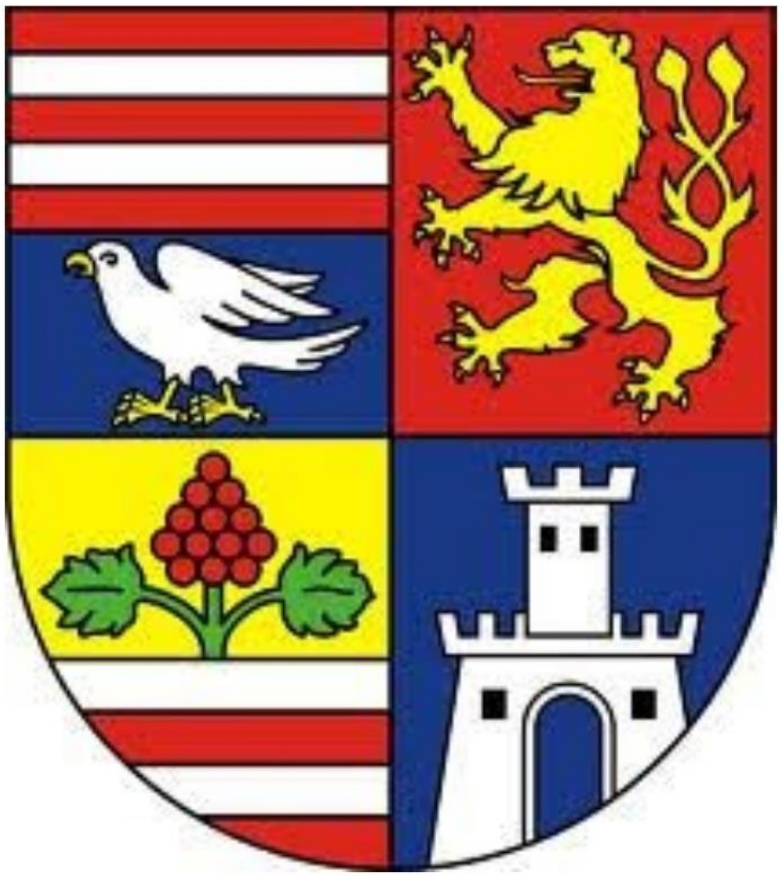
KOŠICE
SELF-GOVERNING
REGION

Chapters of CBC Mobility plan for Eastern Slovakia



Chapters included:

2.2. Compliance with the Provisions of Spatial and Sectoral Planning Documents

2.4. Taking over the provisions regarding the economic, social and natural development of the planning documents of target regions

3. Analysis of the existing situation and the scenario of the mobility trend – proposal of the Transport Model

3.1. Street network - road infrastructure

3.2. Public transport

3.3. Freight transport

3.4. Railway connection

3.5. Flights

3.6. Perspectives of waterways connections

3.7. Alternative means of mobility

3.8. Traffic management

3.10. Participation process - Relevant actors

3.11. Financing of the transport sector

3.12. Data collection, transport network development, transport demand, data calibration and validation, forecasts and foreseeable evolution of mobility variables

3.13. Expected evolution of the fleet of vehicles - to be added after ITS East if you have info

3.14. Border infrastructure

2.2. Compliance with the Provisions of Spatial and Sectoral Planning Documents

National level

Concept of Territorial Development of Slovakia (KURS) 2001 as amended by KURS 2011

The document deals with the concept of development of urban structures, networked settlement structures, protection and creation of land and the whole environment, and involvement in cross-border and international cooperation.

The material provides a detailed description of the settlement of Slovakia in the context of the settlement of neighbouring countries and Central Europe as a whole. It describes centres and centres of settlement, identifying and categorising them according to their size and importance. These centres of settlement and the transport links between them represent development axes where it makes sense to support and expect further economic development.

In accordance with the description and analysis of the settlement and development axes, support for the development of the regions is proposed in general terms, which is further elaborated into the development not only of transport and its infrastructure, but also of other sectors of the economy such as education, health, agriculture, forestry, water management, industry and other sectors.

Just as settlement is described in the broad context of the surrounding countries, transport and the approach to its development is conceptualised in the context of international concepts, both in the frameworks of European Communities and other international frameworks (the UN Economic Commission for Europe's Inland Transport Committee, ECMT - now ITF).

The basic objectives for the current spatial planning documentation are as follows:

- Promoting the development of the economic base and strengthening its competitiveness and efficiency
- Promoting balanced settlement development, including rural development
- Ensuring equal access to infrastructure
- Protecting and creating the environment, cultural and natural heritage
- Promoting integration and cohesion
- Ensuring sustainable development

Strategy for the Development of Public Passenger and Non-Motorised Transport until 2030

The Strategic Transport Development Plan of the Slovak Republic until 2030 has set an effective direction for the development of the transport sector and determined the method of implementation of its development vision. The key issues of the transport sector divided into road, rail, public passenger transport, water transport and civil aviation were defined. One of the basic problems of the transport sector in Slovakia is the long-term unfavourable development of the division of transport work in favour of road transport, from 1995 to 2004 it dropped from half to a quarter of the transport performance in passenger transport.

Based on the problems identified in the analytical part, a target development vision with a horizon of 2030 was defined in relation to European strategic and development documents: A sustainable integrated multimodal transport system that meets the economic, social and environmental needs of society and contributes to the greater inclusion and full integration of the Slovak Republic within the European Economic Area.

The following global strategic objectives have been defined:

1) Ensuring equivalent accessibility of settlements and industrial zones supporting economic growth and social inclusion within all regions of the Slovak Republic (on a national and European scale) through non-discriminatory access to transport infrastructure and services.
2) Long-term sustainable development of the transport system of the Slovak Republic with emphasis on the generation and efficient use of funds in relation to the real needs of users.

3) Increasing the competitiveness of transport modes in passenger and freight transport (counterparts of road transport) by setting appropriate operational, organisational and infrastructural parameters leading to an efficient integrated multimodal transport system supporting the economic and social needs of the Slovak Republic. Improving the quality of transport planning in the Slovak Republic by defining the optimal target value of the division of transport work in the context of the Slovak Republic and determining the steps and tools to achieve it.
4) Reduction of negative environmental and negative socio-economic impacts of transport (including climate change) as a result of environmental monitoring, effective infrastructure planning/implementation and reduction of conventionally powered transport vehicles or use of alternative fuels.

Measures for the implementation of the strategy were defined on the basis of global trends, international agreements and commitments of the Slovak Republic and problems identified in the analytical part of the strategy preparation.

For the purpose of future evaluation of the strategy implementation in practice, indicators have been set to compare the future state of the transport sector in the Slovak Republic with the state at the time of the strategy preparation (division of transport work, number of persons killed and injured in transport, travel time between major settlements, CO2 emissions, and PMx concentration)

Road transport problems relevant for the road network of the Košice Self-Governing Region:

- Unapproved and unapplied change to the road network concept
- Long pre-investment and investment preparation
- Unavailability of selected input data for analysis and planning
- Significant exceeding of design capacities of class I roads in most regions of the Slovak Republic - I/16 connecting to R2 near Košice,
- High lorry traffic volumes on class I roads
- High proportion of transit traffic in selected cities
- Complicated access to motorways and expressways from selected districts

Proposals – road network:

- OPC1: Implementation of the new road network concept
- OPC2: Changing the principles and provision of management and maintenance of road infrastructure
- OPC5: Completion of the west-east priority axis (Rhine-Danube corridor, Czechoslovak branch)
- R6 + D1 – completion of Žilina – Košice, Košice – UA border sections
- OPC7: Completion of the north-south link in eastern Slovakia
- R4 HU border-Košice, R2 Košice, D1 Košice-Prešov, R4 Prešov – Poland

- OPC8 Completion of the central Slovak west - east road axis
- R2 Trenčín – Žiar n. Hronom – Lučenec - Košice
- OPC11 Development of the class I and class II road network
- OPS6 Regular updates of strategic and development documents

Problems – public transport

- According to both the survey and the traffic modelling results, only around 30% of trips are made by vehicles.
- Only 18% of public transport journeys are made by train, and the supply of trains is limited, especially in suburban transport.
- Access to settlements by public transport in regions without upgraded rail lines is much slower than by passenger car.
- Public transport on roads slows down due to traffic congestion and the construction of traffic lights
- There is a continuing loss of passengers to individual car transport (ICT), especially those paying a full fare, which is causing significant losses in public passenger transport (PPT) revenues.
- Loss of passenger is faster in "rural" regions where there is no regular transport to catchment centres throughout the day,
- The loss of passengers causes cancellation of underused routes, especially in the evening, which generates further passenger loss due to the decreasing attractiveness of public passenger transport.
- Regional bus transport systems in most counties are organised according to the demand of their passengers; underused routes are cancelled. As a result, the arrangement of routes is not very systematic and not very clear for attracting new and occasional passengers
- The current train frequency is not attractive enough.
- Insufficient use of the potential of terminals and higher costs of compensating for losses once they are operational.

  The operation of integrated passenger transport terminals (TIOP) within the ITS is complicated by:

  - Non-existent legislation
  - Unclear authority for the operation of integrated passenger transport terminals.

  All these problems further exacerbate the negative trend, which is a gradual decline in the use of VOD systems to the detriment of the strengthening of individual car transport.

Proposals - public transport

- OPZ2: Establishment of the operational concept for passenger transport by rail (as part of the national operational concept for public transport) and its implementation plan until 2030 with a view to 2050 - Establishment of a central coordinator and organiser of public transport, creation of a

national operational concept for public transport and its implementation plan. (It was also part of the Slovak Government policy statement. It has been modified into a "PPT harmonisation" working group aimed at removing barriers to public transport integration.)

- OPZ3: Transport Service Plan of the Slovak Republic (by rail transport) from 2022
- OPZ4: Modernisation of the key Žilina - Košice - Čierna nad Tisou line and associated lines (Hidasnémeti - Košice - Prešov - Muszyna, Košice - Trebišov - Michalovce - Humenné)

Modernisation of inter-station sections and stations, relocation of selected sections

- OPVO1: Preference for public passenger transport in urbanised areas (most needed)
- OPVO4: Improvement of public spaces in cities and construction of new infrastructure for pedestrians and cyclists
- OPVO5: Construction of catchment car parks and parking areas around railway stations and terminals

o To increase the share of rail transport in transport work, combined transport with individual transport should be promoted

- OPVO6: Revitalisation of railway stations and stops to improve the culture and quality of travel
- OPVO7: Achieving high quality terminals, transfer nodes and integrated stops, minimising barriers and maximising compactness and efficiency

From the draft set of projects of the Strategic Plan for the Development of Public Transport of the Slovak Republic until 2030 for the Košice Region:

- TIOP Michalovce
- TIOP Trebišov
- TIOP Košice, Sever - continuity of railway and urban transport
- TIOP Krompachy
- TIOP Margecany
- TIOP Prakovce
- TIOP Spišská Nová Ves
- TIOP Košice, Staničné námestie (interconnection of stations using interoperability)
- Rail connection of Kechnec industrial park and Bočiar industrial zone to integrated rail transport (IRT)
- Double tracks for the Košice - Prešov railway line "Kysak - Prešov" section at TES level
- Improving the safety of bus stops - building bus lanes
- Transfer terminals with appropriate information system
- TES connection of Moldava nad Bodvou terminal to the road
- Preparation of the General Transport Plan of the Košice Settlement Unit
- Update of the Transport Service Plan of the Košice Self-Governing Region

- Low-floor and eco-friendly buses - procurement (180 pcs)
- Public transport performance planning software
- Central bus stops with the relevant information system in KSK
- Fare-information provision of the integrated transport system
- Central dispatching of public transport systems - ITS dispatching

From the draft set of projects of the Strategic Plan for the Development of Public Transport of the Slovak Republic until 2030 for the Košice Region – Rail Infrastructure until 2030:

Green:

- Modernisation of Poprad-Tatry - Lučivná the railway line
- Electrification of the Bánovce nad Ondavou - Humenné line, PD for DSP and DRS stage
- Electrification of the Bánovce nad Ondavou - Humenné line, completion
- Košice – Čierna nad Tisou, modernisation of the railway line, Košice - Michaľany section, PD
- Košice – Čierna nad Tisou, modernisation of the railway line, Michaľany – Čierna nad Tisou section, PD
- Čierna nad Tisou, modernisation of the junction, PD + completion
- Modernisation of the Žilina - Košice railway line, Krompachy (outside) – Kysak track section, additional funding for PD after DRS
- Electrification of the Haniska pri Košiciach – Moldava nad Bodvou line, completion

Yellow:

- Modernisation of the Žilina – Košice railway line, Kysak – Košice track section, completion
- Terminál Sever Košice
- Access to Košice railway station from the eastern side and extension of the underpass
- ŽSR, Electrification and optimisation of the Fiľakovo - Moldava nad Bodvou line, completion of Modré
- Minor projects (level crossings, densification, timetables on the ŽSR network)

National Strategy for Cycling Transport and Cycling Tourism in the Slovak Republic (2013,2015)

The document presents the development of cycling tourism as one of the important opportunities for sustainable tourism development, draws attention to the increasingly large target group of Europeans preferring active holidays associated with exploring the countryside from the saddle of a bicycle and the advantages of cycling, especially for the use of off-season periods. The document sets out priorities and measures for cycling development and proposes its financial instruments.

The basic direction and vision of the cycling strategy is the recognition of cycling as an equal mode of transport and its integration with other modes of transport, as well as the improvement of the perception of

cyclists as full participants in road traffic, a significant strengthening of cycling tourism as an important segment of tourism with great potential.

Sustainable Mobility Plan of the Košice Self-Governing Region, 2023

The Sustainable Mobility Plan of the KSC developed by NDCon s.r.o. in the years 2020-2023 contains the following sections:

1. Data collection

1.1 Data collection on demography and territorial development

1.2 Collection of data on transport

1.3 Collection of accident data and other data

2. Surveys

2.1 Traffic surveys across county boundaries

2.2 Public passenger transport surveys

2.3 ASD (automatic traffic count) traffic volume survey and directional traffic survey

3. Traffic modelling

4. Analyses

5. Update of the Transport Service Plan of the Košice Region

6. Design part

7. Strategic Environmental Assessment (SEA)

8. Implementation and monitoring plan for the Sustainable Mobility Plan

In the Analysis part of the work, the task is to develop a four-stage traffic demand model for car, public and bicycle transport and to process the analyses using the traffic model and other collected data.

The main objective of the analyses is to assess and analyse the current state of the transport sector using the transport model in the area of car and public transport and the model relationships in cycling transport, in terms of organisation, operation, technical condition and functionality, vehicle fleet and infrastructure, etc., in order to identify problems and bottlenecks.

Forecast of the transport situation at time horizons of +5, 10, 20 and 30 years, taking into account demographic developments and alternatives of expected socio-economic and territorial development (optimistic/pessimistic/realistic), independently of infrastructure development.

The analysis focused on describing the current state of transport systems and data development trends. It dealt with transport organisation, institutional arrangements, public transport operations and infrastructure.

The following analyses of public transport were compiled:

- Congestion of sections of the public transport network,

- Number of connections to individual municipalities of the Košice Self-Governing Region,
- Distribution of transport work from individual municipalities of the Košice Self-Governing Region,
- Qualitative and quantitative indicators of public transport

The following analyses were further elaborated:

- Road network and road classification
- Traffic intensity on roads
- Levels of congestion and services,
- Network maintenance and development costs,
- Accessibility

In the preparation of the analyses, attention was paid to the quality and capacity of the infrastructure, transport safety, current and prospective demand, availability and functionality of the networks, capacity of the suburban and urban public transport fleet, organisational and institutional arrangements, the current system of operation and maintenance of the system, operational constraints, transport policy, parking system and the environment. Finally, a SWOT analysis was carried out.

The Sustainable Mobility Plan Surveys and Data Collection report described the traffic surveys carried out and their results, and presented all the data collected during their collection.

