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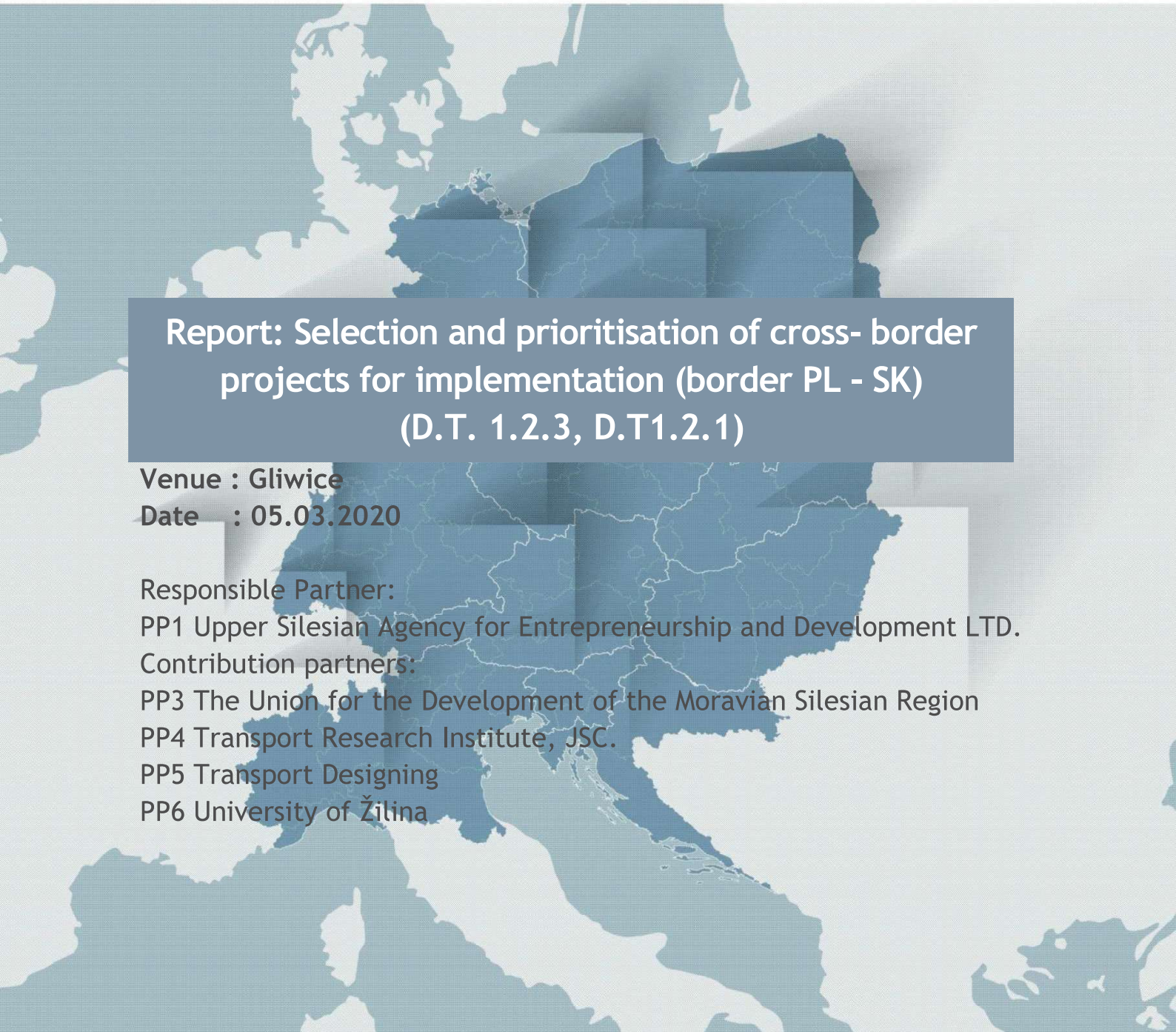
European Union European Regional Development Fund
TRANS TRITIA

D.T1.2.1 Report
D.T1.2.3 Strategic workshop 05.2020

Selection and prioritisation of cross- border projects for implementation (border PL-SK)



# Report: Selection and prioritisation of cross- border projects for implementation (border PL - SK) (D.T. 1.2.3, D.T1.2.1)

**Venue : Gliwice**
**Date : 05.03.2020**

Responsible Partner:
PP1 Upper Silesian Agency for Entrepreneurship and Development LTD.
Contribution partners:
PP3 The Union for the Development of the Moravian Silesian Region
PP4 Transport Research Institute, JSC.
PP5 Transport Designing
PP6 University of Žilina

# 2. Report

## 2.1. Introduction

The main purpose of the report is to present infrastructure projects that will allow for the implementation of strategic objectives related to the development of multimodal transport on the border between the Czech Republic and Slovakia in relation to the entire TRITIA area (fig.1).

Figure 1 - Region Tritia


The basis for the presentation and prioritization of the projects were the strategic assumptions contained in the White Paper, the strategic objectives for the development of multimodal transport in the TRITIA area, the model and scenarios for the development of transport in the TRITIA area and the action plans.

The presentation of projects consisted of several stages:

- Identification of infrastructure projects which have an impact on the development of multimodal transport on the Polish-Slovakian border. The selection of projects was based on a broad analysis of strategic programmes written at international, national

or regional level, with particular emphasis on the development of multimodal transport for the TRITIA area. It was assumed that the projects may be in progress or are planned for implementation.

- Identification on the basis of the transport model and bottleneck workshop for the development of multimodal transport on the PL-SK border for the whole TRITIA area.
- Identification of new projects developing multimodal transport on the border between the PL and SK, which are a proposal for bottlenecks reduction and respond to the needs of key stakeholders (at national and regional level).
- Determination of project priorities according to the scale: high priority (highest importance for the development of multimodal transport on the PL-SK border), medium priority (medium importance for the development of multimodal transport on the PL-SK border), low priority (low importance for the development of multimodal transport on the PL-SK border)

Each project contains a description of: Project goals, project topics with the maps and level of importance (priority) with justification. Projects for rail and road transport are described separately.

## 2.2. List of projects

The list of projects implemented under the action plan on the Poland-Slovakia border has been compiled on the basis of planned and implemented projects in these two countries. It is emphasized that the projects are of international, national and regional nature and directly relate to the development of multimodal transport on the border of the examined border. The following strategic programs and activities were used to develop the list of projects (programs):

*Poland*:

- Strategy for Responsible Development until 2030 (Strategia na Rzecz Odpowiedzialnego Rozwoju do 2030)
- Strategy for the Sustainable Development of Transport until 2030 (Strategia zrównoważonego rozwoju transport do orku 2030)
- Operational Programme Infrastructure and Environment (Program Operacyjny Infrastruktura i Środowisko) (2014-2020)
- National Railway Program (Krajowy Program Kolejnictwa) (until 2023)
- Regional Operational Programme (Śląskie and Opolskie Voivodeship) (until 2023)
- Development Strategy of the Transport System of the Śląskie Voivodeship (Strategia Rozwoju Systemu Transportu Województwa Śląskiego)
- Transport Plan for the Opole Voivodeship 2020 -perspective 2025 (Plan Transportowy Województwa Opolskiego 2020 – perspektywa 2025)
- Development Strategy of the Silesian Voivodeship "Śląskie 2020+" (Strategia Rozwoju Województwa Śląskiego „Śląskie 2020+”)
- Program for Silesia (Program dla Śląska)

*Slovakia:*

- Strategic plan for development of transport in Slovak Republic to 2030 –phase II
- Operational Programme Integrated Infrastructure 2014 – 2020
- Program of economic and social development of Žilina self-governing region 2014-2020

The list of projects was divided into rail and road transport projects. Priority is given to projects developing rail transport. However, there are projects which, with regard to the development of multimodal freight transport, should be carried out within the framework of road transport. The projects presented in Table 1 are in the zero scenario.

Table 1. List of planned and implemented projects

| No. | Projects |
|---|---|
| **Railway transport projects** | |
| 1. | Works on the railway line No. 139 on the Czechowice Dziedzice - Bielsko Biała - Zwardoń (state border) section |
| 2. | Project Poprad – Východná |
| 3. | Project Východná - Liptovský Hrádok |
| 4. | Project Liptovský Hrádok – Liptovský Mikuláš |
| 5. | Project Liptovský Mikuláš - Ružomberok |
| 6. | Project Ružomberok - Turany |
| 7. | Project Turany - Vrútky |
| 8. | Project Vrútky - Varín |
| 9 | Project Node Žilina |
| 10 | Project Krásno nad Kysucou – Čadca (border) |
| **Road transport projects** | |
| 11 | Project Part of the S1 expressway (formerly S69) Bielsko-Biała - Żywiec - Zwardoń, section Przybędza - Milówka (bypass of Węgierska Górka) |
| 12 | Project R3 Tvrdošín – Nižná nad Oravou |
| 13 | Project R3 Nižná nad Oravou – Dlhá nad Oravou |
| 14 | Project R3 Dlhá nad Oravou – Sedliacka Dubová |
| 15 | Project D1 Hubová - Ivachnová |
| 16 | Project D1 Hričovské Podhradie – Lietavská Lúčka |
| 17 | Project D1 Lietavská Lúčka – Dubná Skala |
| 18 | Project D1 Feeder Lietavská Lúčka |
| 19 | Project D1 Turany - Hubová |
| 20 | Project D3 Žilina, Brodno – Kysucké Nové Mesto |
| 21 | Project D3 Kysucké Nové Mesto – Oščadnica |
| 22 | Project D3 Oščadnica – Čadca Bukov 2. profile |

## 2.3. Bottlenecks in the development of multimodal transport on the Poland - Slovakia border

Table 2 presents the bottlenecks for rail transport occurring on the PL-SK border. The list was prepared on the base of the report D.T3.2.2 (Table 10) - Bottlenecks on the railway infrastructure after redistribution of transport load in zero scenario /2030/.

