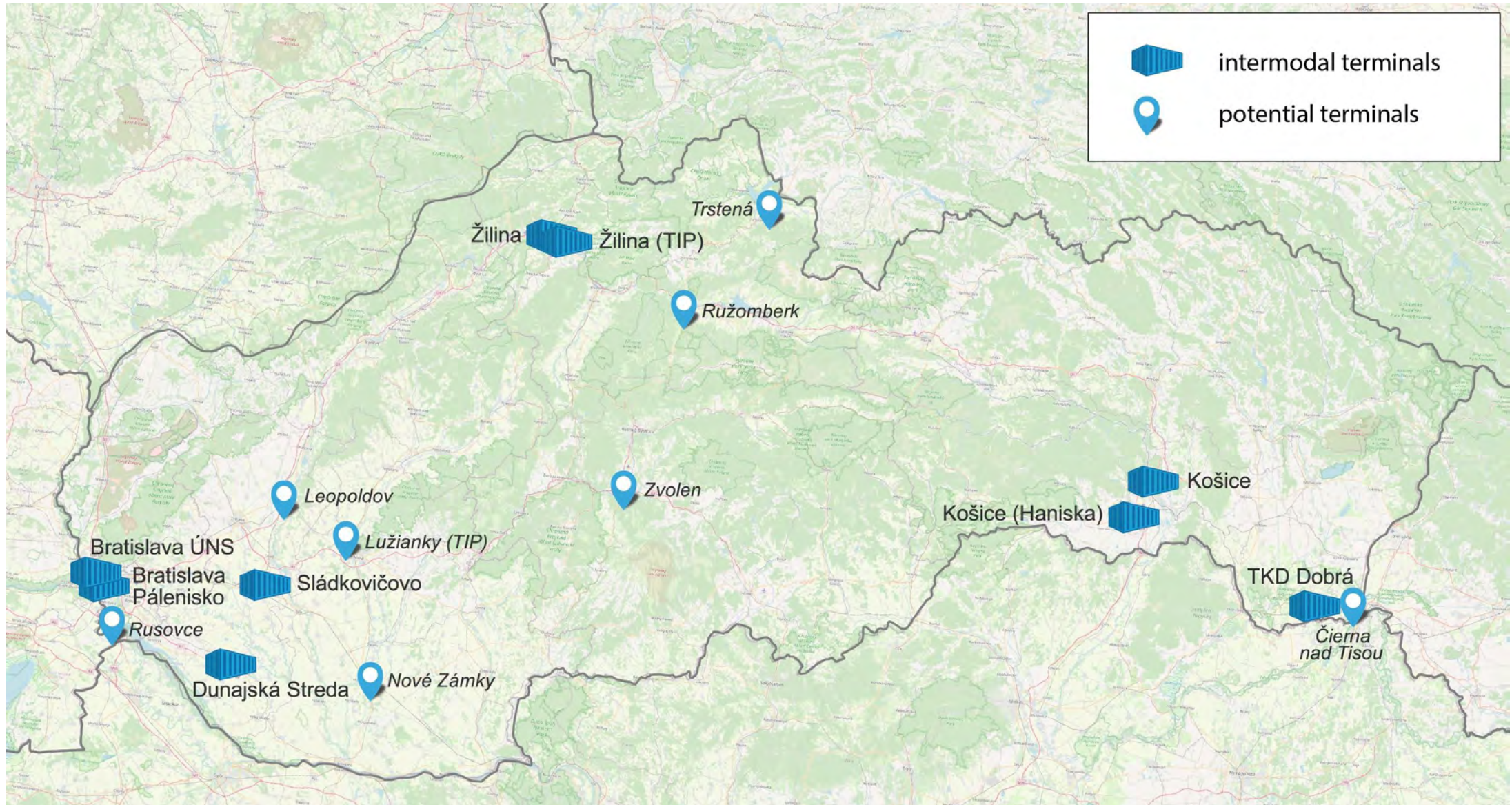
INFRASTRUCTURE OF INTEGRATED TRANSPORT



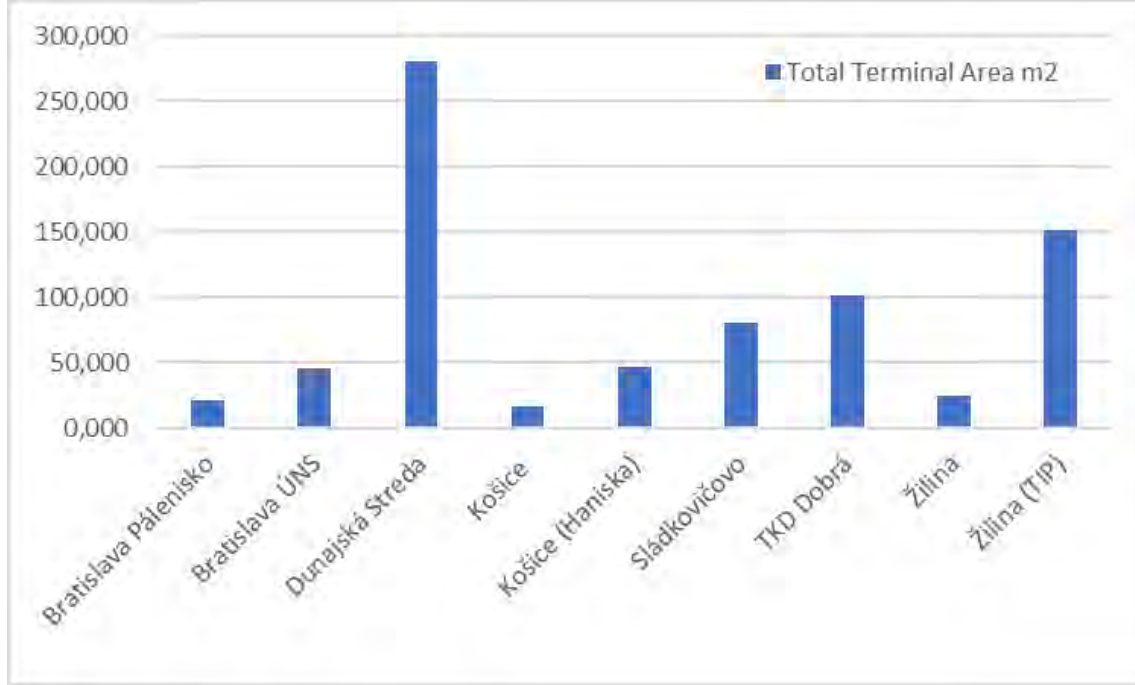
PERFORMANCE OF COMBINED TRANSPORT IN THE