Other objectives of the project processing are:

- Development of a transport model of the Košice Self-Governing Region,
- Analyses of the collected data and results of the surveys using the outputs of the traffic model,
- Updating of real trends of traffic characteristics,
- Creation of a basis for further spatial development in terms of transport
- Transport forecast using the traffic model,
- Design of an efficient and sustainable transport system,
- Proposal of vision, goals and specific objectives for the development of the transport system until 2040,
- Proposal for the approach to maintenance and development of the road network in the administration of the Košice Self-Governing Region,
- Update of the forward-looking transport characteristics,
- Proposal for optimisation and strengthening of the role of railway transport in regional transport services,
- Proposal for the optimisation of the regional bus service,
- Proposal for the principles of an integrated transport system.

After the analytical part of the elaboration of the project "Sustainable Mobility Plan of the Košice Region", which focused on the analysis of the collected, available documents and data, comes the phase that focuses on the vision of mobility, goals and measures on the transport network of the Košice Region. It will be

followed by the implementation plan and the last part, the update of the transport service plan, which will detail the issue of suburban bus transport.

The main contribution of the draft part is mainly the recommendation of the future direction of the Košice Region in the field of transport, transport processes and transport infrastructure. An important contribution to the further development of the Košice Region is also that this document proposes and ranks the order of importance of infrastructure measures on the Class II and Class III road network according to measurable factors, and thus provides a tool for easier, justified and effective advocacy for the implementation of projects leading to the improvement of the transport situation in the Košice Region.

Determination of the main objectives of the design part of the KSC PUM:

- The aim of the PUM is primarily to update the prospective transport characteristics, parameters and services of the Košice Region with their projection into a realistic design of the solution, which takes into account the possibilities of financial resources, including EU funds. The task of the PUM is to define the conditional regulation of possible further territorial development of the Košice Region in terms of transport facilities and services. The resulting PUM fully respects the principles of sustainable mobility planning (in accordance with the document "Methodological guidelines for the development of sustainable mobility plans", Ministry of Transport, Construction and Regional Development of the Slovak Republic, 2015) and strategic documents at regional, national and supranational level (especially EU). The strategic part of the work will be the Sustainable Mobility Plan (SMP) with the subsequent Strategic Environmental Assessment (SEA).
- The preparation and processing of the PUM is also aimed at updating the transport forecast in real indicators, which will be the basis for the design part of the individual transport modes. An integral part of the PUM is the spatial projection and definition of the spatial requirements for linear transport structures and transport areas resulting from the proposal.
- The aim of the PUM is to systematise the issues of transport and sustainable mobility in relation to related legislation, in relation to current national, regional and international transport development concepts and the latest trends in the field, taking into account the needs and potentials of Košice Region.
- The main objective of the document is to address transport at the organisational, operational and infrastructural level by focusing on public passenger and non-motorised transport and on the effective use of new technologies of intelligent transport systems in order to ensure environmentally and financially acceptable transport respecting the basic principles of sustainable mobility and to propose measures to increase the use of sustainable modes of transport.
- Other parallel activities in the field of transport, such as the results of the national transport census of 2015, the process of preparation of the integrated transport system, the Transport Service Plan of 2007, the Regional Integrated Territorial Strategy, the Programme of Economic and Cultural Development of the Košice

Region, the Concept of transfer terminals and the Concept of building a skeleton network of bicycle routes in the Košice Region and other documents, are also taken into account.

On the basis of the analytical part and the definition of the main problems in the field of mobility of the Košice Region, strategic objectives for the transport sector are defined, which are linked to the problem areas from the "Analysis" part. The strategic objectives are also supplemented by indicators so that the development and the degree of achievement of the objectives can be monitored in a measurable way in comparison with their current state.

Summary of the main transport problems in the Košice region:

- Poor structural condition of railways, their insufficient maintenance and modernisation, resulting expensive operation of obsolete railways, poor quality of railway stops and stations;
- Obsolete vehicle fleet in rail transport and resulting lower competitiveness against individual car transport;
- Very low range of rail services;
- Negative impact of free trains on long-distance bus services;
- Untransparent public transport system, insufficient information provision, poor quality of bus stations, bus stops (especially accessibility) and their information system
- Lack of an integrated transport system in practice;
- Lack of infrastructure and preference for public and pedestrian transport in cities;
- Slow and outdated check-in;
- Continued decline in the use of suburban bus services despite the many measures implemented (coordination, modernisation);
- Lack of resources to compensate for increasing losses of carriers;
- Ownership structure of bus stations and lack of legislation for integrated passenger transport terminals;

- Roads running through the centres of villages and towns, even in the main directions, lack Class I roads;
- Lack of funding for the repair and development of county roads and its inappropriate solution by maintenance loans;
- Inadequate structural condition of county roads, especially in mountainous areas;
- Lack of footpaths in villages, which impair access to regular public transport;
- Lack of border crossings to Ukraine;
- Cross-border connections to Hungary with restrictions for bus transport;
- Poor accessibility of mountainous areas in winter (sections of class II roads without winter maintenance);
- Exhausted capacity of the road network in the vicinity of Košice and lack of emergency parking facilities;
- Disjointed routing of routes with unresolved entrances to towns;

- Unsystematic funding for cycling.

The proposal for the road network of the Košice Self-Governing Region is based on the conclusions of the analytical part, defined problems, outputs of traffic modelling and interviews with experts from the National Motorway Company, Slovak Road Administration, Transport Department of the Office of the Košice Self-Governing Region and Road Administration of the Košice Self-Governing Region.

The weaknesses of the road network described in the analytical part are:

- Lack of D1, R2 motorways and expressways network
- Roads running through villages, also in the main directions there are no class I roads;
- Natural barriers without bridges and roads;
- Underdeveloped road network in some places;
- Inadequate structural condition of county roads, bridges and culverts especially in mountainous areas;
- Lack of border crossings to Ukraine;
- Poor accessibility of mountainous areas in winter;
- Lack of funding for repairs and development.

The identified threats in the analyses that need to be eliminated are:

- Exhausted network capacity around Košice;
- Deterioration of the construction condition of regional roads due to slow rehabilitation in connection with undersized financing;
- Deterioration of the environment along the roads;
- Impacts of climate change - deterioration of roads.

The investment proposal is aimed at:

- Meeting the required standards of international routes - TEN-T Rhine-Danube Corridor (D1, I/19), TEN-T core and cumulative network (D1, R4, I/16, I/17,I/19,), E50 roads, E58 and E71 as well as the completion of the Via Carpathia route connecting Lithuania and Poland (S61 - S16 - S19) via the Slovak R4 expressway with Hungary (M30 - M3 - M35 - M4), Romania, Bulgaria and Greece;
- Completion of the construction of the D1 motorway to the Ukrainian border, the construction of the Košice bypass by the R2 expressway and its three-lane continuation to the Banská Bystrica region;
- Completion of the major tunnel connections to the west of Slovakia, Branisko and Soroška, to a full four-lane profile;
- Modernization of all I. class roads in the territory of the Košice Region and for three roads I/18, I/67 and I/79 solution of their crossings through villages by bypasses;
- Solving the insufficient connection of the Spiš region to the D1 motorway by new I class roads under the management of the NDS connecting Spišská Nová Ves, Smižany, Spišské Vlachy and the II/547 road from Krompách and Gelnice to the D1 motorway;

- Addressing the lack of capacity at the entrances to Košice on roads I/19 and II/552 by increasing capacity and giving preference to public transport;
- Elimination of capacity constraints on sections and nodes of the network with a lower level of traffic quality than B (see Figure 78 of the analytical report):
o Route I/20 (formerly feeder PR3) at the entrance to Košice in Košice (resolved by the R2 bypass);
o road I/19 at the entrance to Košice (Bidovce - Košice Oľšany) - bus lane proposal;
o road I/19 at Trhoviště and at the entrance to Michalovce (to be solved by D1);
o road I/18 in Strážske (to be solved by relocation of I/18);
o road II/552 at the entrance to Košice - four-lane section;
o road III/3390 in Košice before the junction with III/3391 near Crow Arena;
- Modernisation of Class II spine roads, solution of their passage through villages, new Class I roads, obtaining a special additional financial fund for the adaptation of Class II spine roads to a higher standard (between the standard of Class I and Class II roads):
- road II/533 county border - Spišská Nová Ves;
- road II/536 - II/547 Spišský Štvrtok - Košice;
- road II/546 Prakovce - Jaklovce;
- road II/547 border of the region - Spišské Vlachy;
- road II/552 fulfils the role of the spine along its entire length, with priority in the sections Košice - Slanské; Nové Mesto and Veľké Kapušany - Vojany;
- road II/555 Kráľovský Chlmec - Veľké Kapušany - Michalovce.

Reconstructions will need to focus primarily on roads in poor and very poor condition , including bridges and culverts, and on roads that have been analysed in the multi-criteria analysis. On these roads, continuous maintenance is most needed until repairs are made.

The scenarios below contain a proposal for the development of the road network as well as a proposal for the maintenance of the Class II and Class III road network in the period up to 2050. The measures to be implemented by the national administrator according to its plan are included in the Bau scenarios. Measures to be initiated or implemented by the Košice Region according to the issues described in this strategy and the proposed specific objectives will be included in the Do all scenarios, the 2030 and 2050 horizons and their 2025 and 2040 phases.

The KSC PUM is in line with the strategic materials in the field of rail transport, which unfortunately are not being implemented. Beyond the scope of the assignment, a number of additional measures are proposed to increase the attractiveness of rail transport. Smaller scale measures should be implemented regardless of the delay of large projects; on the contrary, smaller projects are an opportunity to use subsidies from EU funds

efficiently when large projects are not ready on time. The basis for the infrastructure proposals is a proposal for a new organisation of rail transport in the Košice Self-Governing Region.

Perhaps the most important change in the organisation of rail transport from the perspective of sustainable mobility planning in the region should be a significant strengthening of the role of the region, through the coordinator of the integrated transport system IDS East, in ordering performance in passenger rail transport. It is questionable whether the previously planned transfer of funding from the state to the counties is necessary. If not, a strong position of the institution that organises the Integrated Transport System is necessary, as well as its full understanding of the issue of the costs of operating rail transport. There is a need to put an end to the current situation where transport performance is centrally allocated by the Ministry of Transport and Construction without regard to actual demand, let alone the potential for future demand, as indicated by the strong traffic relations in car transport. Without resolving the possibility of increasing the scope of transport on railway lines, which will thus become an attractive component of public transport and its customer will thus assume responsibility for providing quality transport services along railway lines, it would make little sense to invest in increasing higher throughput on railway lines or in train-bus terminals (except for the already well-covered line Poprad - Košice).

Another significant change should be the position of rail transport in the public transport system in Eastern Slovakia. Rail has potential here due to the lines in operation, where trains can serve as the efficient backbone of the system. However, for this to happen, rail transport needs to be densified during the day and brought into a comprehensible system. Rail is (or can be) capable of carrying large numbers of passengers relatively quickly.

Bus services must follow the train lines and complement the rail network.

In the following chapters a proposal for a new organisation of rail transport in the Košice Region is elaborated. It has been worked out in detail in such a way that it is realistic to accommodate all trains on the line. If necessary, infrastructure measures are proposed in chapter 8.4 so that the proposed traffic parameters can be achieved. The proposed timetable will be implemented in incremental steps over time, which will be refined within the Transport Master. This proposal is prepared in connection with the proposal for a new organisation of rail transport within the PUM of the Prešov Region, so that the train offer builds on each other and the resulting proposal brings a higher added value to the provision of the supporting role of rail transport in Eastern Slovakia.

A prerequisite is the necessity to modernise the signalling equipment at the Košice junction.

The railway is envisaged in the PUM KSK as a carrier transport system within public transport in the future. The proposed rail transport solutions are intended to show the possibilities of using the railway infrastructure and should be a forward-looking solution, with the expectation that demand will grow to multiples of today's values as the quality of supply improves. All proposals have also been modelled in the transport model. Since

the increase in ridership cannot be accommodated by a county decision, only a limited increase in rail service is assumed in the 2025 Transportation Service Plan Update.

In the Design Section, the 2030 scenario shows and is supported by calculations in the traffic model how the tracks could be used. An all day clock schedule is proposed, in practice the ordered schedule will only be at peak times, off-peak times may be double the clock schedule. The introduction of trains from Muszyna to Poland is a forward-looking matter dependent on cross-border demand, particularly from the Polish side. It will also depend on the development of new infrastructure in Poland (modernisation of the Chabówka - Nowy Sącz line and the new Podłęże - Sczyrycz - Tymbark line).

The management of lines and connections in the Košice Self-Governing Region is the result of long-term care for its form on the part of carriers and the Transport Department of the Košice Self-Governing Region Office. It is based on the knowledge of the actual demand for vehicles, on annual partial consultations with the municipalities concerned and is also adapted to the current railway timetable. Unfortunately, the railway timetable cannot be significantly influenced from the position of the county.

The proposal therefore does not aspire to propose a completely new line. Rather, it aims to assess the current state of operation and to resolve deficits or possible excesses that arise from the natural evolution of the market and circumstances outside the competence of the Košice Region. Such influences in recent years have been free trains, subsequent cancellations of long-distance services, the advent of international Flixbus services, changes in road infrastructure and changes in demand. Possibilities of partial improvements, changes of routes, restrictions of termini or timings and possibilities of combinations between rail, suburban bus and public transport systems were also sought. An important objective is to simplify and clarify the system of lines and connections, to introduce segmented timetables and to systematically use timetabled services with an easy-to-remember timetable. A new opportunity will be the possibility to better coordinate lines and connections at regional borders, with the new possibility for the Košice Region to co-determine the lines organised by the neighbouring Prešov Region, instead of the previously used agreements between carriers, which ended up in coordination between lines without the possibility to routinely influence the specific timetable.

The proposal is based on an attempt to optimise within the catchment areas, which are the districts within the region, and also on an attempt to optimise links to nearby destinations in neighbouring regions.

Návrhová časť poskytuje princípy návrhov a odporúčania, ako ich aplikovať na jednotlivé medzioblastné spojenia a zvoz do spádových center. Konkrétny návrh cestovného poriadku pre pracovný deň, víkend a prázdniny bude obsiahnutý v nadväznej Aktualizácii plánu dopravnej obslužnosti. Budú tam tiež ukázané detailnejšie potreby a priority a riešenie obsluhy územia môže byť aj mierne odlišné od návrhovej časti.

Návrh je spracovaný z pohľadu obsluhy územia, stavebným prvkom návrhu je linka a počet spojov na nej. V návrhu je linka opísaná potrebným počtom spojov bez ohľadu na jej príslušnosť k aktuálnemu dopravcovi.

Integrovaný dopravný systém má za úlohu vyriešiť vyššie naznačené problémy:

- Interdependencies between subsystems;
- Unified operating and transport conditions;
- Use of common infrastructure (stops, terminals);
- Exploitation of the specific strengths of the individual subsystems;
- Possibility of easy interchanges;
- Links to the surrounding public transport system in terms of transport services (long-distance connections, terminals of other modes of transport - e.g. airports);
- Clarification of fare systems and connections;
- A common information system that will make it easier for people who are not yet public transport users to find their way around;
- A single point of fare payment for the entire planned journey;
- Opportunities to benefit regular users;
- Appropriate involvement of individual modes of transport - particularly walking and cycling, but also car use where this does not cause problems.

It was decided to create the Integrated Transport System IDS East, s. r. o., which will cover the territory of both eastern Slovak regions - Košice and Prešov self-governing region. This integrated transport system is to connect regional train transport (trains of Os, RR, REx categories), suburban bus transport (after the disappearance of long-distance bus connections, except for international ones, in Slovakia, it is also possible to have fast connections connecting at least three district towns) and public transport systems in large cities of both regions.

IDS Východ, s.r.o. is to provide travel on the basis of one tariff and one travel document for the whole journey. For this purpose, an IDS East, Ltd. coordinator is established as the institution dealing with the planning, organisation and operation of the entire IDS. In addition to the laws, sub-legal standards and technical regulations in force in the Slovak Republic, the framework of traffic rules shall be established by contracts setting out rules and standards for traffic, information systems, passenger check-in and the announcement of tariff conditions.