Table 2. Bottlenecks on the railway infrastructure after redistribution of transport load in zero scenario /2030/ - border PL-SK

| Priority | ID | Section name | Tracks (number) | Capacity (Number of trains/week) (2030) | Number of passenger trains/week (2030) | Number of freight trains/week (2030) | Number of containers/ day (2030) | Number of container trains/day (2030) | Number of container trains/week (2030) | Number of total trains/week (2030) | Occupancy rate (%) (2030) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SK05-C | Diviaky - Vrútky | 2 | 1106 | 312 | 218 | 2759 | 138 | 966 | 1496 | 135,3% |
| 2 | PL139-2 | Tychy - Pszczyna | 2 | 1015 | 588 | 250 | 1457 | 73 | 511 | 1349 | 132,9% |
| 3 | PL139-1 | Katowice Ligota - Mąkołowiec | 2 | 1484 | 1141 | 218 | 1457 | 73 | 511 | 1870 | 126,0% |

Moreover, based on a discussion during the workshop and consultations with stakeholders, the following bottlenecks in rail transport have been identified in the flow of goods on the Polish-Slovakian border, i.e.:

- Railway line 139-2 - Tychy - Pszczyna; 139-1 - Katowice Ligota - Mąkołowiec – lines are located in the core TEN-T network as part of the E-65 route, low capacity of the Katowice - Tychy section and Katowice Ligota station, constituting a significant barrier to the development of the rail transport offer in the directions south of Katowice;
- Linia Čadca – Skalité and Vrútky – Diviaky
- Information technologies of railway infrastructure managers and unification of dispatching management.

## 2.4. Projects resulting from the analysis of the intermodal transport model and bottleneck analysis

Table 3 show the resulting of projects from the analysis of the intermodal transport model and bottleneck analysis.

Table 3. The special railway projects eliminating or reducing bottlenecks

| No. | Projects |
|---|---|
| Railway transport projects | |
| 23 | Čadca - Skalité |
| 24 | Vrútky - Diviaky |
| See no. 1 | Railway line 139-2 - Tychy - Pszczyna; 139-1 - Katowice Ligota - Mąkołowiec |
| 25 | Information technologies of railway infrastructure managers and unification of dispatching management |

## 2.5. Detailed project description and prioritization

A detailed description of the projects includes:

- Project name
- Project goals
- Project priority with justification
- Project topics with the maps

Priorities were assigned based on the following assumptions:

- High importance for the development of multimodal transport on the PL-SK border - high priority
- Medium importance for the development of multimodal transport on the PL-SK border - priority medium
- Low importance for the development of multimodal transport on the PL-SK border - low priorityIn addition, indicated the level of project implementation (national/regional/private)

### 2.5.1. Railway transport projects

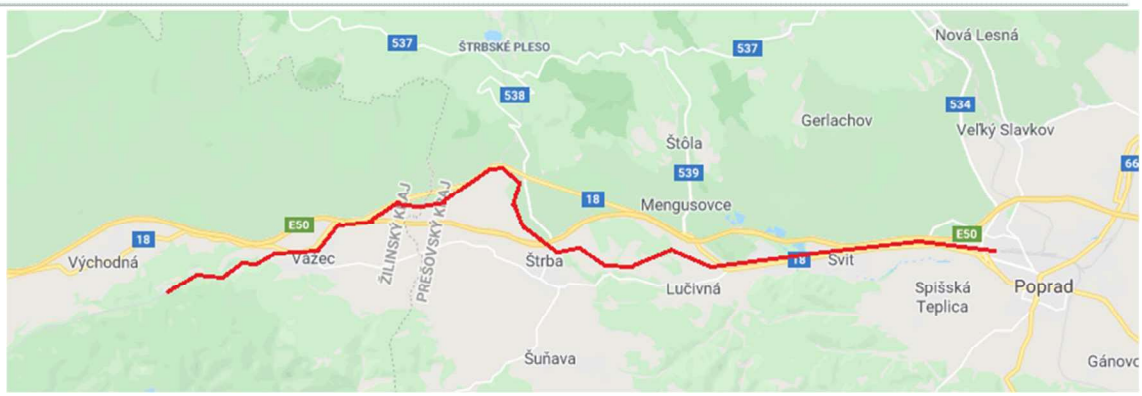
1. **Works on the railway line No. 139 on the Czechowice Dziedzice - Bielsko Biała - Zwardoń (state border section)**

| | |
|---|---|
| **Project goals** | Modernization works on the railway line No. 139 on the Czechowice Dziedzice-Bielsko Biała - Zwardoń section (state border) |
| **Project topics with the maps** | Line 139 - railway line in the Śląskie Voivodeship; double-track on the sections Katowice - Bielsko-Biała Główna and Bielsko-Biała Lipnik - Wilkowice Bystra.<br>The project to modernize the line No. 139 is currently on the reserve list of the National Railway Program, and to a lesser extent Żywiec - Zwardoń. However, the modernization of the line is provided for by both the State Transport Policy and the Transport Plan, and the line is also part of the TEN-T core network. The tender for the feasibility study for this line announced at the beginning of 2020 shows that the implementation of the project is to increase the speed of trains (the study is to investigate both variants of increasing the speed of trains to 130 km / h in the current line route and to the speed of 160 km) / h with possible route corrections), safety and line capacity, better transport accessibility; ensuring rail interoperability and allowing the movement of trains with a length of 750 meters (or at least 650 meters on the Slovak side of the border). The study also includes the recognition of the legitimacy of building a "joint Polish-Slovak tunnel"; the aim of which would be to adapt the line section to freight traffic by bypassing the existing section with the most difficult profile (for this purpose it is necessary to conduct appropriate discussions with the Slovak minister of transport and infrastructure manager). |
| **Level of importance (priority) with justification** | High (significant due to the relief of road transport, subject to similar actions on the part of Slovakia);<br>National / international, but currently mainly focused on passenger transport. It is part of the TEN-T core network. It is part of the CE-65 bus. |


Line 139, section Czechowice Dziedzice - Bielsko - Biała - Zwardoń

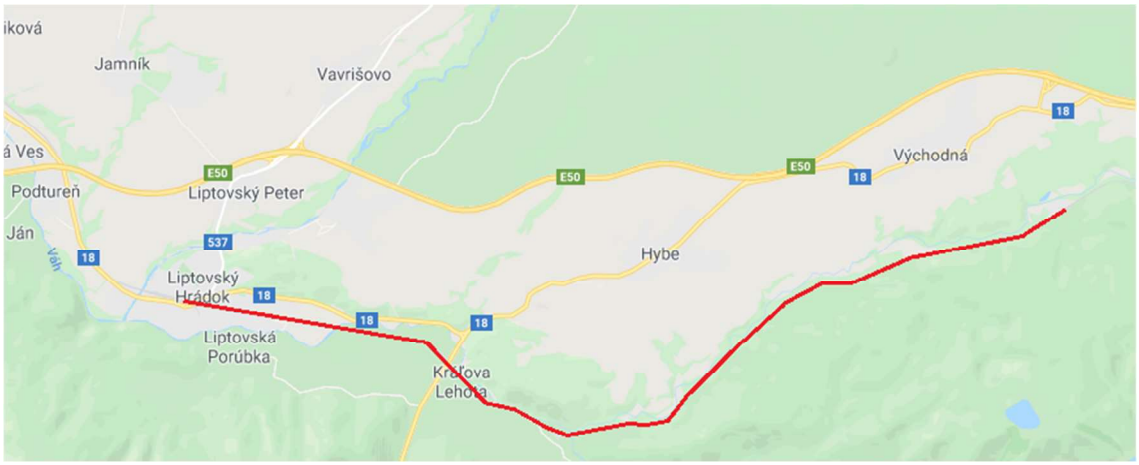
## 2. Project Poprad – Východná

| | |
|---|---|
| **Project goals** | Modernization of infrastructure with elimination of speed bumps. The catennary will be modernized with preparation for transition from AC to DC in lated date afther modernization of line from Žilina. |
| **Project topics with the maps** | Line category - TEN-T core<br>Line class - D4 on wholde section<br>Line maximum speed - Up to 140 km/h (dependint on section) |
| **Level of importance (priority) with justification** | High<br>national<br>justification<br>Modernization of TEN-T coridor Rhine-Danube on parameters with accordance of AGC and AGTC agreements. |



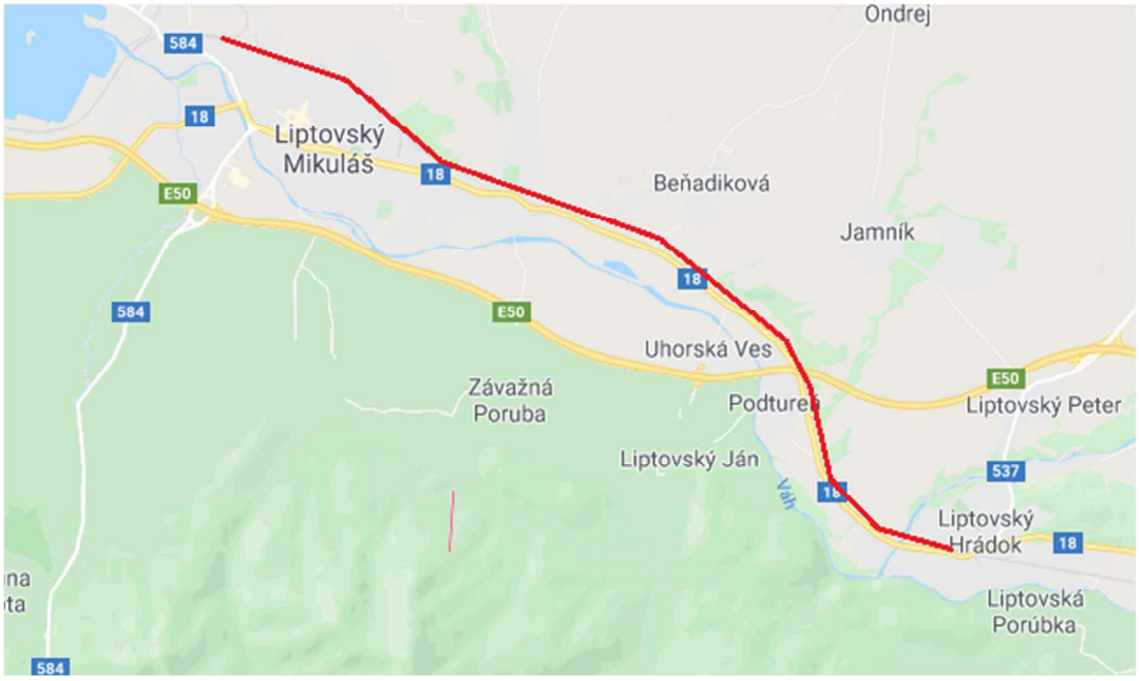

## 3. Project Východná - Liptovský Hrádok

| | |
|---|---|
| **Project goals** | Modernization of infrastructure with elimination of speed bumps. The catennary will be modernized with preparation for transition from AC to DC in lated date afther modernization of line from Žilina. |
| **Project topics with the maps** | Line category - TEN-T core<br>Line class - D4 on wholde section<br>Line maximum speed - Up to 160 km/h (dependint on section) |
| **Level of importance (priority) with justification** | High<br>national<br>Modernization of TEN-T coridor Rhine-Danube on parameters with accordance of AGC and AGTC agreements. |