SLOVAK REPUBLIC (GROSS TONS)



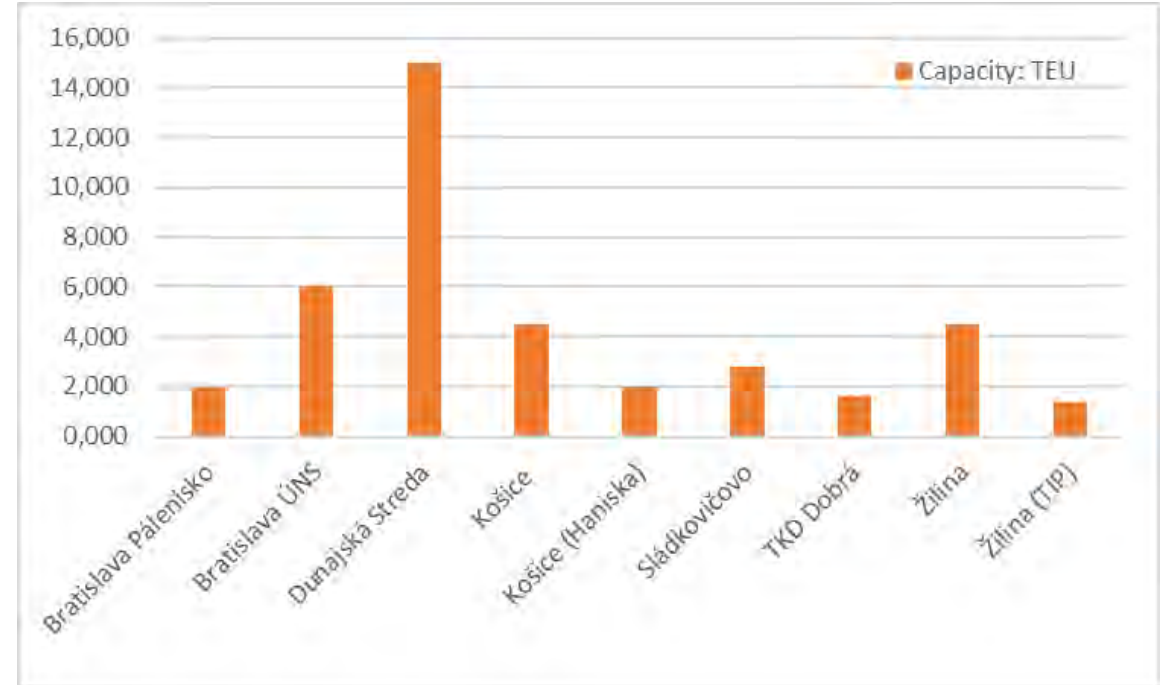
INTERMODAL TERMINALS IN SLOVAKIA



INTERMODAL TERMINALS IN SLOVAKIA



Total Terminal Area (m²)