The creation of the Integrated Transport System East is an important step to achieve sustainable mobility in Eastern Slovakia. In conjunction with other measures (parking policy in the centres of larger cities, establishment of P+R, K+R and B+R car parks, etc.) it has the potential to lead commuters to make greater use of public transport, which is more economical, environmentally friendly and safer than individual car transport.

Proposed:

- Preparation of a feasibility study for the Košice node
- Modernisation of the Košice railway junction
- Connecting the station to the eastern side

- New underpass from the railway to the bus station
- Connection of the railway station platform with the bus station
- Possibility of passage from the bus station to the station forecourt for integrated transport buses
- Modernization of the bus station apron, clarification, information system, cancellation of the underpass, integration with public transport
- Preference for buses on Prešovská and Palackého Street
- Detention car park on the eastern side of the station
- Establishment of IDS East contact centre with sale of travel documents.

Terminals for suburban rail transport on the outskirts of Košice and stations with long-distance transport at the level of district towns and major catchment centres:

- Košice - North - a new terminal is planned to be built on the railway line near Hlinkova Street, after its completion it will be a stop for trains from Kysak, a connecting point for urban transport (also for the future tram line to the Ťahanovce housing estate) with the potential for the establishment of a parking lot for individual car transport
- Košice - south (Barca) - new terminal in the area between the Barca stops and the railway line from Černá nad Tisou, railway stops on two lines, public transport stops, suburban bus terminal from the south and southeast, with P+R, possible prospective extension of the tram line from Barca to the Barca terminal and building a road from III/3416 to the terminal, ideally also creating a road connection to the Slanecká road
- Kysak is a terminal for long-distance transport accessible from the Prešov region, the station lacks better passenger facilities, narrow platform areas lead to slow clearance, lack of infrastructure for buses and cars. Modernisation of the station is being prepared as part of the modernisation of the Poprad - Košice corridor. It is necessary to build a modern Kysak terminal for bus transport in the station forecourt area and a parking lot in the building next to the station
- TIOP Trebišov - it is necessary to build a terminal for regional and urban transport with a quality information system
- TIOP Michalovce - the railway station needs modernization and peronization, two separate parts of the bus station need to be functionally connected, a parking lot for buses needs to be built and equipped with an information system
- Margecany - the station needs modernisation, there is a small but still sufficient terminal in front of the station, the capacity of the terminal needs to be increased in the future
- Krompachy - the station building needs modernisation, the station forecourt has been modernised from KSK funds
- Moldava nad Bodvou, town - a full-fledged terminal has been built, but its connection to the first class road is not solved and it has insufficient use by railway transport.

All major interchanges should be equipped with a standardised IDS East information system, an electronic information system with linked information on train and bus departures and IDS East contact centres with ticketing.

Major interchanges offer interchanges with regional trains. Some of the following interchanges are proposed to operate as part of an integrated transport system. In practice, these terminals will be developed through specific measures in their rail part and the separate establishment of a bus terminal in the station forecourt area:

- Michaľany
- Streda nad Bodrogom
- Pribeník
- Strážske
- Rožňava (v Brzotíne)
- Spišské Vlachy
- Prakovce – terminál je potrebné vybudovať v novej polohe
- Gelnica mesto - terminál je potrebné vybudovať v novej polohe
- Jaklovce – nová poloha zastávky
- Mníšek nad Hnilcom
- Nálepkovo
- Turňa nad Bodvou
- Rožňava mesto
- Dobšiná
- Mníšek nad Hnilcom
- Streda nad Bodrogom
- Pribeník
- Čierna nad Tisou
-

Smaller rail interchanges will also be important for the Integrated Transport System:

- Plešivec
- Turňa nad Bodvou
- Veľká Ida
- Slanec
- Kostoľany nad Hornádom
- Bohdanovce
- Čečejovce

- Haniska
- Čaňa
- Čeľovce
- Kuzmice
- Kalša
- Čerhov

All train-bus terminals should be equipped with an easily accessible bus stop with the IDS East information system, and an on-line information system for train and bus departures should be set up at the more important terminals.

Interchanges in bus transport provide interchanges between suburban and long-distance buses with each other and also with links to urban transport connections where such connections operate. They are often identical locations to the train-bus terminals mentioned in the previous chapters. Existing interchanges are listed here, but also newly proposed interchanges based on the rationalisation of some lines and the introduction of an integrated transport system. Only in the case of the train-bus terminals Košice Sever, Košice Barca and TIOP Trebišov common integrated measures are considered, in all other cases separate measures are proposed for the railway station and separately for the bus station, if it will be possible to implement both parts independently of each other, by different investors and in different time horizons.

The terminals will need to be equipped with suitable bus stops, bus shelters, IDS East information system for the larger terminals as well as on-line information boards with bus departures and car and bicycle parking facilities.

There is a need to build barrier-free bus stops in all municipalities of the region. New and reconstructed bus stops to be equipped with shelters, or with the IDS East information system or on-line information boards.

IDS Terminals in Košice dedicated to bus transport system in regional level:

- Košice - autobusová stanica – existujúci terminál električiek a autobusov (navrhované je prepojenie obidvoch autobusových terminálov s novým riešením vjazdu z Palackého s preferenciou autobusovej dopravy),
- Košice – juh (Barca - účasť terminálu vlak-bus)
- Košice – Sever (súčasť terminálu vlak-bus)
- Moskovská
- Vstupný areál U. S. Steel – existujúci terminál električiek a autobusov,
- Valcovne U.S.Steel
- Važecká

The next part provides an overview of places where the establishment of a P+R parking lot is important for sustainable mobility in the Košice region. Specific proposals for the location of temporary parking lots in the city of Košice (addressed also in the preparation of the document Sustainable Mobility Plan of the Košice Region):

- Zelený dvor
- pred Košickou Novou Vsou alebo Hrašovík
- Terminál Košice - Sever
- Heringeš
- Košice – Krásna (križovatka R2 s II/552)
- Terminál Košice – juh (TIOP Barca)
- Važecká (cez cestu II/552)
- Šebastovce
- Vstupný areál U.S.Steel, Šaca
- Valcovne U. S. Steel
- Pereš
- Moskovská
- Čermeľ

Possible placement of new temporary parking lots on the approaches to Košice at large interchanges of expressways and highways, specifically - it is necessary to ensure that the locations are serviced by public transport • intersection D1 with R2 Hrašovík, (direction from Sečoviec, Prešova) • intersection R2 with II/552 Krásna nad Hornádom (direction Slanec) • intersection I/17 with R4 near Šebastovce (direction Seňa, Kechnec) • intersection R2/U.S.Steel entrance area, Šaca or extension of the parking lots at the Valcovne U.S. Steel stop (direction Moldava n. B., Rešica)

Rail transport can be conveniently combined with traveling by car. Basically, there are two cases where such a combination is advantageous:

1) Travel by long-distance train with the possibility of parking the vehicle at the station For long-distance routes, important stations are Košice, Kysak, Margecany, Krompachy, Spišská Nová Ves, Haniska, Moldava nad Bodvou, Rožňava, Plešivec PUM KSK proposes to establish the following parking capacities:

- Košice – po spriechodnení stanice smerom od východu vybudovať záchytné parkovisko za stanicou
- Kysak – objekt záchytného parkoviska vybudovať proti staničnej budove, kde je k dispozícii pozemok , investorom bude ŽSR, bude spolupracovať s obcou

- Krompachy – parkovacie miesta sú k dispozícii
- Moldava nad Bodvou – parkovanie je k dispozícii
- Rožňava v Brzotíne – zriadenie parkoviska pre cestovanie do Košíc
- Spišská Nová Ves – využiť priestory nákladnej časti stanice
- Michalovce - záchytné parkovisko pri autobusovej stanici
- Trebišov – plocha pozdĺž železničnej trate
- Pribeník – plocha pri stanici
- Streda nad Bodrogom – plochy pri stanici
- Michaľany – zväčšiť plochu pri stanici
- Plešivec – plocha pri stanici
- Turňa nad Bodvou – plocha pri stanici

Parking cars in front of a big city with access by suburban train

- Kuzmice
- Bohdanovce
- Slanec
- Kalša
- Čeľovce
- Čečejovce

Four additional size categories of transfer points for bus transport outside Košice are proposed. Terminals need to be equipped with bus stops, shelters, the IDS Východ information system and, in most cases, online display of current departures, as well as parking spaces for cars and bicycles if there is enough space. Separate bus-bus terminals are in bold, the others are IDS terminals at railway stations and bus stops. B: Rožňava, Spišská Nová Ves, Michalovce C: Štítnik, Sečovce, Sobrance, Kráľovský Chlmec, bakery, Veľké Kapušany, Spišské Vlachy D: Medzev nám., Jasov, Turnňa nad Bodvou, Gelnica mesto, Spišské Vlachy railway, Rožňava railway. (in Brzotín), Rožňava mesto, Plešivec, Plešivec railway, Čierna nad Tisou, Strážske, Strážske railway, Pribeník railway, Budkovce, Bidovce, E: Turna nad Bodvou railway, Jamník, Mníšek nad Hnilcom railway, Dobšiná, Dobšiná railway, Jaklovce railway, Čaňa, Čaňa railway, Čečejovce, Čečejovce railway, Veľká Ida, Veľká Ida railway, Perín-Chym, Ploské, Vajkovce, Beniakovce, Sady nad Torysou, Bačkov, Rozhanovce, Budimír, Ďurkov, Slanec railway, Bohdanovce railway, Slanské Nové Mesto, Nálepkovo railway, Prakovce railway, Buzica, Zemplínska Teplica, Kuzmice railway, Veľaty, Čerhov railway, Borša, Novosad, Trhovište, Horovce, Drahňov, Vojany, Jenkovce, Veľké Revištia, Jovsa, Podhoroď, Hriadky, Pavlovce nad Uhom, Streda nad Bodrogom, Streda nad Bodrogom railway, Michaľany railway, Kecerovce, Kechnec (in the area of the former company Molex), Kechnec – Magna, Brehov, postmark. Biňov, Hriadky, Oborín, Somotor, Bačka, Leles.

The following findings and data-approved facts were identified as the main issues:

- The first kilometres of motorways are still under construction in the territory of the Košice Self-Governing Region.
- The D1 motorway passing through Spiš does not address the connection of the districts of Spišská Nová Ves and Gelnica at all.
- Due to slow renewal, the construction condition of the regional roads is not good and the roads are improving only slowly.
- In the Košice Region, in addition to the planned motorways, class II roads will form the backbone of the road network, but their transport-technical solution does not correspond to this at all.
- Almost no investment is planned for class I roads and there are insufficient funds for the modernisation of class II roads.
- The road network is underdeveloped in some places, even within a short distance from Košice, but the region does not have the means to complete the network.
- The capacity of the roads around Košice as well as the parking capacity in the centre of Košice is exhausted.
- Parametrically good railway lines are in a poor state of construction.
- The management of railway operation as well as the method of maintenance of the lines require modernisation.
- The utilisation of the railway lines is very low, except for line No 180 and partially No 188.
- The performance customer on the railways does not offer services according to potential demand, along the railways the transport service is almost everywhere supplied mainly by buses.
- The quality of service on the railway is very uneven and, due to the very obsolete part of the vehicle fleet, passenger expectations and demand are limited.
- Suburban bus services are set to meet current demand and do not offer services outside periods of strong demand.
- The highly sophisticated timetable system is not clear enough for the occasional user and in some cases inefficient due to the lack of coordination of bus routes from neighbouring regions, but this can and often is solved by clearly designed mobile apps with timetables.
- There is a complete lack of cooperation between public transport systems and suburban bus services.
- Public transport operators deliver part of the service in duplication with suburban transport and do not offer competitive services even on the main routes in cities.
- Public transport in and around cities does not offer an attractive alternative to individual car transport; it is more oriented towards social needs.
- Cycling remains marginalised, receiving limited support only in cities and on cycle routes.
- The most difficult barrier for rural cyclists are the entrances to larger cities, where roads are congested and there is no infrastructure for cyclists.

Based on the problems identified, the following main measures have been proposed for the period up to 2050, divided into Bau and Do all scenarios for 2025, 2030, 2040 and 2050.

- Construction of a complete network of four-lane motorways and expressways in half profile.
- Enforcement of a completely changed way of connecting the Spišská Nová Ves and Gelnica districts to the D1 motorway via the I/82 feeder roads and a new road along II/536.
- Construction of bypasses on the roads I/18, I/67 and I/79.
- Completion of several missing road links of class III, especially for the functioning of public transport.
- Construction of bypasses on Class II roads in sections with traffic volumes above 5 thousand. In the future.
- Modernisation of main railway corridors and junctions.
- Reinforcement of the regular rapid rail service and its operation in 30-60 min. timetable.
- Gradual substantial increase of regional rail transport performance to 15 - 60 min at peak times.
- Introduction of regional express services as a basic element for longer-distance journeys in the region.
- Construction of train-bus terminals at all major railway stations.
- Construction of bus-bus terminals according to the approved strategy with the development process of transport integration.
- Introduce ITS East into daily practice by gradual development from the three centres.
- Establishment of ITS East contact centres.
- Introduction of a modern check-in system and application for information and ticketing.
- Careful coordination of services in the Košice and Prešov regions.
- Introduction of new direct express bus lines between Košice, Rožňava, Trebišov, Michalovce, SobrancamOP 26 ŽDi, Veľký Kapušany and Kráľovský Chlmec in 30-120 min.
- Gradual arrangement of lines in cooperation with the reinforced railway providing two-way transport to the catchment centres into a system of lines with a tact of 30 - 60 min. at peak times.
- Reduction of bus services where rail services are enhanced.
- Setting up an efficient system of catchment centre services linked to rail transport, Košice urban transport and direct rapid bus lines.
- Finding an optimal form of alternative service in areas where demand is low for efficient bus service.
- Linking the urban transport services of Košice and Prešov with the regional transport services of the Košice region by introducing urban out-of-town lines and serving parts of the city with regional transport lines.
- Full integration of urban transport services of smaller towns with regional transport services as a complement to the strongest intra-urban relationships.
- Construction of intercepting car parks at stations of long-distance railway transport, at regional transport stops in the vicinity of Košice and on the outskirts of Košice at public transport lines.
- Establishment of cycle paths allowing access to towns from the surrounding area within 5 km of the city outskirts.

Sustainability Strategy for Funding Class II and III Roads in the Košice Region, 2015

The annotation of the document refers to the fact that class II and III roads are in worse technical condition compared to the superior transport infrastructure.

In the analytical part, the road network in the territory of the region is described from a quantitative and qualitative point of view. It describes the structural and technical condition of the infrastructure, the length of the roads and the structures located on them. Then it describes the factors affecting the road network, whether it is the operation of vehicles itself or climatic and geodynamic factors.

Further, the current state of management and maintenance of Class II and III roads is analysed. It describes the legislation in force, the authority of the individual institutions and the technical facilities. In addition to the roads themselves, the traffic on them, including the state of integrated transport, is analysed.

The second part, entitled Strategy Preparation - Transport Infrastructure, defines the projects, which are divided into groups:

1. Infrastructure construction projects
2. Infrastructure reconstruction projects
3. Infrastructure repair and maintenance projects
4. Bridge repair and maintenance projects

The importance and prioritisation of projects is then assessed using multi-criteria analysis.

The final section describes the sources of funding for these projects. The funding for the regional road infrastructure needs summarised in the form of proposed measures in the construction, reconstruction, maintenance and repair projects will be ensured by a combination of funds coming from the European Union (European funds), the funding of the self-governing regions (revenues and budgets of self-governing regions) and loans from EIB.

Strategy for the Development of Transport and Transport Constructions of the City of Košice, 2015

The strategy was developed by NDCON, s. r. o in 2015. As part of the strategy, traffic surveys, data analyses and a traffic model of the city of Košice for car, bicycle and public transport were prepared.