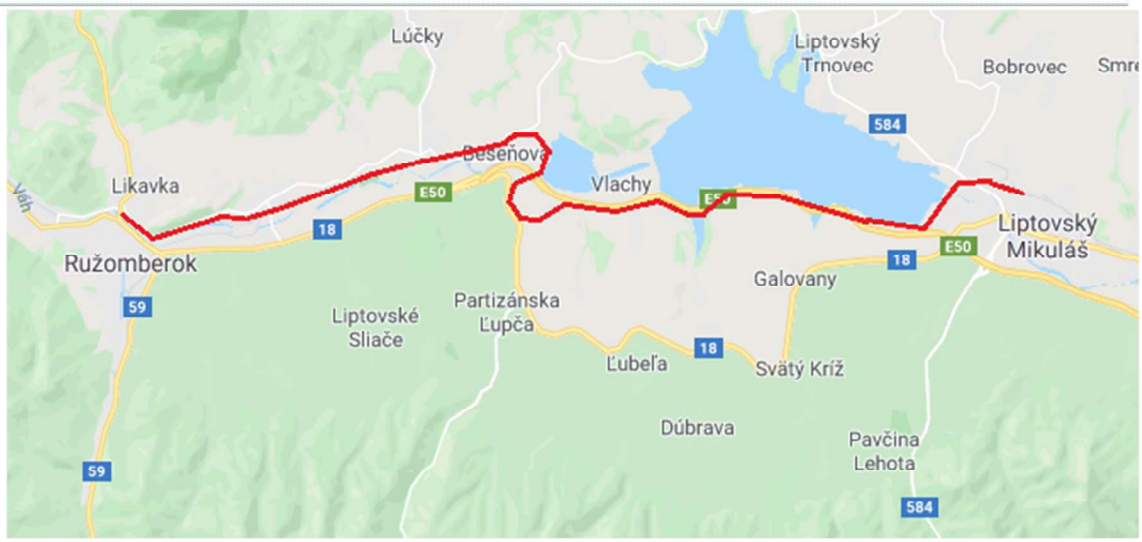
## 4. Project Liptovský Hrádok - Liptovský Mikuláš

| | |
|---|---|
| Project goals | Modernization of infrastructure with elimination of speed bumps. The catennary will be modernized with preparation for transition from AC to DC in lated date afther modernization of line from Žilina. |
| Project topics with the maps | Line category - TEN-T core<br>Line class - D4 on wholde section<br>Line maximum speed - Up to 160 km/h (dependint on section) |
| Level of importance (priority) with justification | High<br>national<br>Modernization of TEN-T coridor Rhine-Danube on parameters with accordance of AGC and AGTC agreements. |



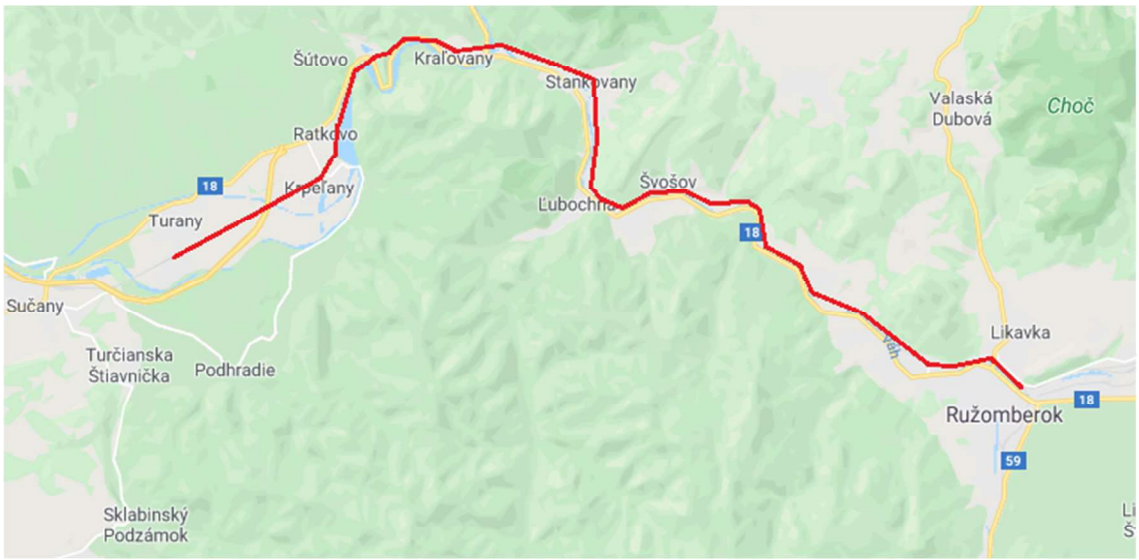

## 5. Project Liptovský Mikuláš - Ružomberok

| | |
|---|---|
| Project goals | Modernization of infrastructure with elimination of speed bumps. The catennary will be modernized with preparation for transition from AC to DC in lated date afther modernization of line from Žilina. |
| Project topics with the maps | Line category - TEN-T core<br>Line class - D4 on wholde section<br>Line maximum speed - Up to 160 km/h (dependint on section) |
| Level of importance (priority) with justification | High<br>national<br>Modernization of TEN-T coridor Rhine-Danube on parameters with accordance of AGC and AGTC agreements. |



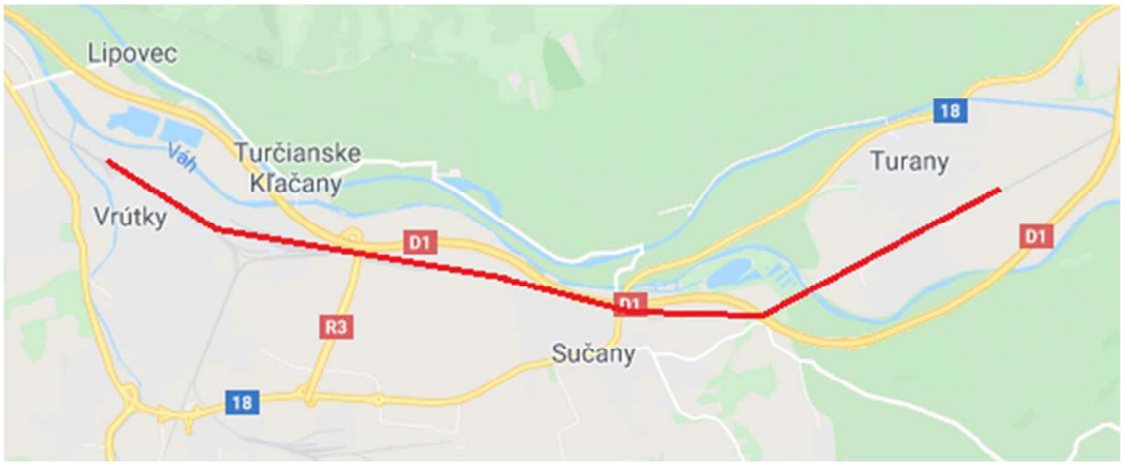

## 6. Project Ružomberok - Turany

| | |
|---|---|
| Project goals | Modernization of infrastructure with elimination of speed bumps. The catennary will be modernized with preparation for transition from AC to DC in lated date afther modernization of line from Žilina. |
| Project topics with the maps | Line category - TEN-T core<br>Line class - D4 on wholde section<br>Line maximum speed - Up to 160 km/h (dependint on section) |
| Level of importance (priority) with justification | High<br>national<br>Modernization of TEN-T coridor Rhine-Danube on parameters with accordance of AGC and AGTC agreements. |