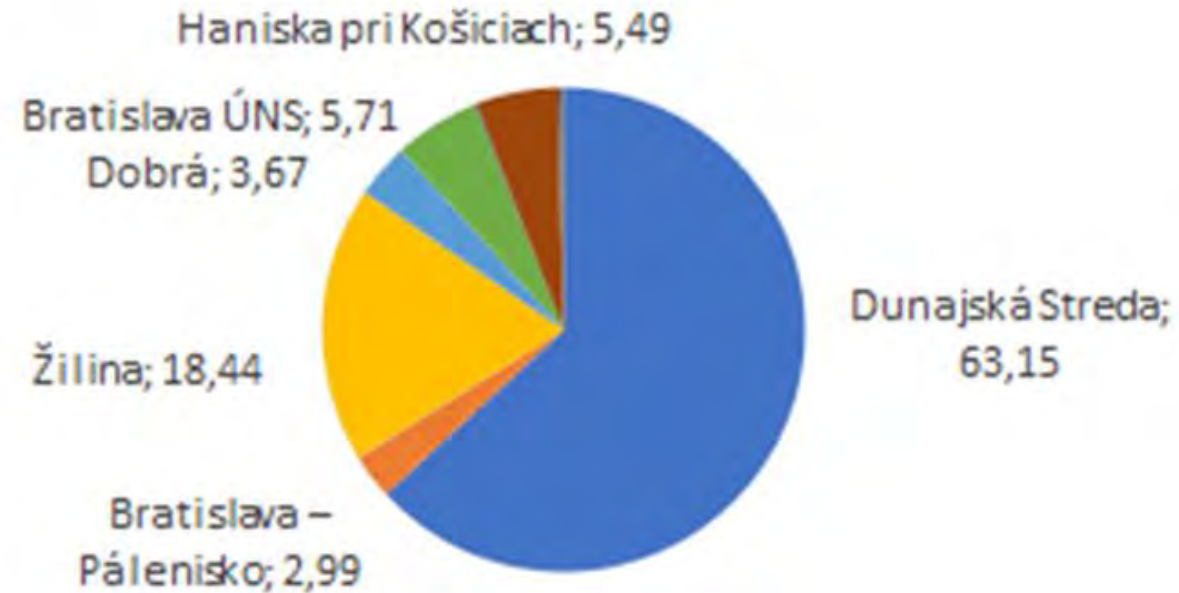


Capacity (TEU)

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

- 9 intermodal terminals, the most important terminal in Dunajská Streda, main operators: Metrans and Rail Cargo Group.

INTERMODAL TERMINALS IN SLOVAKIA



Share of handled ITU (%) in 2018

TKD DOBRÁ INTERMODAL TERMINAL

- Important for development of freight transport between Ukraine and the EU.
- 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 m²
- Capacity: 1,630 TEU



MEASURES FOR SUPPORT OF INTERMODAL FREIGHT TRANSPORT

- One-time support (support from the Recovery and Resilience Plan)
- Regular support to intermodal transport capacity enhancement (classified as shifting freight flows from road to other more environmentally friendly modes of transport (rail and water))
- Periodic support to SWL (classified as support to single wagon loads in order to maintain the transport of freight flows on rail)
- Support for terminal construction/upgrading

The Concept of the Development of Intermodal Transport in the SR until 2030 (2022)

CONCLUSIONS

- Some possibilities to improve cross-border transport infrastructure between Slovakia and Ukraine.
- Extending of existing infrastructure or construction of new infrastructure (border crossings till 3.5 tonnes).
- Development of transport infrastructure between Slovakia and Ukraine (freight transport flows) is partially dependent on the demand for transport which is not sufficient at present but may change in the future.
- There are possibilities of improvement of organisations of cross-border checkpoints and transport.
- Multimodal transport is essential for the greening of freight transport.
- Many potential places for the development of multimodal transport but moving of freight transport from road to railway is still a challenge.



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**THANK YOU VERY MUCH
FOR YOUR ATTENTION**