A proposal section with proposal horizons of 2020, 2030 and 2040 was developed. In the field of public transport, the following objectives were proposed:

- Responsibility of the city leadership for the transport system
- Increased sustainability of transport system funding
- Increased efficiency and sustainability of public transport
- Environmentally-friendly urban transport

In order to achieve the objectives, the following proposed projects have been proposed to achieve the public transport measures:

- Carry out a special study on the creation of a transport authority for traffic management, including the integration of public transport with regional
- Feasibility study of an integrated transport system - economic proposal of the system, conceptual-policy project for the integration of public transport in the territory of the city of Košice
- Update of the transport service plan of the city of Košice
- Within the framework of the work on the spatial plan, enforce the preference for new housing development and commercial zones in the vicinity of public transport lines
- Reform budgeting for maintenance and development of urban transport infrastructure
- Introduction of transparent financing of urban public transport
- Electronic system e-Cards - integrated pre-paid tickets, shared charging for public integrated transport, parking, bicycle sharing, car sharing
- New railway stop for regional transport Košice - Sever at Hlinkova Street (investment of ŽSR)
- ITS terminals for regional bus transport: U. S. Steel, Valcovne U. S. Steel, VSS križovatka, Važecká, Pereš, Košice - Sever and turning points Moskovská and Košice Nová Ves near Lingovo
- New operational concept of suburban transport in the city, use of terminals, physical, operational, information and tariff integration, integration of suburban lines into the city service
- Košice bus station - existing tram and bus terminal - prospective proposal for connecting both terminals with a new solution for the entrance from Palacký with preference for public transport
- Ensure tact traffic on the sections Košice - Prešov, Košice - Moldava nad Bodvou and Košice - Trebišov at an interval of 60 minutes, to Prešov in peak hours at an interval of 30 minutes
- Implement the management of public transport traffic flow into the new city control panel
- Modernisation of tram lines
- Renewal of tram fleet - at least 10 bidirectional vehicles
- Modernisation of tram maintenance base
- New tram lines
- Programme of modernisation of stops
- Preference for public transport at controlled intersections
- Establishment of preferential lanes for buses, cyclists, and taxis with customer Army Gen. Ave. L. Svobodu - Hlinkova, Americká, Prešovská cesta, Sečovská cesta, Palackého, Moldavská cesta, entrance to the entrance area of U. S. Steel from the R2 road, Štefánikova -PFB, approaches to the new controlled intersection at Jumba
- Modernisation of the information system in vehicles and at bus stops
- Modifications and equipment of public transport interchanges

- Completion and modification of bus turnarounds
- Modification of roads for public transport traffic
- Construction of a new bus garage in the south-western part of the city
- Reconstruction of converter stations, overhead lines, return cables of the tram network
- Modernization of the expressway to U. S. Steel, traffic control, reconstruction of the expressway overpass in Peres
- Extension of the tram line to Ťahanovice via Hlinkova
- Purchase of new trams for the new line to Sídlisko Ťahanovce
- Renewal of an ecological form of non-rail public transport - trolleybuses
- Extension of the ecological form of non-rail public transport for line 10 and on Sečovská
- Tariff-information provision of the integrated transport system - check-in systems and provision of traffic information
- Central ITS dispatching and software for integrated transport management
- Modernization of the central traffic dispatching of public transport and electrodispatching
- Software for planning public transport performance for the city of Košice
- Closure of the Bačíková and Továrenská Street crossing by unidirectional street closure except for public transport
- Re-routing of Štúrova Street in the section Kuzmányho - Južná třída except for public transport

Landscape Restoration Programme of the Košice Region, 2019

The approach to landscape management increases the risks of deterioration in several closely interrelated areas:

- State of the waters
- Environmental
- Food safety
- Climate risks
- Social

Over the last 60 years, more than 3 billion m3 of rainwater have been drained from the Košice region without utilisation, the land is getting dry, but at the same time the Košice Region has the most frequent floods in Slovakia in two catchment areas, the Roňava and the Torysa (Košické Oľšany). The Medzibodrožie area is threatened by desiccation.

The Programme aims to change the approach to managing forest and agricultural landscapes as well as urban landscapes so that a substantial proportion of rainwater can be retained in the landscape in a three-tiered approach with the following sequence:

a) first, catching rainwater in the place/space where it falls
b) subsequent retention/accumulation of rainwater in the landscape
c) finally, diverting the part of rainwater not previously absorbed by the catchment/territory/landscape

The specific objective of the Programme is to build water retention systems, facilities and technical solutions with a total cyclical rainwater retention capacity of 60 million m3.

The synergistic effect of the Programme after its full-scale implementation in the Košice Region will be to mitigate the extremes of rainfall activity over the catchment area/territory/landscape, and thus reduce landslides, which are accelerated by the concentration of rainwater runoff from runoff areas due to above-average rainfall activity

All system processes necessary for the creation of a new level of quality of the legislative environment, organisational provision of the programme and subsequent effective implementation of the programme to the full extent of its usefulness through the implementation of the Programme for all sites, land and buildings owned by the Košice Self-Governing Region will be activated.

The programme will aim to achieve:

- stopping or reducing the effects of those civilisation activities that increase the risks of localised flooding, drying and overheating of areas,
- triggering (activating) or enhancing the effects of activities that reduce the risks of localised flooding, drying and overheating of areas,
- elimination of existing burdens created by previous economic and other civilisation activities increasing the risks of rapid rainwater runoff from runoff areas in forest, agricultural and urban landscapes and in areas built up with transport and industrial infrastructure
- consistent application of negative and positive incentive mechanisms to eliminate the consequences of neglect of responsibilities or breaches of obligations arising from legal norms that precisely define how to manage areas and runoff areas in forest, agricultural and urban landscapes in areas built up with transport and industrial infrastructure

General Plan of Transport Infrastructure of the Prešov Region

The document from September 2015 was created based on a long-term need to prepare comprehensive documentation of this kind for the Prešov Region. The document deals with infrastructure for all modes of transport – road, rail, water, air and non-motorised.

The main objectives of the spatial forecast:

- to determine the main principles of transport infrastructure development, principles of its optimisation and priorities for the process of transport improvement in the Prešov Self-

Governing Region, focusing in particular on the optimisation of road and rail transport, including other modes of transport (air, water and bicycle), with due consideration of the self-government development plans defined in the spatial planning documentation,

- to address the possibilities of supporting the long-term functional use of the territory of the self-governing region by public road, rail and bicycle transport, taking into account urban agglomerations and areas with large numbers of visitors,
- to take into account and elaborate selected parts of current transport documents at the level of the Slovak Republic related to the Prešov Self-Governing Region, e.g. the Strategic Plan for the Development and Maintenance of Class II and III Roads for the Years 2014-2020,
- to create a spatial planning basis that will be used for the preparation of the Prešov Self-Governing Region Spatial Plan.

The Prešov Self-Governing Region is a border region. In terms of transport location it has an important position for the whole Eastern Slovakia. It is located in the transport **gravity centre East** together with the Košice Self-Governing Region. On the territory of the Prešov Self-Governing Region, the main and secondary transport development axes are defined, taking into account their importance in the territory.

2.3. Compliance with the provisions of sectoral strategic documents

2.4. Taking over the provisions regarding the economic, social and natural development of the planning documents of target regions

Spatial Plan of the Large Territorial Unit (ÚPN VÚC) of Košice Region, as Amended

The Spatial Plan of the Large Territorial Unit (UPN VÚC) of Košice Region was updated by Amendments and Supplements 2004, 2009, 2014, and subsequently by Amendments and Supplements 2017 of the ÚPN VÚC of the Košice Region were approved by the KSK Council by Resolution No. 509/2017 and the binding part was promulgated by KSK Decree No. 18/2017, approved by Resolution No. 510/2017, which entered into force on 10.07.2017.

The spatial plan is a tool for enabling the implementation of large and especially linear constructions in such a way that the area would not be built up with other constructions. It thus represents a reservoir of opportunities that may arise. From the transport point of view, its role is therefore primarily to define and protect the corridors of transport constructions. In the ÚPN VÚC Košice Region there are regulations for the development of superior transport infrastructure and public utility constructions associated with their implementation:

- 6.1. respect the superior status of the pan-European multimodal corridors of the International Transport Forum (ITF) and the TEN-T transport networks

- 6.2. respect the transport networks and regulations of the TEN-T and European agreements allocated and planned on the routes of the pan-European multimodal corridors of the ITF
- 6.3. respect the transport infrastructure allocated and planned on the routes of the ITF off-corridor networks of conventional railway and combined transport and the TEN-T road network
- 6.4. respect the TEN-T transport networks and facilities allocated and planned on the routes of the upcoming multimodal corridors and their branches
- 6.5. respect the transport infrastructure classified according to European agreements (AGR, AGC, AGTC)
- 6.6. respect the transport infrastructure
- 6.7. respect the transport networks of trans-regional level;
- 6.8. protect the area of the route of the D1 motorway Budimír - Michalovce - Záhor (border crossing with Ukraine),
- 6.9. respect the corridor for the D1 motorway with connection to settlements
- 6.10 respect the corridor for the R2 expressway region border - Rožňava - Košice (in the section through the Soroška mountain pass, tunnel variant) with the connection of the city of Košice in the nodes
- 6.11. protect the corridor for the joint section of R2 and R4 expressways (in the section from the intersection with the I/68 road to the connection to the D1 motorway) and the related parallel roads
- 6.12. protect corridors for class I roads, their relocations, reconstructions and modifications, including their crossings in the basic road network of cities, namely to
- 6.13. protect corridors for class II roads, their relocations, reconstructions and modifications, namely to
- 6.14. protect corridors for important urban roads and class III roads, namely to
- 6.15. protect areas for the development of existing road border crossings and the construction of new road border crossings into the Republic of Ukraine
- 6.16. protect corridors for the reconstruction and construction of roads towards the Republic of Hungary
- 6.17. protect areas for suburban bus and passenger rail transport, terminals of the integrated transport system
- 6.18. in the field of railway transport development to protect areas for railway transport corridors
- 6.19. protect areas for air transport development
- 6.20. protect areas for water transport development

Programme of Economic and Social Development of the Košice Self-Governing Region (PHSR KSK 2016 - 2022)

The Programme of Economic and Social Development of the Košice Self-Governing Region (PHSR KSK 2016 - 2022), together with the Spatial Plan of the Large Territorial Unit of Košice Region, are the basic and key documents for the management of the self-government in the field of regional development. The programme is designed for a period of 7 years, i.e. for the period 2016-2022. It is based on the knowledge of the current situation and the specific needs of residents, entrepreneurs, interest groups and other entities in the Košice Region.

The document is prepared in accordance with Act No. 539/2008 Coll. on the Support of Regional Development, as well as in accordance with the amendment to this Act No. 309/2014 Coll. which entered into force on 1 January 2015. The recommended Methodology for the Preparation of PHSR of Municipality, Municipalities and SGR prepared by the Ministry of Transport, Construction and Regional Development of the Slovak Republic was adequately taken into account in the preparation of the document. Information on the brief development of transport policy in relation to the original forecasts and the actual situation: in particular Annex 1 in the Programme for Economic and Social Development of KSK for 2016-2022.

The document consists of five parts. The first analytical part is concluded with a SWOT analysis and an estimate of the future development of the region. The second strategic part defines visions and objectives, which are primarily related to job creation. In the following programme section, specific projects and measures to achieve the defined objectives, including their financial costs, are presented. The fourth implementation section describes how the plan will be implemented, the communication strategy and the monitoring and evaluation system.

As for transport, the SWOT analysis identifies the weak connection of the region to the superior transport infrastructure as a weakness of the Košice Region. The region's involvement in the global exchange of goods by supporting the development of transport corridors in the north-south and east-west directions is identified as an opportunity.

Strategy for the development of cycling transport and cycling tourism of the Košice Region 2022 - 2027 - 2030

The Strategy for the Development of Cycle Transport and Cycle Tourism of the Košice Region 2022 - 2027 - 2030 (hereinafter referred to as the KSC Cycle Strategy) is a medium-term strategic document, loosely linked to the Cycle Strategy 2014 - 2020. The concept of the new KSK Cyclostrategy aims at its interconnection and complementarity with other strategic documents, in particular the KSK Sustainable Mobility Plan, the KSK Skeleton Network of Cycle Roads and the KSK Tourism Development Strategy. It is temporally linked to the new programming period of the Slovak Republic and the European Union. It is based on the knowledge of the situation especially in the field of cycling and cycling infrastructure, as surveys of the division of transport

work, which identify the share of cycling transport, have not been systematically carried out throughout the entire territory of the Košice Region. Nevertheless, the strategic vision is primarily oriented towards increasing the number of cyclists and cyclotourists, as this is the main indicator of the effectiveness of funds spent on building cycling and cyclotourism infrastructure. The KSC Cycling Strategy discusses concrete steps to achieve the expected result, which is a 6% share of cycling in the total division of transport work in the district towns of the Košice Region. The individual steps to achieve

The KSK Cycle Strategy proposes solutions that will contribute to the sustainable development of cycling in the KSC. The KSK Cycle Strategy proposes solutions that will contribute to the sustainable development of cycling in the KSC.

and cyclotourism on the territory of the region with interconnection to the mutual cooperation of entities from the territory of the region, which

will be interested in implementing the strategy on a partnership basis. The strategy is drawn up in accordance with the objectives of

existing strategic documents at national, regional and local level.

An important part of the strategic document is the revision and extension of the Košice Region's Skeleton Network of Cycle Roads to include its connection to all towns in the sense of the Region's Sustainable Mobility Plan. The updated version of the Skeleton Network of Cycle Roads also constitutes the spatial planning basis for the next update of the Košice VUC Spatial Plan.

Strategy for the Development of Cycling Transport and Cycling Tourism in the Košice Self-Governing Region

The Strategy was approved by the Košice Self-Governing Region Council at its 25th meeting held on 21 October 2013 in Košice.

The purpose of the strategy is to offer a more comprehensive view of the issues and importance of cycling transport and cycling tourism in the Košice Self-Governing Region. And also to propose solutions for further development of cycling transport and cycling tourism until 2020.

The implementation of this strategy aims to:

- Support the development of cycling transport in towns and municipalities of the Košice Self-Governing Region and ensure its inclusion in integrated passenger transport.
- Promote the Košice Self-Governing Region as a modern cycling destination. In cooperation and partnership with local tourism associations and destination management organisations to improve services and facilities for cyclists.
- Improve the safety of cyclists on the roads and apply modern principles in planning and implementing measures to reduce traffic accidents.

The strategy document proposes measures at three basic levels:

<u>Priority Axis 1 – Cycling transport</u>

Coordination of cycling transport development in the Košice Self-Governing Region

Support for the construction and maintenance of cycling infrastructure

Priority Axis 2 – Cycling

Marketing and promotion of cycling tourism facilities in the territory of KSK

Support for the construction and modernisation of cycling infrastructure

Promotion of service improvement

Priority Axis 3 - Partnership

Support for cycling and cycling tourism surveys

Raising awareness among stakeholders

Promotional events to promote cycling and cycling tourism

Source: PUM KSK

Amendments and Supplements to the Spatial Plan of the Large Territorial Unit of Prešov Region

Amendments and supplements to the Spatial Plan of the Large Territorial Unit of Prešov Region were approved by Resolution of the Council of the Prešov Region No. 589/2009 on 27 October 2009 and promulgated by General Binding Regulation No. 17/2009. They entered into force on 6 December 2009.