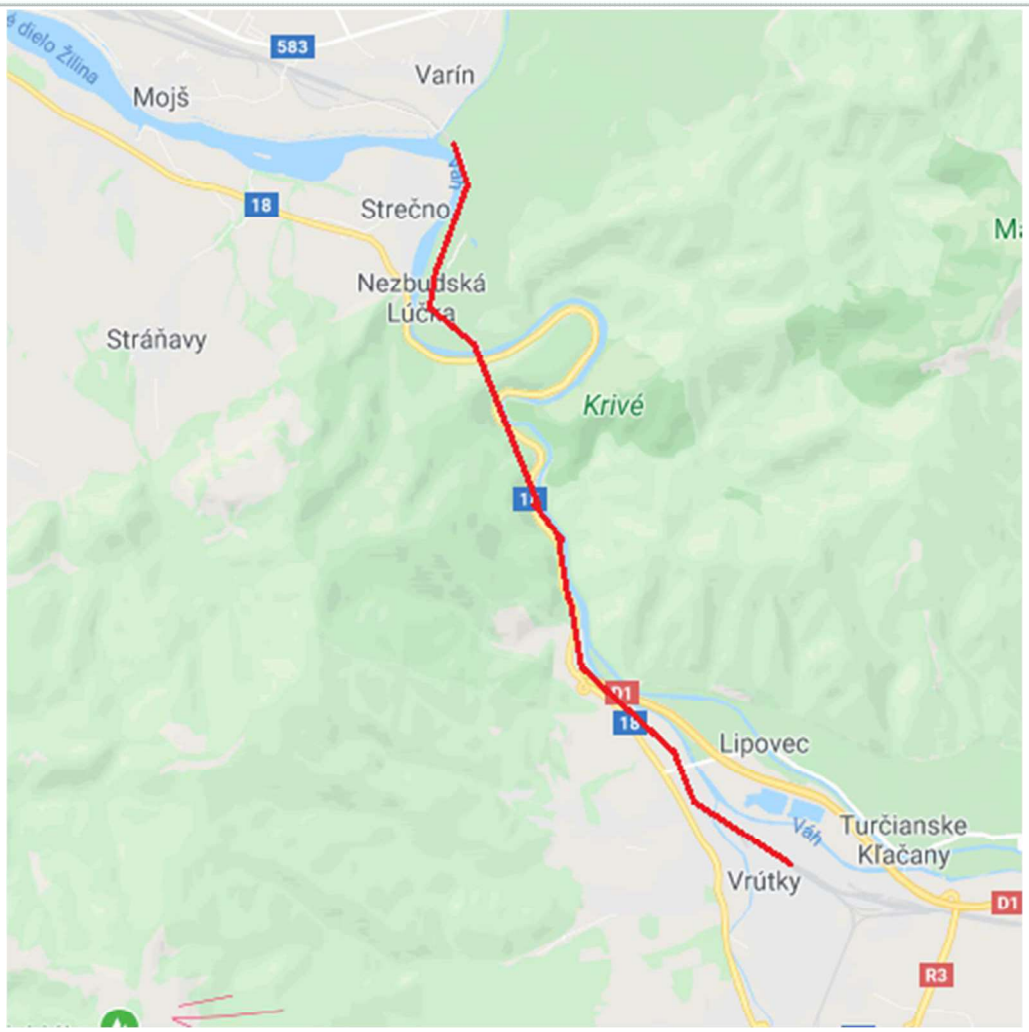
## 7. Project Turany - Vrútky

| | |
|---|---|
| **Project goals** | Modernization of infrastructure with elimination of speed bumps. The catennary will be modernized with preparation for transition from AC to DC in lated date afther modernization of line from Žilina. |
| **Project topics with the maps** | Line category - TEN-T core<br>Line class - D4 on wholde section<br>Line maximum speed - Up to 160 km/h (dependint on section) |
| **Level of importance (priority) with justification** | High<br>national<br>Modernization of TEN-T coridor Rhine-Danube on parameters with accordance of AGC and AGTC agreements. |



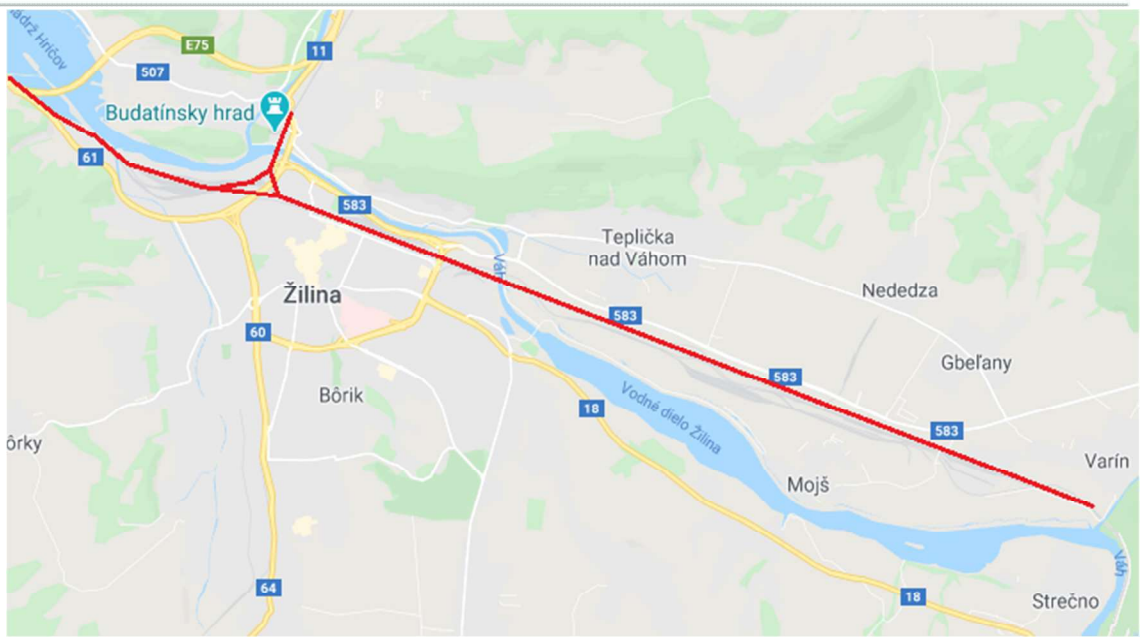

## 8. Project Vrútky - Varín

| | |
|---|---|
| **Project goals** | Modernization of infrastructure with elimination of speed bumps. The catennary will be modernized with preparation for transition from AC to DC afther the project implementation. |
| **Project topics with the maps** | Line category - TEN-T core<br>Line class - D4 on wholde section<br>Line maximum speed - Up to 160 km/h (dependint on section) |
| **Level of importance (priority) with justification** | High<br>national<br>Modernization of TEN-T coridor Rhine-Danube on parameters with accordance of AGC and AGTC agreements. |



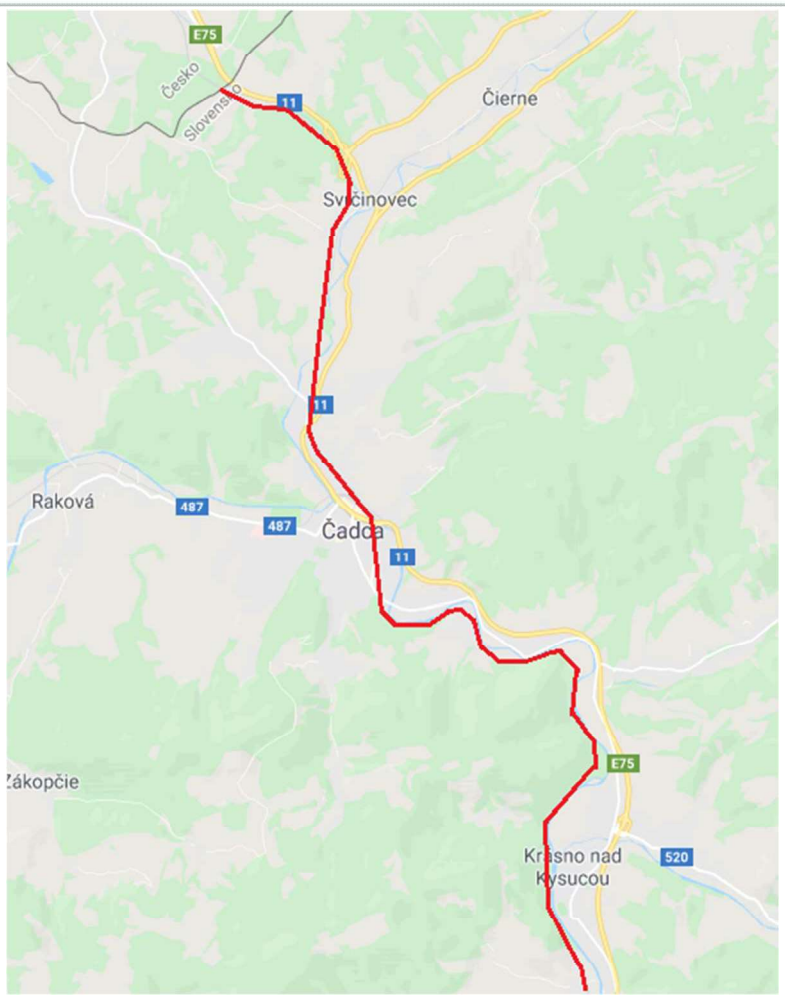

## 9. Project: Node Žilina

| | |
|---|---|
| **Project goals** | Modernization of infrastructure with elimination of speed bumps in Railway station Žilina. The catennary will be modernized with preparation for transition from AC to DC and its implementation on section Púchov – Žilina. |
| **Project topics with the maps** | Line category - TEN-T core<br>Line class - D4 on wholde section<br>Line maximum speed - Up to 160 km/h |
| Level of importance (priority) with justification | High<br>national<br>Žilina node modernization is part of important railway modernization projects in Slovakia. Žilina node is end station of track no. 120 from Bratislava, trakc no. 180 from Košice and track no. 127 from Čadca. Žilina is intersection of two TEN-T core coridors - Baltic-Adriatic and Rhine-Danube. The modernization will ensure the track parameters in accordance of the AGC and AGTC agreements. |




## 10. Project: Krásno nad Kysucou - Čadca (border)

| | |
|---|---|
| **Project goals** | Modernization of infrastructure with elimination of speed bumps. The catennary will be modernized with preparation for transition from AC to DC in lated date afther modernization of whole line Liptovský Mikuláš (Poprad) - Žilina. |
| **Project topics with the maps** | Line category - TEN-T core<br>Line class - D4 on wholde section<br>Line maximum speed - Up to 160 km/h (dependint on section) |
| **Level of importance (priority) with justification** | High<br>National<br>The modernization of section Krásno nad Kysucou - Čadca - Border crossing SK/CZ means and update of the railway superstructure and substructure for parameters in accordance with the AGC and AGTC agreements. |

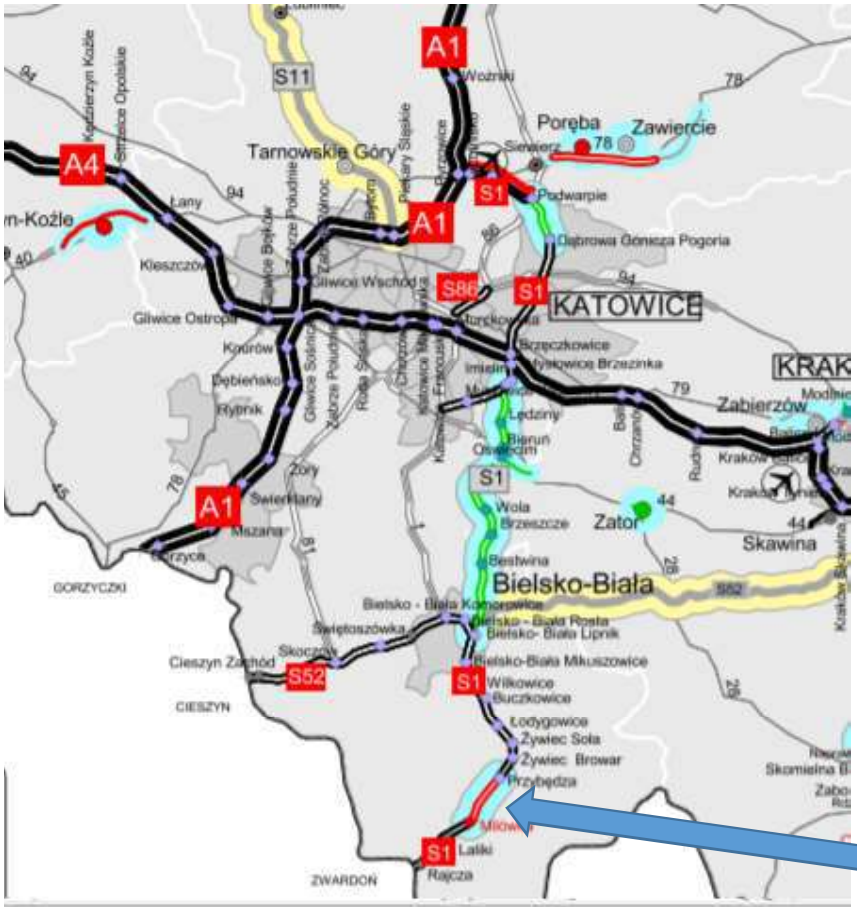



## 2.5.2. Road projects

### 11. Part of the S1 expressway (formerly S69) Bielsko-Biała - Żywiec - Zwardoń, section Przybędza - Milówka (bypass of Węgierska Górka)

| | |
|---|---|
| **Project goals** | Construction of a section of the S1 expressway on the section Pyrzowice - Bielsko-Biała |
| **Project topics with the maps** | rom km 27 + 700 to km 36 + 230 of the Bielsko-Biała - Żywiec - Zwardoń expressway (border crossing Myto / Skalite).<br>Road class: S (express road)<br>The length of the road is 8.53 km.<br>Design speed - 80 km / h.<br>Transverse slope: 2.0%.<br>Pavement load - 115 kN / axle.<br>Traffic category: KR6.<br>Investment scope:<br>Construction of a class S road with a length of approx. 8.53 km, which will have two types of cross-section: single-carriageway - one road with two lanes each, in the section before and after the tunnels (length: 3.713 km), dual carriageway - two roadways with two lanes each, on the tunnel section and |

| | |
|---|---|
| | between tunnels (length: 4.817 km). As part of the task, the following engineering structures will be constructed: 2 tunnels (approx. 830 m and approx. 1000 m long), 3 bridges, 5 flyovers and 1 economic crossing. In order to protect the neighboring areas against traffic noise, acoustic screens will be built along the planned route. At the beginning and end of the section, the missing slip roads will be expanded - the "Przybędza" and "Milówka" junctions, partly constructed as part of the construction of adjacent sections. In addition, as part of the construction of the expressway, the Road Maintenance Circuit in Milówka will be built, in which the Tunnel Management and Control Center will be located, i.e. two tunnels built under this task and the existing tunnel on the expressway in Laliki. |
| **Level of importance (priority) with justification** | High<br>The S1 road is located in the VI corridor of the Trans-European Transport Network connecting the countries of the Baltic Sea basin with the countries of Southern Europe and running along the TEN-T priority axis No. 25, ie the "Gdańsk-Brno / Bratislava-Vienna road axis".<br>The main goal of the S1 construction is to connect the A-1 motorway with the S-1 Bielsko-Biała - Cieszyn and S-69 Bielsko Biała - Żywiec - Zwardoń expressways, national roads No. 1 and 86 and the remaining road network of the Śląskie Voivodeship. The road enables the connection of the agglomeration of the Śląskie Voivodeship and the neighboring voivodships as well as cross-border areas with the International Airport in Pyrzowice, as well as domestic and international passenger and cargo traffic related to air transport. |




Section: Przybędza - Milówka

## 12. Project R3 Tvrdošín - Nižná nad Oravou

| | |
|---|---|
| **Project goals** | Construction of new expressway in vicinity of Tvrdošín town a part of North - South R3 highway Tvrdošín North - Martin - Žiar nad Hronom - Samerobce - national border SK/HU |
| **Project topics with the maps** | Length of the section - 4,400 km<br>Number of new bridges on R3 - 10 with length of 1 567,6 m<br>Number of new bridges outside R3 - 3 with length of 134,6 m<br>Length of noise concealing walls - 2 150 m<br>Level crossings - 2 |
| **Level of importance (priority) with justification** | Medium<br>National<br>Expresway R3 is part of the TEN-T comprehensive network. |


## 13. Project R3 Nižná nad Oravou - Dlhá nad Oravou

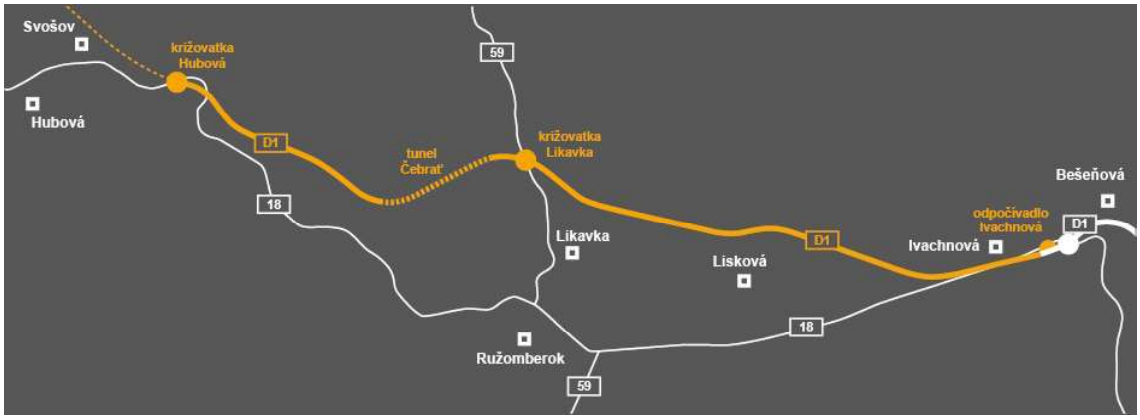
| | |
|---|---|
| **Project goals** | Construction of new expressway in vicinity vilage Podbieľ is a part of North - South R3 highway Tvrdošín North - Martin - Žiar nad Hronom - Samerobce - national border SK/HU |
| **Project topics with the maps** | Length of the section - 8,300 km<br>Number of new bridges on highway - 19 with length of 2 956 m<br>Tunels - Biela Skala with length of 515 m<br>Level crossings - 1 |
| **Level of importance (priority) with justification** | Medium<br>national<br>Expresway R3 is part of the TEN-T comprehensive network. |


## 14. Project R3 Dlhá nad Oravou - Sedliacka Dubová

| | |
|---|---|
| **Project goals** | Construction of new expressway in vicinity of vilage Dlhá nad Oravou a part of North - South R3 highway Tvrdošín North - Martin - Žiar nad Hronom - Samerobce - national border SK/HU |
| **Project topics with the maps** | Length of the section - 4,200 km<br>Number of new bridges on highway - 11 with length of 1 544 m<br>Level crossings - 1 |
| **Level of importance (priority) with justification** | Medium<br>national<br>Expresway R3 is part of the TEN-T comprehensive network. |

## 15. Project D1 Hubová - Ivachnová

| | |
|---|---|
| **Project goals** | Construction of new motorway in vicinity of town Ružomberok a part of West - East D1 expressway Bratislava - Žilina - Prešov - Košice - Michalovce - national border SK/UA |
| **Project topics with the maps** | Length of the section - 15,275 km in D26,5 profile<br>Number of new bridges on D1 - 12<br>Number of new bridges outside D1 - 9 with cumulative length of 6 434 m for all bridges in project<br>Length of noise concealing walls - 4 858 m<br>Tunnel - 1 Čebrať with length of 3650 m<br>Level crossings - 3 |
| **Level of importance (priority) with justification** | Medium<br>National<br>Motorway D1 is important as a TEN-T core network (Rhine - Danube corridor). |




Source - NDS map

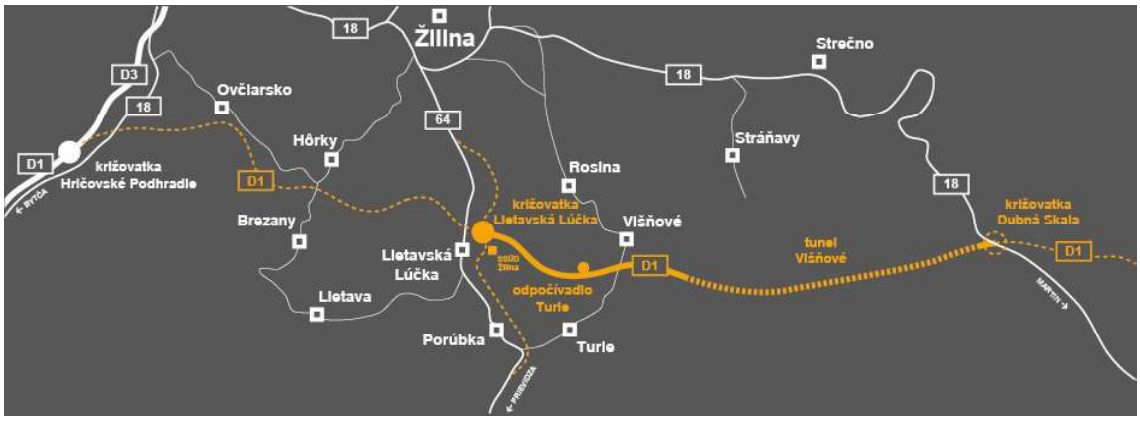
## 16. Project D1 Hričovské Podhradie - Lietavská Lúčka

| | |
|---|---|
| **Project goals** | Construction of new motorway in vicinity of town Žilina a part of West - East D1 expressway Bratislava - Žilina - Prešov - Košice - Michalovce - national border SK/UA |
| **Project topics with the maps** | Length of the section - 11,317 km in D26,5 profile<br>Number of new bridges on D1 - 11 with total length 3 670 m<br>Length of noise concealing walls - 3 450 m<br>Tunnels - 2, Ovčiarsko with length of 2 367 m and Žilina with length of 687 m<br>Level crossings - 0 |
| **Level of importance (priority) with justification** | Medium<br>National<br>Motorway D1 is important as a TEN-T core network (Rhine - Danube corridor). |