In the field of transport the Spatial Plan of the Large Territorial Unit of Prešov Region contains the following binding regulations of the functional and spatial arrangement of the territory[1]:

1. in the field of superior transport facilities,
   - 1.1 to stabilise the basic zoning of the Slovak Republic in space,
     - 1.1.1 eastern Slovakia and the transport-gravity centre Košice/Prešov,
     - 1.1.2 respect the priority status of intermodal infrastructure and the TINA and TEM networks
   - 1.2 respect transport networks and facilities allocated along the routes of multimodal corridors (especially the TINA network),
     - 1.2.1 multimodal corridor V.a (TEM 4) Bratislava - Žilina - Prešov/Košice - Záhor/Čierna nad Tisou - Ukraine localized for roads and for railway and combined transport lines,
       - 1.2.1.1 corridor and areas of non-level crossings and intersections, motorway feeders and road connections for the D1 motorway route in the territory of the region,
       - 1.2.1.2 the airport for international transport in Poprad and its development needs,

1.3 multimodal eastern “Baltic Corridor” running in the line PR border (Bialystok - Lublin - Rzesow) - Prešov - border of Košice Region / Košice - Republic of Hungary (Miskolc - Debrecen) localized for roads and for railway and combined transport lines /,

1.3.1 expressway R4, category R 24.5 Rzesow - PR border - Vyšný Komárnik - Svidník - Stročín - Giraltovce - Lipníky - Prešov - Košice - Milhosť - HR border as part of the Via Carpatia road link,

1.4 respect the transport networks and facilities allocated on the routes of the complementary TINA corridors,

1.4.1 TINA railway line - connection of multimodal corridor No. IX with Poland along the line PR border - Plaveč - Prešov - border of Košice Region,

1.4.2 TINA road - border of Košice Region - Prešov - Lipníky - Svidník - PR border. (until the completion of the R4 road link, VIA CARPATIA),

1.5 respect the transport networks classified under European agreements (AGR),

1.5.1 as a prospective part of the road network, Lipníky - Vranov nad Topľou - Humenné - border of the Košice Region,

1.5.2 potential airports of the main network - Svidník,

1.6 to respect the main transport networks within the international tourist transport - roads,

1.6.1 eastern north-south route PR border - Podspády - Spišská Belá - Kežmarok - Poprad - Vernár - border of the Košice Region with exclusion of transit freight transport over 7.5t in the section Tatranská Javorina - Podspády - Spišská Belá,

1.6.2 Pribylina - Starý Smokovec - Ždiar - Javorina with exclusion of transit freight transport in the whole section,

1.7 respect the transport networks within the national level - roads,

1.7.1 PR border - Spišská Stará Ves - Stará Ľubovňa - Ľubotín - Bardejov - Svidník,

1.7.2 border of the Banská Bystrica Region - Vernár,

1.7.3 Poprad - Spišská Belá - Stará Ľubovňa - Mníšek nad Popradom - PR border,

1.7.4 Ľubotín - Sabinov - Prešov,

1.7.5 Humenné - Snina - Ubľa - border with Ukraine,

1.7.6 Vranov nad Topľou - border of Košice Region,

1.8 respect the transport networks of trans-regional level - railway lines,

1.8.1 Poprad - Plaveč,

1.8.2 border of the Košice Region Humenné - Medzilaborce - border with PR,

1.8.3 Prešov - Vranov nad Topľou - Strážske /the territory of the Košice Region/ - Humenné
- Medzilaborce - PR, (until the completion of the Baltic Corridor),

1.9 respect the transport networks of trans-regional level - roads,

1.9.1 Spišský Štvrtok - border of the Košice Region,

1.9.2 Svidník - Stropkov - Medzilaborce - Palota - PR border,

1.9.3 Humenné - Medzilaborce - PR border,

1.9.4 PR border - Becherov - Zborov - Bardejov - Kapušany,

1.9.5 Bardejov - Tarnov - Kurov - PR border,

1.10 respect transport networks of trans-regional level – potential airports for international transport,

1.10.1 Prešov, Kamenica nad Cirochou

1.11 support the complementary status of transport infrastructure of secondary international, national and trans-regional importance, which together with intermodal infrastructure and TINA networks form a superior transport system,

2 protect within the superior road network of regional transport facilities:

2.1 the E 50 road section on the route of the I/18 road, border of the Žilina region - Poprad - Prešov and on the route of the I/68 road in the section Prešov - border of the Košice Region,

2.2 the road E 371 on the route of the roads I/18 Prešov - Lipníky and I/21 Lipníky - Svidník - Vyšný Komárnik - border with the Republic of Poland as part of the north-south expressway link connected with the European road E 71 on the route of the road I/68 border of the Košice Region /Košice - Seňa - border with the Republic of Hungary/ and its corridor until the time of completion of the expressway R4 in the category R 24.5 in the corridor of this link,

2.3 the I/18 and I/74 roads Prešov - Ubľa - state border with Ukraine and its corridor for the proposed parallel road link Lipníky (R4) - Ubľa on a separate route, including the currently prepared sections of the I/18 Vranov-obchvat, I/18 Nižný Hrabovec - Petrovce n. Laborcom, I/74 Brekov-Humenné as parts of this road link,

3 protect the corridors of class I, II and selected sections of class III, their relocations and modifications, including passable sections through the settlements concerned on:

3.1 road I/18

3.1.1 in the section between Svit - Poprad for the possibility of widening to a four-

lane road,

3.1.2 in parallel with the D1 route in the section Janovce - Spišský Štvrtok, Spišský Hrhov - Nemešany - Spišské Podhradie /new route/ - Behárovce and Fričovce - Prešov západ,

3.1.3 in the passable section through the city of Prešov on the route: Prešov západ intersection (connection with the D1 Prešov západ - Prešov juh tunnel route and the R4 route) - Levočská street with the widening of the bridge over the Torysa river to a four-lane road - Duklianska - Vranovská street and with connection to the R4 by a feeder from the Prešov-Nižná Šebastová area along the I/18 line (non-level intersection) - Fintice non-level intersection,

3.1.4 in the section Prešov - Kapušany - Lipníky as a joint section of the roads I/18 and E371, in the section Kapušany Lipníky in the common corridor with the expressway R4,

3.1.5 in the section Lipníky - Vranov nad Topľou - Strážske (I/74) with a territorial reserve for the parallel route of the proposed road link Lipníky - Ubľa,

3.1.6 south-eastern bypass of Levoča according to the town's SP.

3.1.7 connection of the road I/18 (E-371) and R4 from the Kapušany area to the D1 motorway (E-50) at the Prešov - south intersection, as the eastern bypass of the town of Prešov according to Prešov's SP, SP of the municipality of Teriakovce, SP of the municipality of Ruská Nová Ves and SP of the municipality of Dulova Ves, in the category of local expressways with intersections with

lower category roads, enough to ensure the transport service of the surrounding area,

3.2 road I/74 in the section Strážske - Humenné - Snina - Ubľa in the common corridor for the proposed road link Lipníky - Ubľa with connection of the Amusement Park Vtáčie údolie and the centre of the town of Humenné, by establishing an intersection in the Krámová area on the proposed relocation of the road I/74 Brekov - Humenné as part of the road link Lipníky-Ubľa,

3.3 road I/68

3.3.1 through the town of Prešov according to Prešov's SP on the route: I/68 ZVL intersection - intersection with Jána Pavla II. street – Obrancov mieru street - I/18 joint section (Levočská street) - nám. Mieru - Sabinovská street 68,

3.3.2 in the section Poland border - Ľubotín - Lipany with bypasses of the villages

of Plavnica, Ľubotín and Kamenica and in the section Lipany - Šarišské Michaľany on a separate new route in category C 11,5/80 parallel to the original route and with non-level connections of settlements at the intersections Milpoš, Pečovská Nová Ves, Sabinov-sever, Drienica, Sabinov - Jakubovany and Šarišské Michaľany,

3.3.3 in the section Prešov - border of the Košice Region, in parallel with the completed D1 motorway, - new points 5.3.3.4 - 5.3.3.5 are inserted

3.3.4 in the section Šarišské Michaľany-Prešov in category C 22,5/80 it is mostly situated on the route of the existing road with non-level intersections connecting the settlements Gregorovce, Veľký Šariš and at the intersection of the R4 expressway (northern bypass),

3.3.5 in the section Mníšek n. Popradom (PR border) - Stará Ľubovňa - Ľubotín - Lipany (bypass of the centre) and with bypasses of the villages of Plavnica and Kamenica,

3.4 road I/66

3.4.1 in the section Poprad - Matejovce - Spišská Belá with a territorial reserve for a four-lane road of category C-22,5/80, with bypasses of the settlements Matejovce, Veľká Lomnica, Huncovce, Kežmarok, Spišská Belá, (connecting to the road I/77 with a bypass of the village of Bušovce),

3.4.2 in the section Spišská Belá - Tatranská Javorina with exclusion of freight transport over 7.5 t from the border crossings Tatranská Javorina and Podspády (alternative route for the so-called Carpathian Road or Via Montana),

3.4.3 in the section KSK border - Vernár - Poprad, with a bypass of the village of Hranovnica and with a tunnel in the cadastre of the village of Vernár according to the SP of these municipalities,

3.4.4 in relation to the I/66 road, we propose the I/66 road in the section of the border of the Banská Bystrica Region - connection to I/67 with a territorial reserve for its reconstruction in the context of ÚPN VUC Banská Bystrica Region,

3.5 road I/77

3.5.1 in the section Spišská Belá - Podolínec - Stará Ľubovňa with a territorial reserve for bypasses of the settlements of Bušovce (on a common route with a bypass of the town of Spišská Belá), Podolínec, Nižné Ružbachy and Hniezdne,

3.5.2 in the section Ľubotín - Obručné - Bardejov - Nižná Polianka with a territorial reserve of the settlements of Tarnov, Rokytov, Mokroluh, Lenartov, Malcov, Gerlachov and Bardejov (south-western bypass of the centre),

3.5.3 in the section Bardejov - Svidník, with a territorial reserve of a bypass of the settlements of Bardejov - Dlhá Lúka, Zborov, Smilno, Nižná Polianka,

3.5.4 in the section Nižná Polianka - Svidník completion to achieve category C 9.5/80, in the section Nižný Orlík Svidník to MZ - 14/80,

3.6 road I/73 (E371) in its entire length and its corridor as a territorial reserve for a parallel route of the expressway R4 (Via Carpatia) north - south on the route Vyšný Komárnik - Svidník - Stročín - Giraltovce - Lipníky - Kapušany,

3.7 road I/79 in the section Vranov nad Topľou (eastern bypass with connection to the road link Lipníky-Ubľa) - Sačurov - Sečovská Polianka with a territorial reserve for bypasses of these settlements,

3.8 road II/545

3.8.1 in the section Kapušany - Bardejov with connection to the road I/18 and R4, and with a territorial reserve for bypasses of Kapušany, Raslavice, Kobyly and Kľušov,

3.8.2 in the section Bardejov - Becherov - border of the Republic of Poland for the needs of tourism and border cooperation, reconstruction to achieve category C9,5/70,

3.9 road II/546 on the route Prešov - Margecany with a territorial reserve for the route relocation with connection Bajerov - Kvačany - Klenov and Prešov - Cemjata with a bypass of the local part of Prešov - Cemjata with a proposal of separate routes for the relocation of these sections,

3.10 road II/537 (Cesta slobody) in the section in the town of Vysoké Tatry in the Podbanské area

- Tatranská Kotlina with a territorial reserve for a southern bypass of Starý Smokovec in category C 9.5/60,

3.11 road II/538 in the section Tatranská Štrba - Štrbské Pleso with a territorial reserve for its extension on the route III/3060 to the village of Štrba with connection to the D1 motorway near the village of Štrba,

3.12 road II/539 Mengusovce - Vysoké Tatry, Vyšné Hágy with a territorial reserve for modification to category C 9.5/60,

3.13 road II/534 in the section Poprad, Veľká - Starý Smokovec, directional modification of the section of connection to the road II/537, with non-level connection to D1, in the

urban area of Nový and Starý Smokovec with connection to the intersection II/537 homogenisation of a feeder road of categories B 3 - MZ 8/40,

3.14 road II/536 Kežmarok - Jánovce with a territorial reserve for bypasses of settlements of Ľubica, Vrbov, Vlková and Kežmarok,

3.15 road II/540 Veľká Lomnica - Tatranská Lomnica with proposed relocation to route III/3102 in category C 9.5/60 and in the section of apartment houses in the Eurocamp premises in category B2-MZ 14/60. In the section Eurocamp - Veľká Lomnica in category C 9.5/60 with a territorial reserve for a bypass of Veľká Lomnica,

3.16 road II/542 Spišská Belá - Slovenská Ves - Spišská Stará Ves with a territorial reserve for bypasses of the settlements of Slovenská Ves and Spišská Stará Ves, (alternative route for the so-called Carpathian Road or Via Montana),

3.17 road II/543 with a territorial reserve for bypasses of settlements Červený Kláštor, Kamienka and Veľký Lipník, (alternative route for the so-called Carpathian Road or Via Montana),

3.18 road II/533 in the section D1 Levoča - Spišská Nová Ves with a territorial reserve for a parallel new class II road with the function of connecting two district settlements to the D1 motorway and the town of Levoča via the motorway feeder D1 Levoča - Levoča I/18 intersection, and a provisional connection of the original route II/533 to the Levoča motorway intersection,

3.19 road II/547 Spišské Podhradie - Spišské Vlachy with a territorial reserve for a bypass of the town of Spišské Podhradie according to the SP of Spišské Podhradie,

3.20 road II/556 in the section Giraltovce - Hanušovce,

3.21 road III/3533 on the route Bardejov, Bardejovská Nová Ves - Kučín - Giraltovce with a territorial reserve for the modification of the class II road,

3.22 road II/575 Stropkov - Havaj - Krásny Brod - Medzilaborce - Palota with a territorial reserve for bypasses of settlements Chotča, Bukovce, Makovce and Havaj,

3.23 road II/554 Havaj - Repejov - Ruská Kajňa - Košarovce - Tovarné - Nižný Hrušov

3.24 road II/556 in the section Fijaš-Ruský Kručov as a connection of roads I/73 and I/15,

3.25 road II/559 Humenné - Čertižné with a territorial reserve for bypasses of the villages of Zbudské, Hankovce, Kochanovce, Lackovce, with connection to the original road I/74 in the area of Humenné (Krámová),

3.26 road II/567 with a territorial reserve for its modification to category C 9.5/60 and for bypasses of settlements Výrava and Nižná Jablonka,

3.27 road II/558 in the section Humenné - Tovarné - Vranov nad Topľou and bypass of the villages of Závadka, Topoľovka,

3.28 deleted

3.29 road III/3177 Sabinov - Ražňany - Jarovnice - Hermanovce - Bertotovce with a territorial reserve for its modification to a class II road with bypasses of settlements Ražňany, Jarovnice, Hermanovce with a priority function of road connection of the corridor of the road I/68 along the line of Prešov

- Sabinov - Lipany and settlements situated in the hornotoryská valley to the I/18 road and D1 motorway (Henrichovce intersection), with a connection to the I/68 relocation in the area of Sabinov - Orkucany

- juh,

3.30 road II/558 Jalová - Príslop to be excluded from public traffic in accordance with the requirements of the first sanitary protection zone of the water pond Starina after the construction of a replacement link Stakčín - Stakčínska Roztoka - Príslop in the category of class II road,

3.31 road I/15 in the section Stročín - Stropkov - Turany nad Ondavou - Nová Kelča - Holčíkovce - Malá Domaša - Slovenská Kajňa - Sedliská - Vranov nad Topľou, modification to category C 11.5/80, including relocations around the settlements of Tisinec, Stropkov, Benkovce and a local relocation of the route in the section Turany nad Ondavou - Nová Kelča, with modification of the passable sections through settlements to the category of local roads with possible modifications in order to increase road traffic safety,

3.32 for homogenisation of the road III/3571 Lomné - Bžany,

3.33 for the reconstruction of the special-purpose road Bžany - Valkov to the category of local road MOK 7.5/40,

3.34 for homogenisation of road III/3630 in the section Remeniny - Matiaška,

3.35 for homogenisation of the road III/3630 in the section Matiaška - Detrík and in the section of Dobrá recreational centre bridge,

3.36 connection of the roads I/66 and III/3110 Ždiar - Veľká Franková, by a new class III road in cat. C7/5/60:

3.37 connection Vyšný Slavkov - Poľanovce, new road of class III in category C7.5/60,

3.38 road of class III Ulič - Nová Sedlica, reconstruction to category C 7.5/60,

3.39 road III/3074 Vikartovce - Liptovská Teplička, reconstruction of the road,

3.40 deleted

3.41 connection of the villages Dlhé Klčovo - Nižný Hrušov - road of class III Strážske - Suché, new road of category C7.5/60,

3.42 new road - south-eastern connection Stará Ľubovňa I/68 - Jakubany - class III road

III/3146 in category C 7.5/60

3.43 other class III roads due to their reconstruction,

3.44 in the field of other public transport facilities,

3.44.1 protect existing public transport facilities,

3.44.2 create and protect space for public transport facilities,

3.44.3 promote the creation of motor-tourism service centres along transit and tourist routes,