Source - NDS map

## 17. Project D1 Lietavská Lúčka - Dubná Skala

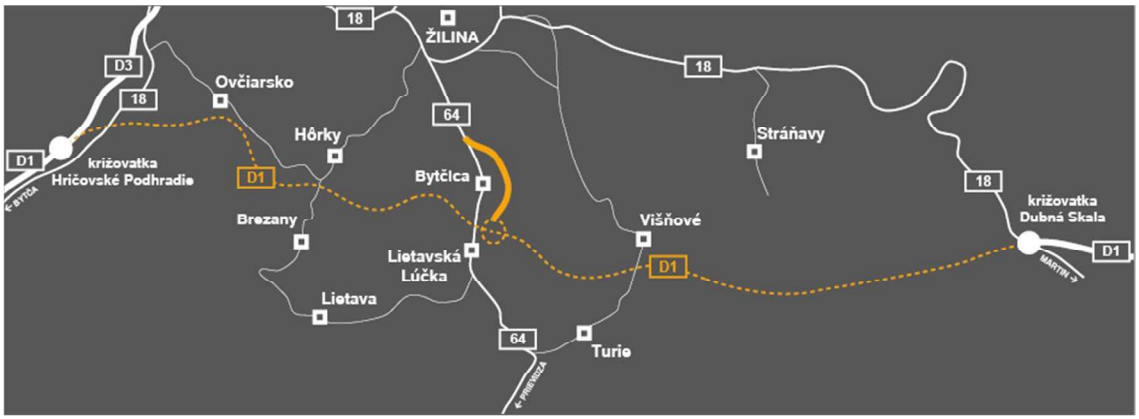
| | |
|---|---|
| **Project goals** | Construction of new motorway in vicinity of town Žilina a part of West - East D1 expressway Bratislava - Žilina - Prešov - Košice - Michalovce - national border SK/UA |
| **Project topics with the maps** | Length of the section - 13,510 km in D26,5 profile<br>Number of new bridges on D1 - 8 with total length of 2 626 m<br>Length of noise concealing walls - 871 m<br>Tunnels - 1, Višňové with length of 7 537 m<br>Level crossings - 1, Lietavská Lúčka |
| **Level of importance (priority) with justification** | Medium<br>National<br>Motorway D1 is important as a TEN-T core network (Rhine - Danube corridor). |




Source - NDS map

## 18. Project D1 Feeder Lietavská Lúčka

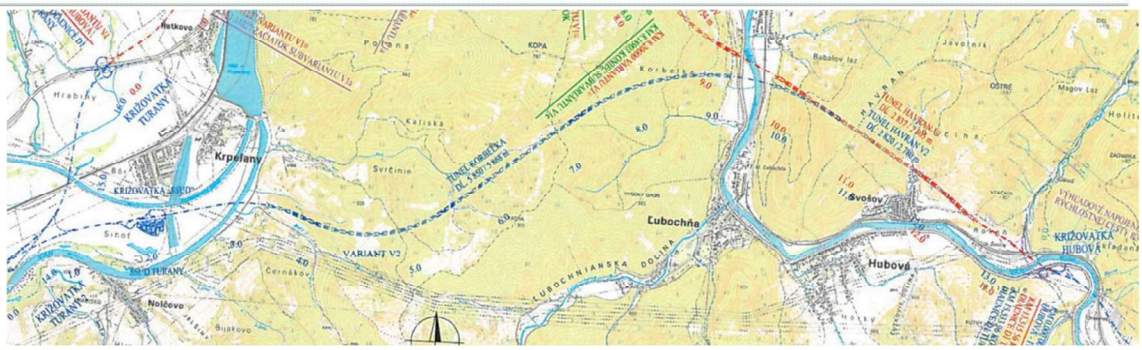
| | |
|---|---|
| **Project goals** | Construction of new feeder in vicinity of town Žilina a part of West - East D1 expressway Bratislava - Žilina - Prešov - Košice - Michalovce - national border SK/UA |
| **Project topics with the maps** | Length of the section - 2, 590 km<br>Number of new bridges on feeder - 5<br>Length of noise concealing walls - 2 934 m<br>Tunnels - 0<br>Level crossings - 1, |
| **Level of importance (priority) with justification** | Medium<br>National<br>Motorway D1 is important as a TEN-T core network (Rhine - Danube corridor). |




Source - NDS map

## 19. Project D1 Turany - Hubová

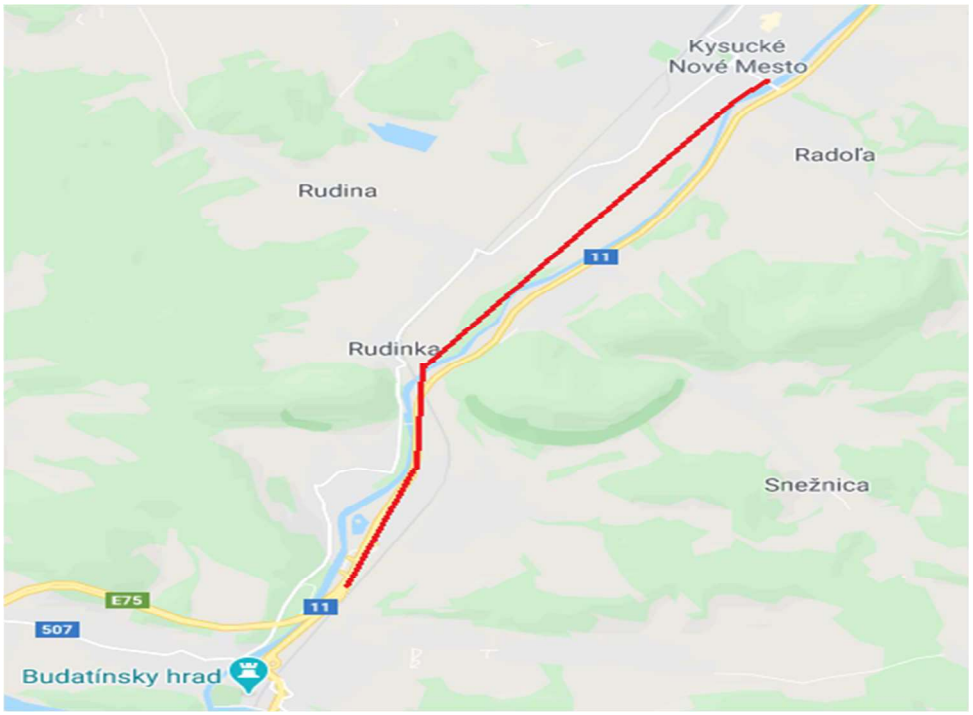
| | |
|---|---|
| **Project goals** | Construction of new motorway in vicinity of vilage Kraľovany a part of West - East D1 expressway Bratislava - Žilina - Prešov - Košice - Michalovce - national border SK/UA |
| **Project topics with the maps** | Length of the section - 13,530 km<br>Bridges - 1 340 m<br>Length of noise concealing walls - unknown<br>Tunnels - 2, Korbeľka (5 868 m) and Havran (2 820 m)<br>Level crossings - 2 |
| **Level of importance (priority) with justification** | Medium<br>National<br>Motorway D1 is important as a TEN-T core network (Rhine - Danube corridor). |




Source- Štátna ochrana prírody SR process EIA

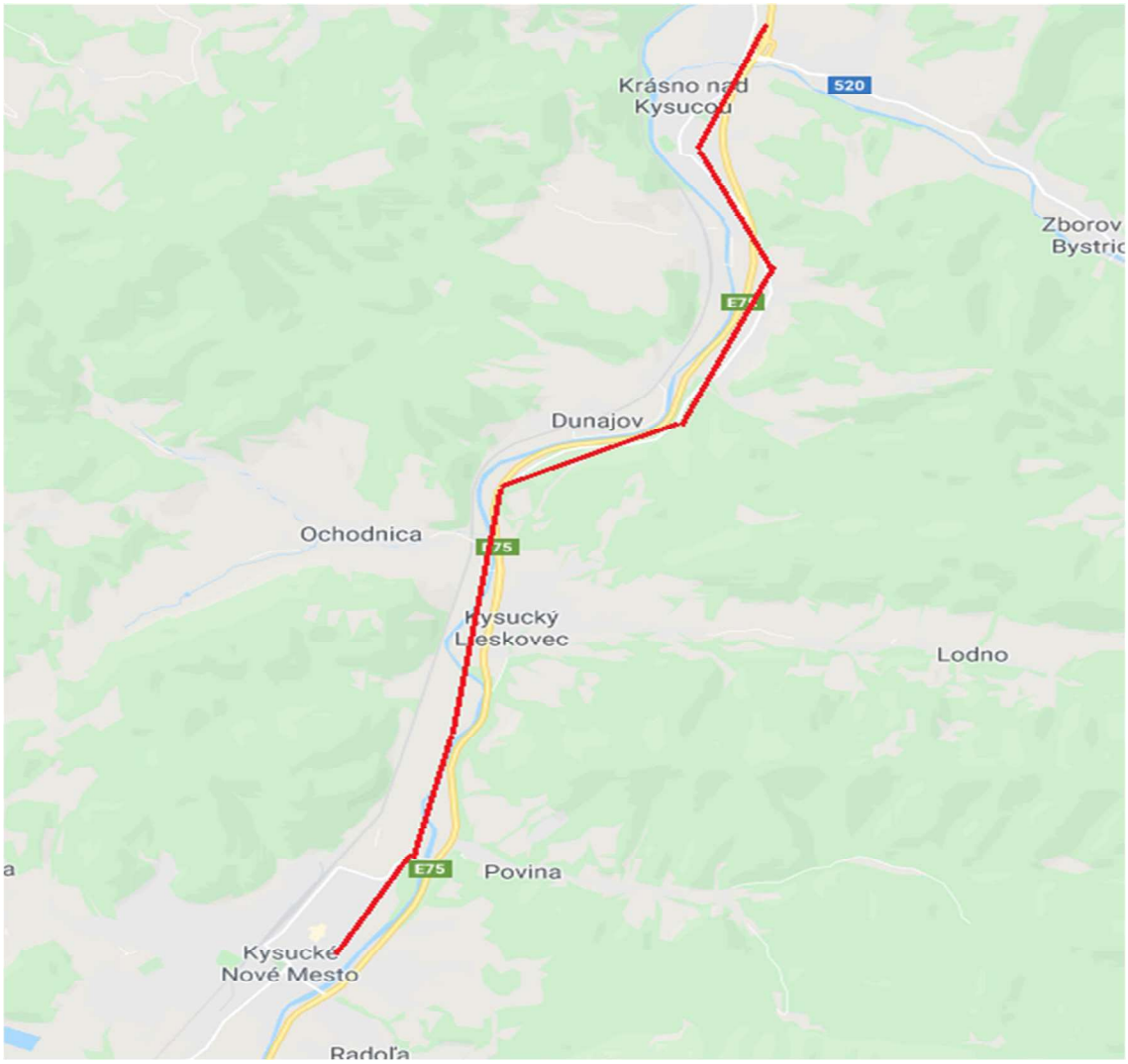
## 20. Project D3 Žilina, Brodno – Kysucké Nové Mesto

| | |
|---|---|
| **Project goals** | Construction of new motorway between towns Kysucké Nové Mesto and Žilina a part of South - North D3 expressway Žilina - Čadca - national border SK/CZ |
| **Project topics with the maps** | Length of the section - 11,200 km in D24,5 profile<br>Number of new bridges on D1 - 16 with total length of 3 896 m<br>Length of noise concealing walls - 9 419 m<br>Tunnels - 0<br>Level crossings - 2, Brodno and Kysucké Nové Mesto |
| **Level of importance (priority) with justification** | Medium<br>National<br>By the implementation of projects D3 Žilina, Brodno - Kysucké Nové Mesto - Oščadnica - Čadca, Bukov will be build missing 26 km motorway and connected the coherent 4 lane motorway from Žilina to Čadca as part of the multimodal TEN-T coridor (Baltic-Adriatic, Rhine-Danube). |



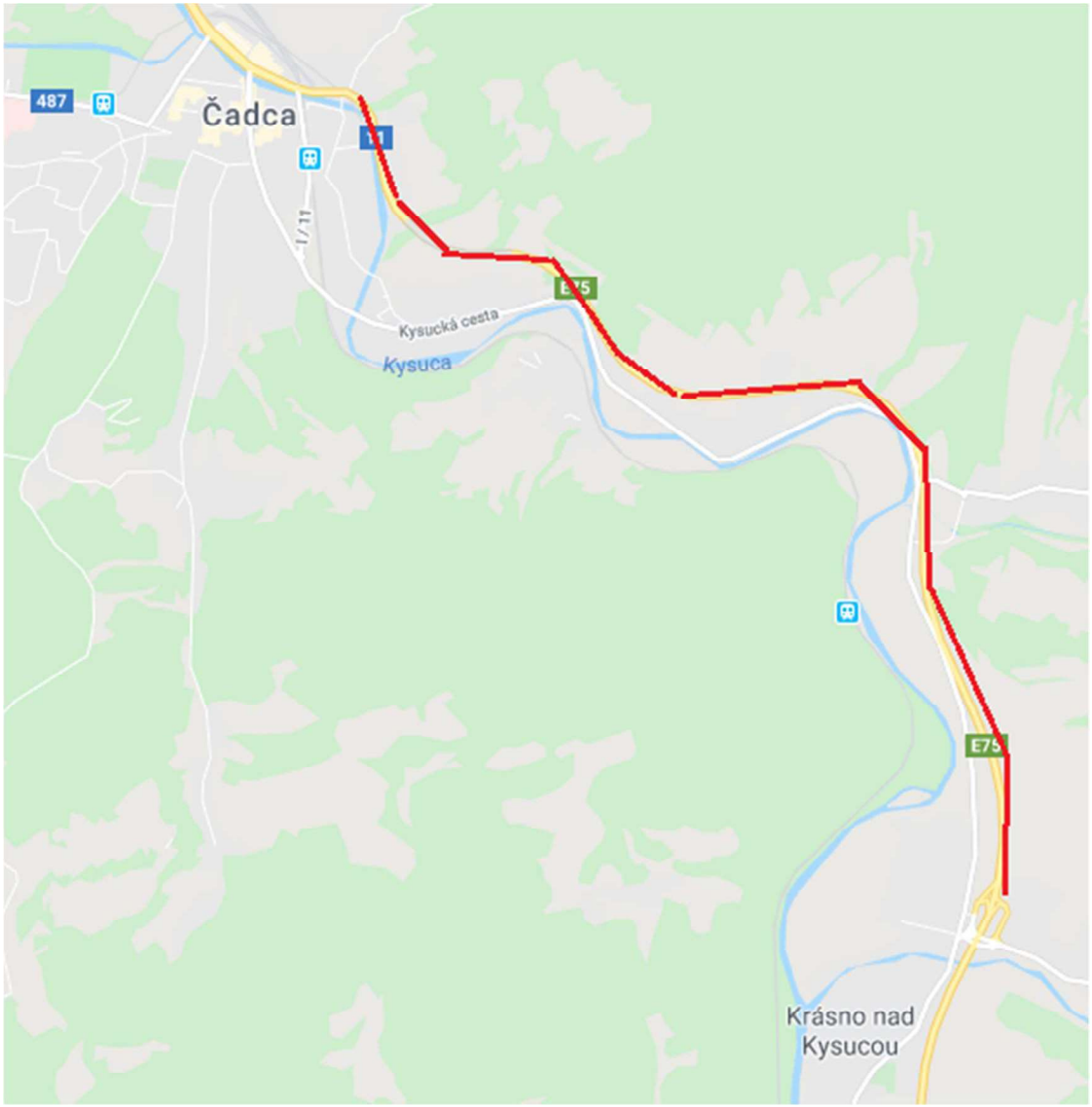
## 21. Project: D3 Kysucké Nové Mesto - Oščadnica

| | |
|---|---|
| **Project goals** | Construction of new motorway between town Kysucké Nové Mesto and vilage Krásno nad Kysucou a part of South - North D3 expressway Žilina - Čadca - national border SK/CZ |
| **Project topics with the maps** | Length of the section - 10,800 km in D24,5 profile<br>Number of new bridges on D1 - 18 with total length of 2 060 m<br>Length of noise concealing walls - unknown<br>Tunnels - 0<br>Level crossings - 1, Krásno nad Kysucou |
| **Level of importance (priority) with justification** | Medium<br>National<br>By the implementation of projects D3 Žilina, Brodno - Kysucké Nové Mesto - Oščadnica - Čadca, Bukov will be build missing 26 km motorway and connected the coherent 4 lane motorway from Žilina to Čadca as part of the multimodal TEN-T coridor (Baltic-Adriatic, Rhine-Danube). |



## 22. Project: D3 Oščadnica - Čadca Bukov 2. Profile

| | |
|---|---|
| **Project goals** | Construction of new motorway around town Čadca a part of South - North D3 expressway Žilina - Čadca - national border SK/CZ |
| **Project topics with the maps** | Length of the section - 10,800 km in D24,5 profile<br>Number of new bridges on D1 - 8<br>Length of noise concealing walls - up to 5 000 m<br>Tunnels - 1<br>Level crossings - 0 |
| **Level of importance (priority) with justification** | Medium<br>National<br>By the implementation of projects D3 Žilina, Brodno - Kysucké Nové Mesto - Oščadnica - Čadca, Bukov will be build missing 26 km motorway and connected the coherent 4 lane motorway from Žilina to Čadca as part of the multimodal TEN-T coridor (Baltic-Adriatic, Rhine-Danube). |