3.45 road link Sulín - Kremná in category C 7.5/60,

3.46 road link Osadné - PR border (Balnica), in the category of class III road,

3.47 reconstruction of the road III/3445 Prešov - Petrovany - Drienov - Lemešany (D1) to category C 7.5/60 and its connection to D1 and I/68 in the area between Drienovská Nová Ves and Ličartovce to ensure adequate transport serviceability of the production area with proposed industrial parks in the area between Petrovany and Drienov,

3.48 relocation of the road III/3832 in the Podskalka area in the section from the connection of this road relocation to the road connection Lipníky - Ubľa (relocation of I/74) at the intersection in the Krámová area to the cadastre of the municipality of Ptičie and its reconstruction on the route through the cadastre of the municipality of Ptičie on the existing route to the exit to the municipality of Ptičie and the reconstruction of the connecting section of the road III/3833 in the category of four-lane class II road, including a new route to the entrance area of the Amusement Park Vtáčie údolie, in order to create an adequate transport connection of the Amusement Park Vtáčie údolie to the superior transport system,

3.49 reconstruction of the road III/3833 in the section Ptičie - Porúbka in category C 7.5/60 in order to strengthen recreational activities in the context of the Vtáčie údolie area of interest,

3.50 relocation of the road III/3452 in the section Malý Slivník - Furmanec (outside the Roma settlement),

3.51 relocation of the road III/3083 Tatranské Matliare (at the intersection II/537) - intersection II/540 to the route II/540 in the section Tatranská Lomnica (urban area, intersection II/537) - intersection III/3083 in cat. B3-MZ 8.5/50 or C 7.5/60 in the extra-urban area,

3.52 connection Krajná Poľana -Staškovce, modification of the class III road to cat. C 7.5/60,

3.53 connection Mlynčeky - Kežmarské Žľaby (II/537) in the category of class III road C 7.5/60 (extension of road III/3101),

3.54 road III/3431 with route relocation to a proposed eastern bypass of the village of

Fintice according to the SP of Fintice,

3.55 road III/ 3445 (Petrovianská street) in category B1 - MZ 25/80,

3.56 road II/576 - bypass of Vechec in category C 11.5/80 with connection to the bypass of Vranov nad Topľou,

3.57 new road connection along the line Stakčín - Stakčínska Roztoka - Príslop in the category of II. class,

3.58 extension of the road III/3096 to the premises of climatic spas proposed to the north-west of the village of Malý Slavkov and its connection to the I/67 relocation at a non-level intersection,

3.59 road link Dúbrava (PO region) - Oľšavka (KE region) in the category of class III road,

3.60 new road link Stebnícka Huta - PR border / Blechnarka Pass - Wysowa - Zdrój in the category of class III roads,

4 protect areas for the development of existing roads and construction of new roads crossing the state border without checks, inside the Schengen area in the section of the border with Poland, namely:

4.1 roads crossing the state border with unrestricted passenger and restricted freight traffic:

a) Becherov - Konieczna, road, on the road II/545, up to 7.5 t.,

b) Kurov - Muszynka, road, on the road III/3483, up to 7.5 t,

c) Lysá nad Dunajcom - Niedzica, road, on the road II/543, up to 7.5 t.,

d) Červený Kláštor - Sromowce Niżne, footbridge on the Dunajec River, pedestrians, bicycles,

e) Medzilaborce - Palota - Lupków, railway, passenger and freight transport,

f) Palota - Radoszyce, road, on the road II/575,

g) Tatranská Javorina - Lysá Poľana, road, on the road I/67, without TIR,

h) Podspády - Jurgów, road, on the road III/3078, up to 7.5 t.,

i) Plaveč - Muszyna, railway, passenger and freight transport,

j) Mníšek nad Popradom - Piwniczna, road, on the road I/68, up to 7.5 t.,

k) deleted

l) Čirč - Leluchów, road, on the road I/77, up to 7.5 t.,

m) deleted

n) deleted

o) Čertižné - Jaśliska, road (unpaved road), passenger transport,

p) Nižná Polianka - Ożenna , road on the road III/3519, up to 7.5t,

r) Stebnícka Huta - Blechnarka - Wysowa - Zdrój, road on the new class III road, up to 7.5t,

s) Veľká Franková-Kacwin, road on reconstructed dirt road, up to 3.5t,

t) Legnava-Milik, road on the road III/3138, new road bridge, up to 7.5t,

u) Osadné-Balnica, road on a new class III road, up to 3.5t,

4.1.1 roads crossing the state border with unrestricted passenger and unrestricted freight traffic,

a) Vyšný Komárnik - Barwinek, road, on road E371, I/21, (R4), TIR traffic,

4.1.2 pedestrian and cycling roads crossing the state border, tourist roads and roads for border traffic

a) Červený Kláštor-Sromowce Niżne, on foot, bicycles,

b) Lesnica-Sczawnica, on foot, bicycles,

c) Malý Lipník - Andrzejowka, construction of footbridge, pedestrians, bicycles,

d) Osturňa - Lapszanka, pedestrians, bicycles,

e) Regetovka - Regietów, pedestrians, bicycles, skis,

f) Cigeľka-Wysowa - Zdrój, pedestrians, bicycles,

g) Litmanová-Jaworky, pedestrians, bicycles,

h) Stráňany-Jaworky, walking, skiing,

i) Veľký Lipník-Szlachtowa, pedestrians, bicycles, skis,

j) Ruské - Roztoky Górne, pedestrians, bicycles,

4.1.3 protect areas for the development of existing border crossings and the construction of new checked border crossings on a Schengen border in the section of the border with Ukraine, namely:

a) Ubľa - Malyj Bereznyj, international customs crossing, VŠS, road, on the road I/74, passenger transport, freight transport up to 3.5t, proposal for freight transport without restrictions in the context of the proposed expressway Prešov - Ubľa,

b) Ulič -Zabriď, proposed crossing on the reconstructed road II/566, passenger traffic, freight up to 7.5t, border traffic,

4.2 deleted

5 protect the areas for the additional combined transport terminal Prešov - Šarišské Lúky and Poprad – Vydrník / Košice Region /,

6 provide a territorial reserve for the modernisation of railway lines:

6.1 modernisation of the main transit line category I.a Žilina / Žilina region / - Poprad - Košice region / Košice / to a speed of 120-160 km/h,

6.2 modernisation and double track of the north-south major line category I.b in the section Republic of Poland border - Plaveč - Prešov - border of Košice Region / Kysak / to a speed of 120- 160 km/h including the railway tunnel Obišovce (KSK) - Ličartovce (PSK) and for the line relocation outside the city of Prešov after 2015 according to the SP of the town of Prešov,

6.3 double track and electrification of the railway line of category III in the section Bánovce - Michalovce - Humenné,

6.4 double track of the Tatra Electric Railway railway line in the section Poprad - Starý Smokovec and improving the performance of the Tatra Electric Railway railway line in the section Starý Smokovec - Tatranská Lomnica,

6.5 territorial reserve for a new railway line in the section Bardejov - Zborov - Vyšný Orlík - Svidník - Duplín - Stropkov - Lomné - Turany nad Ondavou - Holčíkovce - Sedliská - Hudcovce with connection to the railway line Vranov nad Topľou - Strážske,

6.6 for lines of trans-regional importance with prospective electrification:

6.6.1 (Bánovce nad Ondavou) - Humenné - Medzilaborce - (Palota - PR border / Lupkow), (of international importance),

6.6.2 Prešov - Vranov nad Topľou - Strážske,

6.6.3 Poprad - Plaveč - (Muszyna) with directional modifications to a speed of 80km/h and connected section Veľká Lomnica - Tatranská Lomnica,

6.7 local, regional and non-conventional routes of the current size:

6.7.1 Humenné - Snina - Stakčín,

6.7.2 Vranov nad Topľou - border of Kosice Region /Trebišov/,

6.7.3 Kapušany pri Prešove - Bardejov,

6.7.4 Tatra Electric Railway: Tatranská Lomnica - Starý Smokovec - Štrbské Pleso,

6.7.5 Cog railway: Štrba - Štrbské Pleso, with extension to the new railway station Štrba on the modernised railway line Žilina - Košice,

7 protect airport completion areas and airport protection zones,

7.1 public airport for international transport Poprad - Tatry with the function of a feeder airport for Bratislava and Košice airports and for international air terminals Vienna, Prague and Budapest,

7.2 public national airports of the main network Svidník, Kamenica nad Cirochou as potential regional public airports for international traffic,

7.3 Prešov, a military heliport and potential regional public airport for international traffic,

7.4 Ražňany-Sabinov public domestic airport as an airport of local importance,

7.5 heliport for the air ambulance service (LZS) at NsP Poprad,

7.6 for aerial work in agriculture, forestry and water management: Hertník, Kurov, Zborov, Kurima, Udavské, Klčov, Volica, Veľká Lomnica, Mirkovce, Ďačov, Šarišské Michaľany, Kamienka, Kolonica, Sitníky, Vranov-Čemerné.

The spatial plan is a tool for enabling the implementation of large and especially linear constructions in such a way that the area would not be built up with other constructions. It thus represents a reservoir of opportunities that may arise. The content of the spatial plan will have to be taken into account in the development of the sustainable mobility plan.

Source: PUM PSK

Economic and Social Development Programme of the Prešov Self-Governing Region for the Period 2021 - 2030

The basic task of the document is to ensure the general development of the region and to meet the needs of its residents in the medium term. Where the county as a whole is going, it sets objectives and measures to achieve those objectives. It is based on the needs of residents, municipal governments, businesses, interest groups, civic and non-profit sectors, and on expert analysis across sectors.

At the same time, this programme responds to the topics set out in the individual operational programmes for the same period and further develops or implements them in its structure. Thanks to this, it creates conditions for drawing funding and resources from the European Structural and Investment Funds.

It sets out a number of economic, social and environmental analyses and measures from which the following strategic objectives could be selected for the purposes of this report:

SC 1.2 Completion and quality technical infrastructure

1.2.1 Optimisation of transport infrastructure for better serviceability of the territory

SC 3.1 Protection of the environment and human health, more efficient use of natural resources to ensure sustainable development of the territory

3.1.5 Support for the introduction of efficient and environmentally friendly modular passenger transport systems

Source: PUM PSK

Regional Integrated Spatial Strategy of the Prešov Region for 2014 - 2020

The Regional Integrated Spatial Strategy (RIUS) is a document prepared for the needs of the Prešov Self-Governing region for the purpose of coordination and synchronisation of all processes and implementation of the Integrated Regional Operational Programme (IROP) on the territory of the region and further by appropriate combination of these measures with other operational programmes in the years 2014 - 2020. It is available for consultation or detailed study on the website of the Prešov Self-Governing Region.

It is a planning tool that brings together the participation of individual partners in selected projects from the perspective of an integrated approach to the development of the region. All planned interventions and investments are carried out in close cooperation with the European Parliament and the Council of the EU over a selected period. It is the main planning document for the ideal distribution of funds received from the European Commission and its funds, as well as from the state budget and other financial sources, subject to the associated conditions.

The whole document is based on the following principles:

1. RIUS is developed and implemented in an objective and transparent manner through partnership and multi-level governance
2. RIUS is based on expert analysis, evidence, assessment of premises and comparisons, and forms the basis for informed and responsible decision-making by stakeholders
3. RIUS is aimed at addressing the specific significant problems, needs and challenges of the territory concerned
4. RIUS is based on an integrated approach, where partnership is its core, providing all the coordination in the specific territory.
5. RIUS respects the principles of project management, including a system of continuous evaluation and monitoring, with emphasis on the outcome, proper progress and impact of the projects being implemented

It is a document that seeks to distribute the financial potential for individual projects within the county, according to the level of priority and the actual development potential of the selected projects, for the purpose of further economic growth and achieving as favourable an impact as possible on the standard of living of the greatest number of residents possible.

RIUS has been built to achieve and deliver the Europe 2020 strategy through Integrated Territorial Investments (ITI), which are divided into two levels. For investment units in the regional strategy of the Prešov Region - NUTS 3 and for investment units within the regional town of Prešov.

In its analytical and strategic part, it mainly addresses the following four priority areas:

1) Safe and ecological transport in regions
2) Easier access to efficient and higher quality public services
3) Mobilization of creative potential in the urban functional area of the town of Prešov
4) Improving the quality of life in the Prešov Region with emphasis on the environment

For the Sustainable Mobility Plan of the Prešov Self-Governing Region, the first area related to transport is particularly important, which includes the following investment priorities within transport analyses.

Investment priority 1.1:

Strengthening regional mobility by linking secondary and tertiary nodes to TEN-T infrastructure, including multimodal nodes.

Specific objective 1.1:

Improving accessibility to TEN-T infrastructure and class I roads with emphasis on the development of a multimodal transport system

Investment priority 1.2:

Developing and improving environmentally-friendly and low-noise transport systems, including inland waterways and maritime transport, ports and multimodal links, and airport infrastructure to promote sustainable regional and local mobility.

Specific objective 1.2.1:

Increasing the attractiveness and competitiveness of public passenger transport; Specific objective 1.2.2:

Increasing the attractiveness and transport capacity of non-motorised transport (especially cycling) in the total number of persons transported.

Source: PUM PSK

Spatial Plan of the Lesser Poland Voivodeship

The Spatial Plan of the Lesser Poland Voivodeship was approved by Resolution of the Senate of the Lesser Poland Voivodeship No. XV/174/03 of 22. December 2003

The Spatial Plan of the Lesser Poland Voivodeship keeps in mind the transport connections to the Slovak Republic, which includes connections to the Prešov Self-Governing Region.

In the area of roads on the territory of Lesser Poland no motorway or express road to the Prešov Self-Governing region is planned.

As far as first class roads (in Poland “droga krajowa”) are concerned, the Spatial Plan involves plans for the modernisation of roads:

- no 49 Nowy Targ - Czarna Góra - Jurgów - state border over its entire length. On the Slovak side, is the road of class III 3078 from the border crossing to Podspádov on the I/66 road.
- no. 87 Nowy Sącz - Stary Sącz - Piwniczna - state border over its entire length. On the Slovak side the road I/68 connects to Mníšek above Poprad.

At road no. 75 (Branice - Niepołomice - Brzeszko - Nowy Sącz - Krynica - state border it is an extension to the state border - on the Slovak side, the road III/3483 from the border via Kurov connects to the road I/77.

As far as class two roads (in Poland “droga wojwódzka”) are concerned, the Spatial Plan envisages the modernisation of roads:

- no 960 Czarna Góra - Bukowina Tatrzańska - Łysa Polana - state border. On the Slovak side, the I/66 road connects in Tatranská Javorina.
- no. 977 Tarnów - Tuchów - Gromnik -Zborowice - Moszczenica - Gorlice - Konieczna - state border. On the Slovak side the connecting road is II/545 Becherov - Zborov - Bardejov - Kapušany.

As far as class three roads are concerned (in Poland "droga powiatowa"), the Spatial Plan envisages the modernisation of the road: no. 25335 Muszyna - Leluchów - state border. On the Slovak side the connecting road is the I/77 road.

Border crossing points:

- restriction of the tonnage of lorries at the Łysa Polana - Tatranská Javorina crossing;
- allowing freight transport up to 3.5 t through the border crossing Jurgów - Podspády; modernisation and improvement of the technical parameters of the access roads to the border crossing points:
- Piwniczna - Mníšek nad Popradom (together with the construction of a new bridge over the Poprad River and the planned road relocation);
- Konieczna – Becherov;
- Niedzica - Lysá nad Dunajcom;

Modernisation and improvement of the technical parameters of the access roads to the border crossing points of local border traffic:

- Leluchów - Čirč;
- Muszynka - Kurov;

Establishment of new border crossing points for local border traffic in the district of the municipality Uście Gorlickie:

- Blechnarka - Stebnícka Huta;
- Wysowa - Cigeľka;
- Regetów – Regetovka

Infrastructure for crossing borders in Muszynka (Muszynka - Kurov).