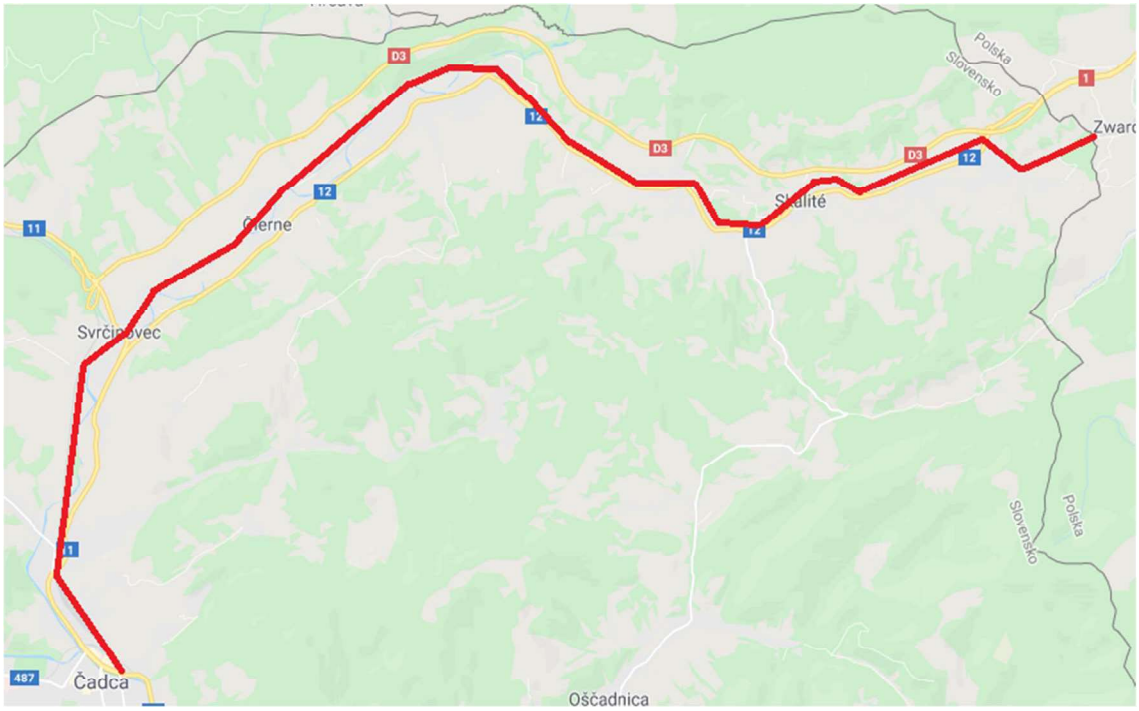


# 2.5.3. Projects eliminating or reducing bottlenecks

## Railway transport

### 23. Project Čadca - Skalité

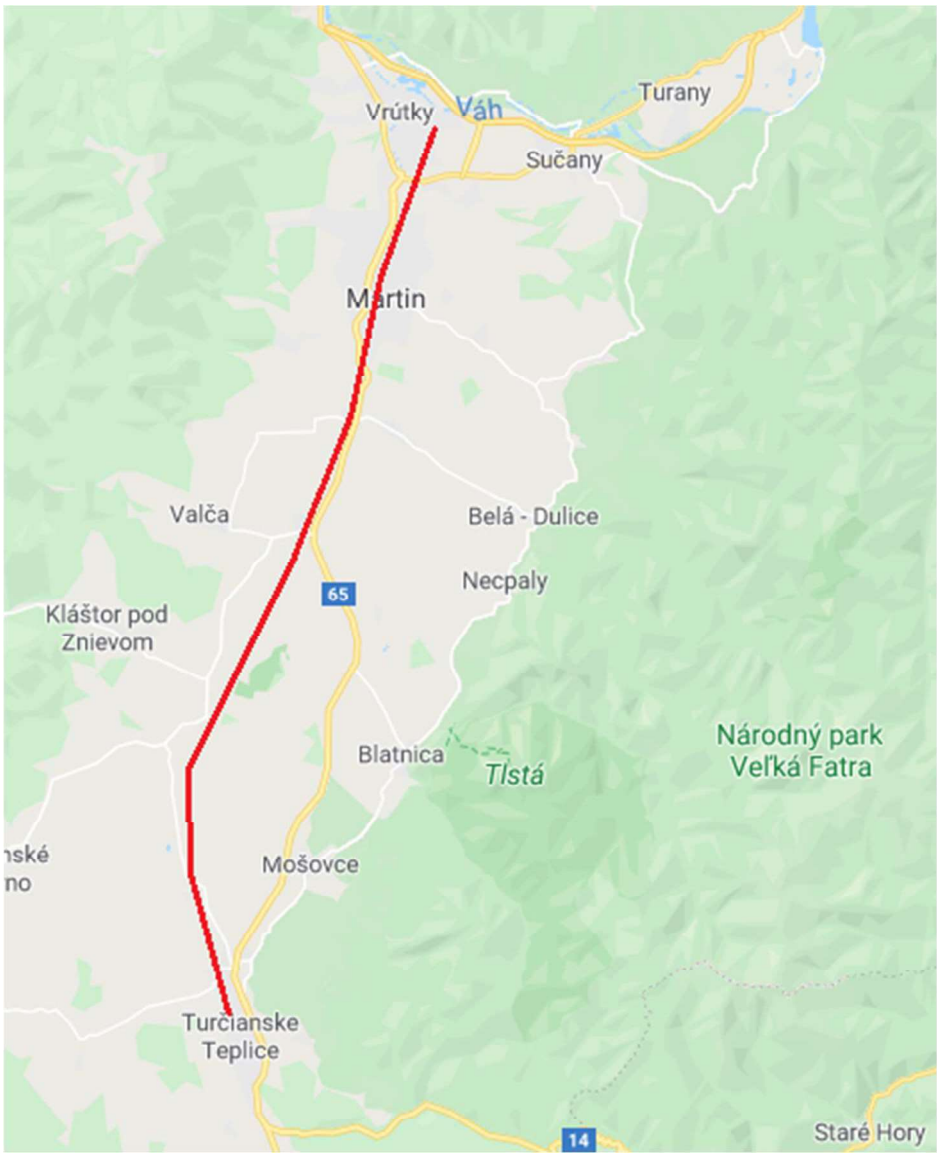
| | |
|---|---|
| Project goals | Modernizaion of TEN-T coridor with posible construction of second track. Main goal will be the modification of track direction to minimize gradient which now reach up to 26‰ at border area. |
| Project topics with the maps | At least one tunnel on border between SR and PL. |
| Level of importance (priority) with justification | High<br>National<br>In the Žilina region is not suitable railway border-crossing for freight transport. The modernization will ensure the better connection on the North-South axis with Poland. |




### 24. Project Vrútky - Diviaky

| | |
|---|---|
| Project goals | Upgrading the capacity and infrastructure to maximize throuput of the railway. |
| Project topics with the maps | Optimization of speed bumps and throughput on bottleneck sections of the line. The modernization should also include electrification and optimization of the adjacent sections to ensure maximal throughput of longer section of the network. |
| Level of importance (priority) with justification | High<br>National |

| | |
|---|---|
| | If the main North-South corridor from Žilina to Bratislava will be overloaded by passenger and freight transport, this is the alternative connection, but with unsufficient parameters at the moment. |




## 25. Information technologies of railway infrastructure managers and unification of dispatching management

| | |
|---|---|
| **Project goals** | Improving the management of rail freight transport (possibility of obtaining current data on the position of the train on the PKP PLK network, on the composition of trains in advance before arrival at border crossing stations) and shortening stays at border crossing stations (Petrovice u Karviné/Zebrzydowice and Bohumín-Vrbice/Chalupki (train clearance, replacement of locomotives, staff, etc.). |
| **Project topics with the maps** | Includes:<br>- unification of dispatch control for the international transport of freight trains |

| | |
|---|---|
| | - cooperation in the harmonization of allocated ad hoc routes and freight train timetables (including the same period of validity of ad hoc routes), shortening the waiting time for route allocation<br>- eliminate the problem of allocating ad hoc routes in cross-border sections - so that only individual cars or small groups of cars can be transported<br>- to include in the information systems also cases where one train at the border station on the PKP PLK network or Správa železnic, s.o. it breaks down into several trains and each resulting train goes across the border separately<br>- harmonization of timetable change data between Správa železnic, s.o. and PKP PLK<br>- cooperation in the harmonization of exclusion activity on lines in border areas and on the RFC 5 corridor,<br>- improving the cooperation of small railway carriers in the Czech Republic with Polish carriers regarding the timely provision of information about trains for the needs of international traffic dispatch management - for the timely delivery of locomotives for train overhangs, ensuring their sufficient number<br>- to sanction cases of frequent and repeated arrival of repair wagons on international trains from the PKP PLK network in the direction of the Railway Administration, s.o. |
| **Level of importance (priority) with justification** | High<br>National<br>Organizational measures in the scope of introduction and maintenance of set levels and rules of dispatch control of freight transport in international transport. A more efficient organization of freight transport will enable an improvement in the use of existing capacities and thus offer a higher capacity until the implementation of infrastructure constructions. |

# 3. Conclusions

## 3.1 Rail transport

- Rail freight transport from Slovakia to Poland (within the Project area) is carried out - due to geographical conditions (Beskid range - Jablunkovska Pass) through the Czech Republic.
- The existing Chadca - Zwardoń railroad connection and further towards Bielsko-Biała is currently of marginal importance for freight traffic. Even full modernization will not contribute to the change due to technical conditions - inclination of the tracks.
- Taking the above into account, only the implementation of the following projects indicated in the design studies is considered
    - railroad investments on the Slovak side - i.e. implementation of national plans supplemented by the following investments described in the study: Čadca - Skalité, Vrutky – Divaky,
    - Railroad investments in the Silesia and Moravia Region,
    - Railroad investments in the Silesia and Opole regions,
    - Railroad investments on the territory of Silesia - especially those dedicated to traffic to / from Slovakia, i.e. modernization works on railroad line no. 139 on the section Czechowice Dziedzice - Bielsko Biała - Zwardoń (state border) and railroad line139-2 - Tychy - Pszczyna; 139-1 - Katowice Ligota - Mąkołowiec (where the modernization of lines 139-1 and 139-2 results mainly from the PL - CZ and transit / corridor Baltic - Adriatic traffic on the Polish section,

  it will enable to realize the basic objective of the Project, i.e. to indicate the technical conditions for changing the road transport to another one to the extent required by the White Paper of the European Union.
- Investment activities in the field of railroads should be complemented by a number of organizational activities improving freight traffic on the territory of our countries going beyond the borders of the TransTritia Project, first of all, improving data exchange between IT systems - such as: track reservation, queuing, tracking, etc. and harmonizing transport rates and their calculation.

## 3.2 Road transport

- Road transport is currently the most important element in the trade of goods between Poland and Slovakia.
- Cooperation links using container transport between Silesia and the Land of Žilina - the automotive industry could grow after the road investment in the S1 road, the so-called "bypass of Węgierska Górka", and further towards Katowice with the inclusion of freeways into the system
- Implementation of the Slovak road investments indicated in this study will contribute to the improvement of road traffic within the TransTritia Project area and will indirectly affect the realization of the Project objective.

- The investment directly affecting intermodal transport is to improve access to the existing intermodal terminal in Żylina

## 3.3 Inland transport

- In the time horizon under consideration and in the area under consideration - until 2030, no inland transport investments were made
- The modernization of the inter-modal terminal in Żylina, i.e. the conversion from bimodal to tri-modal, requires a separate technical and economic analysis - this is related to the Váh's transport capacity to the north.

## 3.4 Final conclusions

The research on freight transport in the TRANS TRITIA Project area and the results of modelling and technical analysis showed the necessity:

- implementation of all investment plans, i.e. planned and indicated in our project in the area of rail and road,
- introduction of a number of organizational improvements.