In the area of railway infrastructure, only the line Podłęże - Tymbark - Muszyna (Plaveč on the Slovak side) is mentioned as part of the international route CE 65.

The intentions in the field of air and inland waterway transport do not directly affect the Prešov Self-Governing Region.

Source: PUM PSK

Spatial Plan of the Subcarpathian Voivodeship

The Spatial Plan of the Subcarpathian Voivodeship was approved by Resolution of the Senate of the Subcarpathian Voivodeship No. LIX/930/18 of 27 August 2018.

On a general level, the Subcarpathian Voivodeship wants to cooperate with Slovakia, which means the Prešov Self-Governing Region, in the development of tourism and the joint use of the natural values of the landscape on the Polish-Slovak border. It also wants to work together to develop road and rail links.

As for transit roads in the voivodeship, the Prešov Self-Governing Region is directly affected by the S 19 expressway in the section of the A 4 motorway (Rzeszów - Zachód) - Barwinek - the state border, which in the Prešov Region is supposed to connect to the R 4 expressway in the direction of Prešov.

In the same direction, the first class road (droga krajowa) No. 19 in the section Rzeszów - Babica - Domaradz - Dukla - Barwinek - state border is to be further developed to the category of main road with accelerated traffic. In the Prešov Region, the I/21 road follows.

The Spatial Plan provides for the maintenance of the second class road (droga wojewódzka) No. 992 in the direction Jasło – Zarzrecze - Nowy Zmigród - Kąty - Krępna - Świątkowa Mała - Grab - state hranica. On the Slovak side, the road III/3519 to Nižná Polianka is followed by the road I/77.

The second class road (droga wojewódzka) No. 892 in the direction Zagórz - Komarańcza - Radoszyce - state border, which is followed in the Prešov Region by the road II/575 to Palota and Medzilaborce, is also mentioned.

In railway transport, the only link between the Podkarpackie Voivodeship and the Prešov Region in Poland is the single-track non-electrified line No. 107 Nowy Zagórz - Łupków intended for passenger and freight transport. The Spatial Plan envisages the revitalisation of the section of this line to the state border. On the Slovak side the track continues to Palota and Medzilaborce.

Source: PUM PSK

3. Analysis of the existing situation and the scenario of the mobility trend – proposal of the Transport Model

3.1. Street network - road infrastructure

Three corridors of the core trans-European transport network cross the territory of Slovakia: Baltic-Adriatic Corridor, Orient/Eastern Mediterranean Corridor and Rhine-Danube Corridor, which passes through KSK along the line of D1 and the railway line Ostrava/Přerov - Žilina - Poprad - Košice - border of Slovakia/Ukraine.

TEN-T: TRANS EUROPEAN NETWORK - TRANSPORT - is a planned road, rail, water and sea transport network to be usable for the entire European continent; the main objectives are: to connect national networks, to link the peripheral regions of the Union with the centre, to improve the safety and efficiency of the networks. 2 multimodal Pan-European corridors passed through Slovakia – partly also through the Košice Region

Corridor V: Venezia - Koper / Trieste - Ljubljana - Budapest - Uzhhorod

supplementary route V.a: Bratislava - Žilina - Uzhhorod of which on the territory of the Slovak Republic and Košice Region: intersection with D1, D2, I/61 Bratislava - Trnava - Trenčín - Považská Bystrica - Žilina - Ružomberok - Liptovský Mikuláš - Poprad - Prešov - Košice - Michalovce - Sobrance - state border of SK/U, Vyšné Nemecké crossing, district of Sobrance

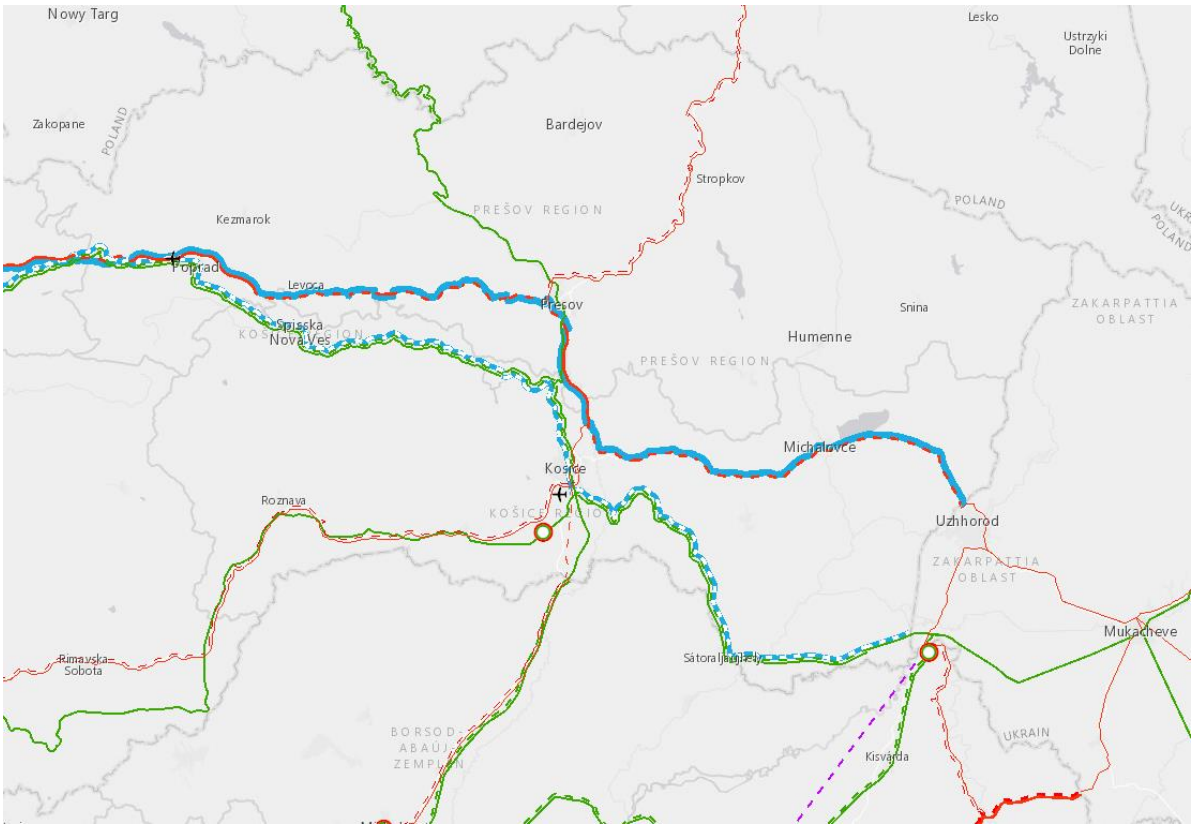
Corridor VI: Gdańsk - Grudziądz - Warszawa - Katowice - Žilina of which on the territory of the Slovak Republic: state border of PL/SK, border crossing Skalité, district of Čadca - intersection with I/11, I/60 Žilina

The TEN-T is based on the Pan-European Corridor Network. 28 EU countries are TEN-T participants.

The core TEN-T network passes through the Košice Self-Governing Region along the **D1** motorway from Levoča to Bidovce and along the I/19 road in the section Bidovce - Vyšné Nemecké

The comprehensive Trans-European Road Network passes through the Košice Self-Governing Region along the following routes:

- I/16 – R2: Gemerská Panica - Košice
- I/17 – R4 : Košice - - SK/H state border, Milhosť crossing



Rhine-Danube Corridor of the TEN-T core network and the TEN-T network in Eastern Slovakia

Rhine-Danube Corridor (RDC) - solid line = roads, dashed line = railways

TEN-T rail network under Regulation 1316/2013 of the European Parliament and of the Council (EU)

TEN-T road network under Regulation 1316/2013 of the European Parliament and of the Council (EU)

Thick lines=core network, thin lines=comprehensive network, dashed lines=new section (upgrade)

Source: http://ec.europa.eu/transport/infrastructure/tentec/tentec-portal/map/maps.html

The following routes are included in the TEN-T network in the Košice Region according to Annex I of Regulation 1315/2013 of the European Parliament and of the Council:

Core network (commitment to meet TEN-T parameters by 2030):

Roads: D1 motorway Iliašovce, Lemešany - Bidovce - road I/19 Bidovce - Michalovce - Vyšné Nemecké (-Uzhhorod)

Railways: track 180 - 190: Kysak - Košice - Čierna nad Tisou (-Chop)

Comprehensive network (commitment to meet TEN-T parameters by 2050):

Roads: I/16 – R2: Gemerská Panica - Košice

I/17 – R4: Košice - Milhosť (- Tornyosnémeti)

Railways: track 160: Gemerská Panica - Košice

track 169: Košice - Hidasnémeti

Airport: Košice

Combined transport terminal: Košice

TEN-T roads shall be of the expressway type without non-level uncontrolled intersections and crossings and without level crossings.

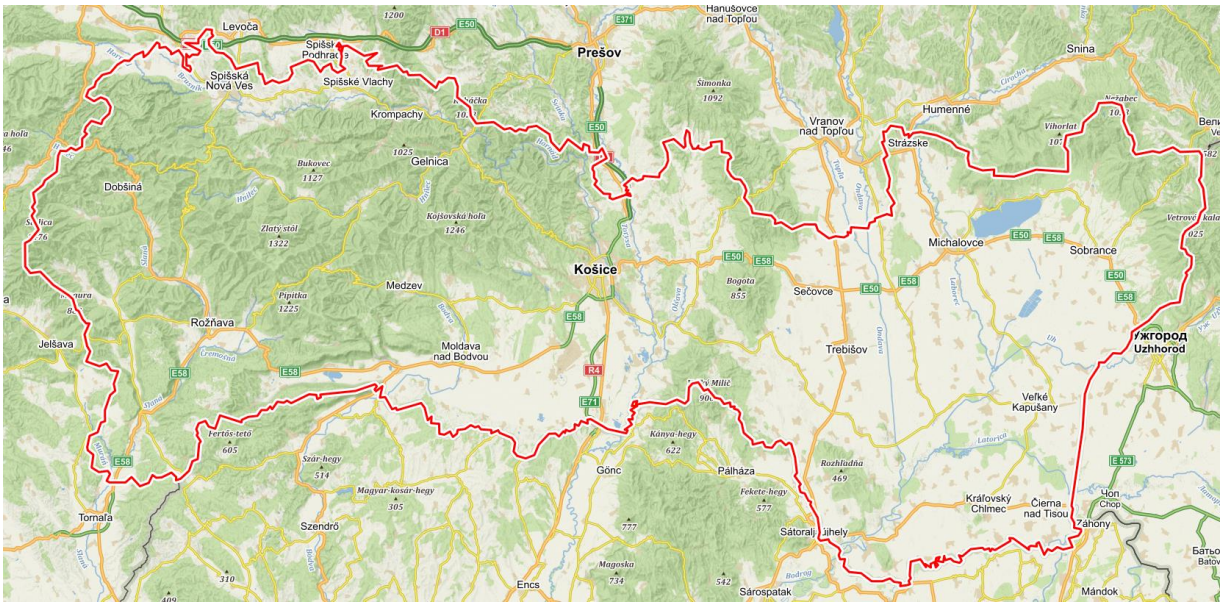
TEN-T lines must be electrified, with a speed of at least 100 km/h, a load capacity of 22.5 t, a train length of 740 m and ERTMS in operation, and a new requirement for a GC gauge and a combined transport code P400.

INTERNATIONAL ROAD NETWORK "E" - is the network of roads in Europe, numbered E1 and higher. E50 passes through the Slovak Republic - partly also through the Košice Region:

- main roads of class "A":
  - E50 - state border CZ/SK, Drietoma border crossing, districts of Trenčín - Žilina - Ružomberok - Liptovský Mikuláš - Poprad - **Prešov - Košice - Michalovce - state border of SK/U, Vyšné Nemecké border crossing, district of Sobrance**,
  - E65 - state border of CZ/SK, Kúty border crossing, district of Skalica - Malacky - Bratislava - SK/H state border, Rusovce border crossing, district of Bratislava V
  - E75 - state border of CZ/SK, Svrčinovec border crossing, districts of Čadca - Žilina - Trenčín - Trnava - Bratislava - SK/H state border, Rusovce border crossing , district of Bratislava V
- auxiliary roads of class "A", E58 and E71 pass through the Košice Region
  - E58 - state border of A/SK, border crossing Bratislava Petržalka - Bratislava - Trnava - Nitra - Zvolen - Lučenec - **Rožňava - Košice - Michalovce - state border SK/U, Vyšné Nemecké border crossing, districts of Sobrance**,
  - E71 - **intersection with PR3, I/19 Košice, Prešovská - Sečovská - SK/H state border, Milhosť border crossing, district of Košice vidiek**,
  - E77 - state border of PL/SK, Trstená border crossing, district of Tvrdošín - Dolný Kubín - Ružomberok - Banská Bystrica - Zvolen - state border of SK/H, Šahy border crossing, district of Levice
- class "B" road, the E571 passes through the Košice Region:

- E371 - state border of PL/SK, Vyšný Komárnik border crossing, district of Svidník - intersection with I/20, I/68, I/80 Prešov
- E442 - state border of CZ/SK, Makov border crossing, districts of Čadca - Bytča - intersection with I/61
- E571 - intersection with D1, I/61 Bratislava-Zlaté Piesky - Trnava - Nitra - Zvolen - Lučenec - **Rožňava - intersection with PR3, I/19 Košice, Prešovská - Sečovská,**
- E572 - intersection with D1, I/9, Trenčín - juh, districts of Trenčín - Prievidza - intersection with R2, R1 Žiar nad Hronom, district of Žiar nad Hronom
- E575 - intersection with D1, I/63, Bratislava-Gagarinova - Senec - Dunajská Streda - state border of SK/H, Medveďov border crossing, district of Dunajská Streda

As for road transport, the most important European routes for long-distance transport in practice are the E50 (Brest - Žilina - Prešov - Košice - Michalovce state border with Ukraine - Mukachevo - Dnipro), E71 (Košice - state border with Hungary - Miskolc - Split), E58 (Wien - Zvolen - Rožňava - Košice - state border with Ukraine - Mukachevo - Kišinev - Mariupol) and E571 (Bratislava - Zvolen - Rožňava - Košice). The D1 motorway is currently in operation in the section Košice - Prešov, including the PR3 motorway feeder to Košice, the R4 expressway to the border with Hungary and the section of the R2 road in Košice (Šaca - Nižná Kapustníky) are also in operation. The D1 section Budimír - Bidovce is under construction.



Roads in KSK

Source: PUM KSK

The road network of the Prešov Self-Governing Region comprises 3,189,322 km of roads of different transport significance (TEN-T, D, R, I - III class), category and other transport and operational characteristics. From this point of view, it is therefore appropriate and expedient to organise such a different transport network into logical units according to suitably selected criteria and set parameters. The classification of road

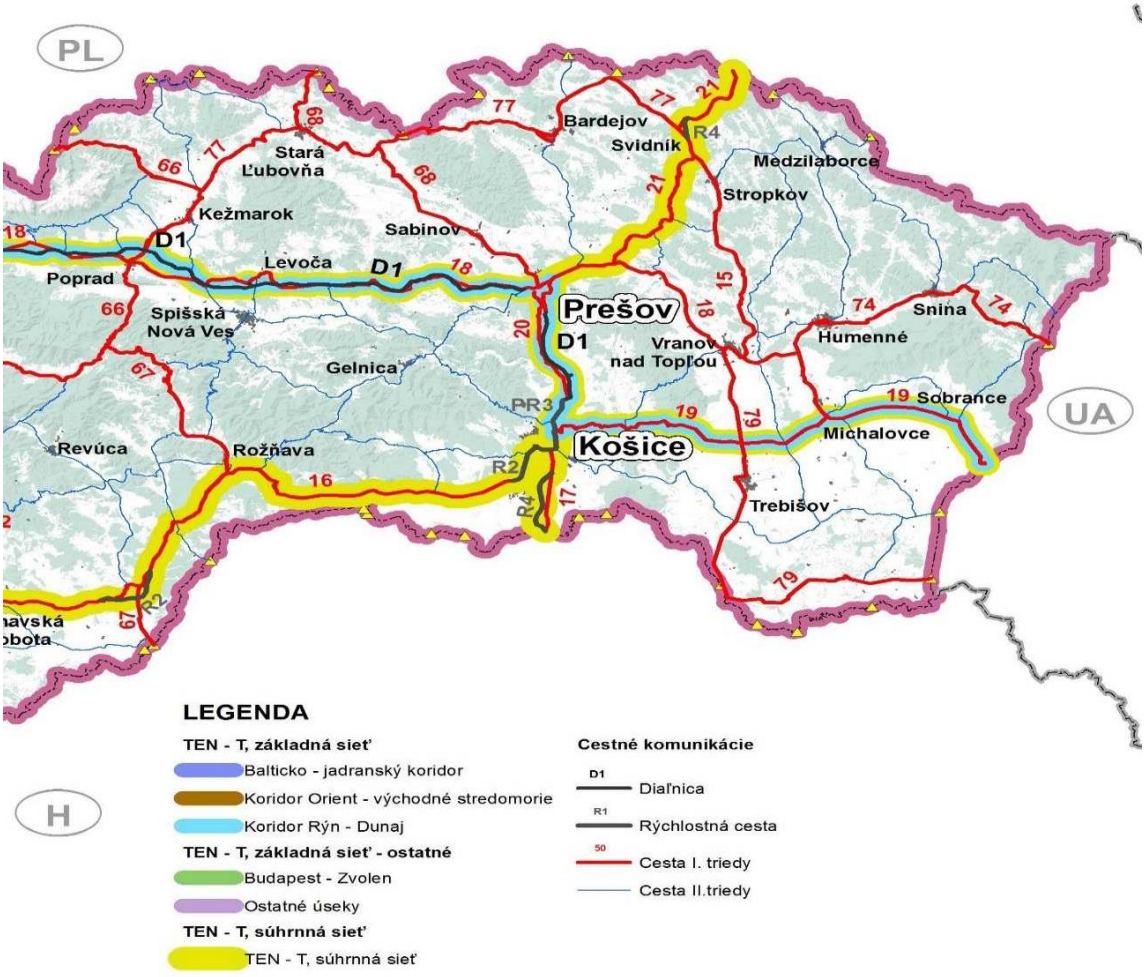
sections into backbone, core and other road networks has been successfully applied in the development of projects of the same nature as this one.

Transport networks of the Slovak Republic of international level according to Regulation 1315/2013 of the European Parliament and of the Council of 11 December 2013 concerning the Prešov Region are defined within the core and comprehensive main and supplementary TEN-T network as follows:

TEN-T core network: In Slovakia, the road part of the TEN-T core network consists of motorways D1, D2, D3, D4, section Jarovce - Kittsee, and expressways R3, section Šahy - Vrútky, R6. The basic TEN-T network passes through the Prešov Region along D1 in the sections Štrba - Spišský Štvrtok and Levoča - Lemešany. The Rhine-Danube Corridor of the TEN-T core network, which also includes the railway line Poprad - Košice in the Prešov Region, also runs along this route. In the pre-accession period, this corridor was referred to as Multimodal Corridor Va.

D1 motorway in the category D 26,5/120 passes through the Prešov Region along sections with connecting nodes - Štrba, Mengusovce, Poprad Airport, Poprad-Veľká, Poprad-Matejovce, Jánovce, Levoča, Spišské Podhradie, Behárovce, Široké, Bertotovce, Chminianska Nová Ves, Prešov- západ, Prešov-juh, Lemešany

Comprehensive TEN-T network: In Slovakia, the TEN-T network includes roads R1, R2, R3 - section Trstená - Hubová, R4 and R5. It passes through the Prešov Region along the route of the future R4 expressway in the section Vyšný Komárník - Prešov - West. This route is part of the road link Rzeszów - Vyšný Komárnik - Prešov - Košice - Milhosť - Miskolc, in the past also referred to by the working name “Baltic Corridor”, today as the international road network Via Carpatia, supported by the Three Seas Initiative (also the BABS Initiative) of the 12 eastern EU states, which in Slovakia aims to build an expressway in category R 24.5 along the line Rzeszów - Vyšný Komárnik - Svidník - Stročín - Giraltovce - Lipníky - Prešov - Košice - Milhosť - Miskolc along the international roads E371, E50, E71 and the state roads I/21, I/18 and I/17 as a new expressway R4.



TEN-T network in the east of Slovakia

Source: Department of Road Database of the Slovak Road Administration

The international network of European "E" roads also passes through the territory of the region:

- E 50 - state border of the CZ/SR - Drietoma - Trenčín - Žilina - Prešov - Košice - state border of the SR/UA (Uzhhorod)
- E 371 - state border of PL/SK Vyšný Komárnik border crossing, district of Svidník - intersection with I/18, I/20 Prešov

as well as the less established "TEM" trans-European routes according to the United Nations Economic Commission for Europe (UNECE):

- TEM4 (Žilina - Ružomberok - Lipt. Mikuláš - Poprad - Prešov - Košice - Michalovce - Sobrance - SK/UA state border, Vyšné Nemecké border crossing)
- TEM7 (Prešov - Svidník - SK/PL state border, Vyšný Komárnik border crossing).

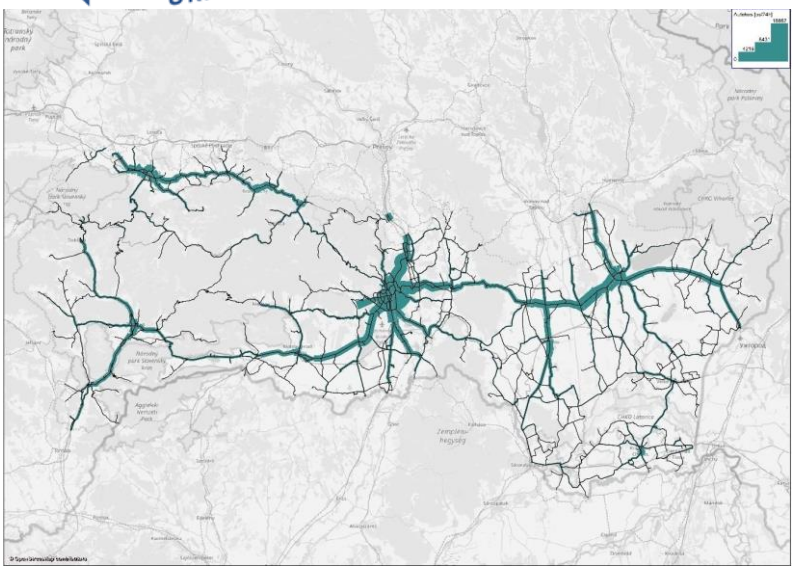
Source: PUM PSK

3.2. Public transport

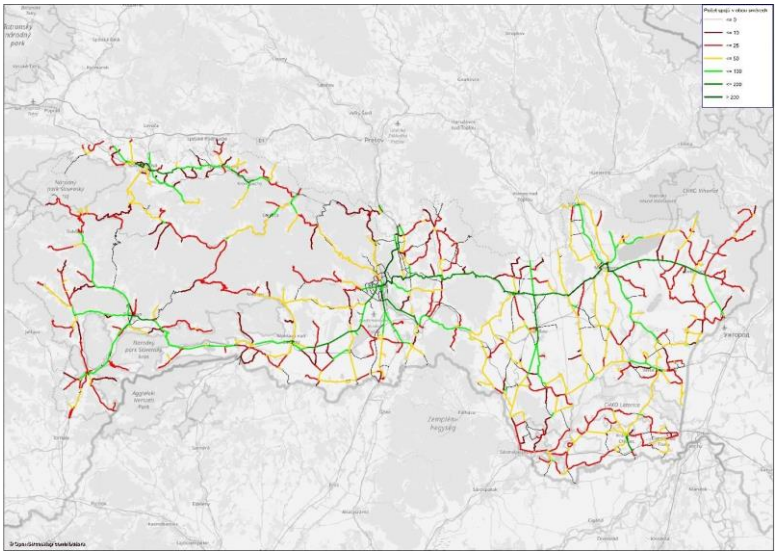
Public passenger transport in the public service mode provides what we call transport services, i.e. transporting people to work, to schools, for medical, social and other services, as well as for cultural and sporting activities. It is already evident from this description that a significant proportion of public passenger transport is directed to centres, categorised according to the importance of the centre.

In bus transport, the following sections are key for network dimensioning:

- Košice - Prešov on the roads D1, I/20 and III/3325
- Košice - Sečovce - Michalovce on the road I/19
- Košice - Jasov on the road II/548
- Moldava nad Bodvou - Medzev on the road II/550
- Košice - Turňa nad Bodvou on the road I/16
- Košice - Milhosť on the road I/17
- Košice - Ždaňa on the road III/3416
- Košice - Slanec on the road II/552
- Spišský Štvrtok - Spišská Nová Ves - Margecany on the roads II/536 and II/547
- Spišská Nová Ves - Markušovce on the road III/3244
- Rožňava - Plešivec on the road I/16
- Rožňava - Dobšiná on the road I/67
- Parchovany - Trebišov - Veľaty on the road I/79
- Trebišov - Hraň on the roads III/3677, III/3664 and III/3663
- Strážske - Michalovce on the road I/18
- Michalovce - Stretava on the road II/555
- Michalovce Sobrance - Vyšné Nemecké on the road I/19
- Kráľovský Chlmec - Veľké Kapušany - Vojany on the roads II/555 and II/552



Cartogram of the intensity of passengers carried by bus transport [axle/24h]



Number of bus services on road sections

The most congested sections of the road network in terms of the number of bus passengers are the access routes to bus stations in the largest cities of the Košice Region.

Busiest sections of the road network by number of bus passengers according to the transport model

Busiest sections		**Number of passengers/24h**
1	Košice - entrance to AS	34,929
2	Palackého, Košice	21,931
3	Michalovce - entrance to AS	10,163
4	Štúrova, Košice	9,904

5	Rožňava, Spišská Nová Ves	9,023
6	Južná trieda, Košice	8,923
7	Spišská Nová Ves Town Days	7,311
8	Moldavská cesta, Košice	7,226
9	Prešovská cesta, Košice	6,889

Another important indicator describing the load on the public transport system is the number of passengers at stops. The busiest stops on the territory of the region are:

The busiest public transport stops in the territory of KSK according to the transport model

Stop		**Number of passengers/24h**
1	Košice, AS	20,118
2	Košice, railway station.	12,224
3	Rožňava, AS	4,013
4	Spišská Nová Ves	3,520
5	Trebišov, AS	3,430
6	Michalovce, railway station. sk:bus station	2,911
7	Spišská Nová Ves, 10 June 2014	2,311
8	Michalovce, Zemplín market	2,193
9	Kosice, Ryba	2,157
10	Košice, Važecká	2,144

The table above shows the dominance of bus services, with the busiest public transport stops being mainly the main bus stations of the largest cities. Among the ten busiest stops there are only two railway stations - Košice and Spišská Nová Ves.

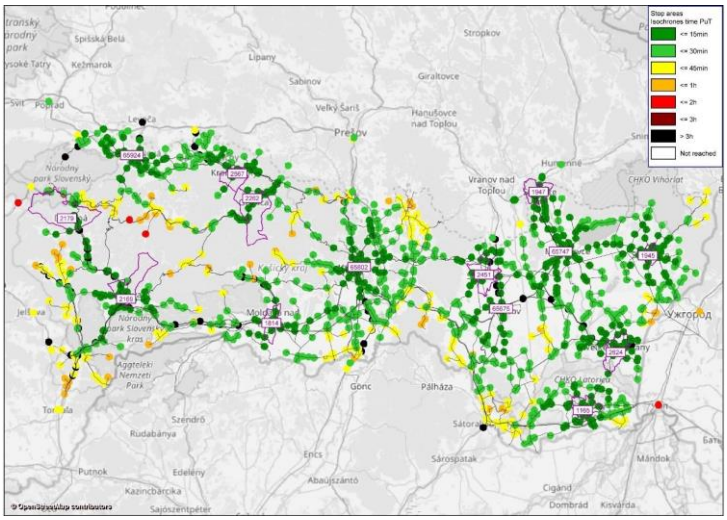
In the municipalities of the Košice Self-Governing Region, according to data from the Transport Department of the Košice Self-Governing Region Office, in 2017 buses on suburban bus transport lines operated under contract with the Košice Self-Governing Region (carriers eurobus and ARRIVA Michalovce) stopped 22,290 times on weekdays, 7,814 times on Saturdays, 7,915 times on Sundays, and 19,296 times during holidays. The average number of services to a municipality per hundred inhabitants is 2.8, buses on Sundays account for 36% of the weekday supply and buses on holidays account for 87% of the weekday supply.

The most frequently used function of public transport is regular commuting to the regional centre for work, services, office or doctor's appointments.

From the experience with the use of public transport, it is possible to determine the limit of daily commuting time, i.e. about 45 min, in the case of commuting by regional trains with higher comfort for passengers, even a commuting time of 60 min or slightly longer is acceptable.

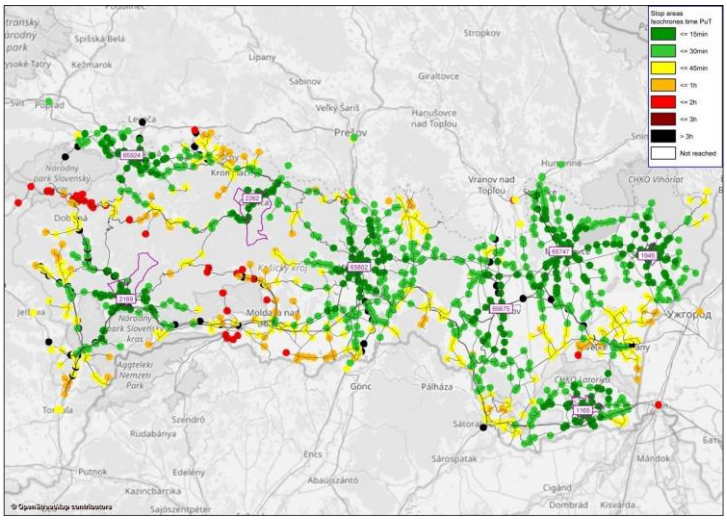
For remote regions, alternatives will also be sought with longer times and compensation by higher standards. Defining the regional centres Košice, Spišská Nová Ves, Dobšiná, Rožňava, Krompachy, Gelnica, Moldava nad Bodvou, Košice, Sečovce, Trebišov, Strážske, Michalovce, Sobrance, Kráľovský Chlmec and Veľké Kapušany, the existing time accessibility is shown in the figure below. Accessibility to the nearest regional centres is ensured for all except for the furthest villages near the border or furthest from the catchment centres (Gemerská Panica, Kečovo, Silická Brezová, Henclová, Nálepkovo-Peklisko, Úhorná, Opátka, Opiná, Kecerovský Lipovec, Nový Salaš, Slanská Huta, Černochov, Bara, Pinkovce and Záhor)

The question remains whether the catchment centres such as Dobšiná, Gelnica or Strážske are sufficiently active.



Accessibility of regional centres by public transport

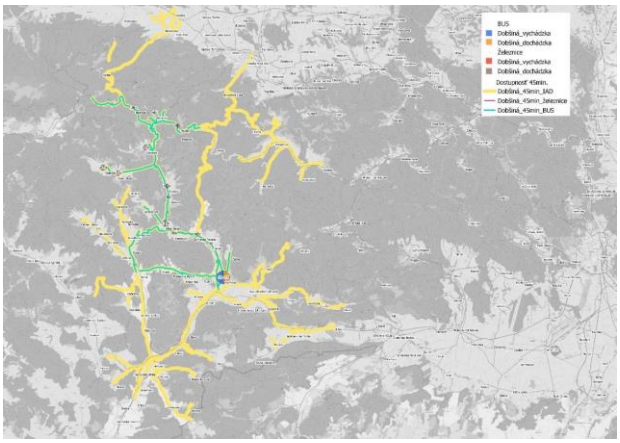
Focusing on the accessibility of district towns and Kraľovský Chlmec, above the limit of 45 minutes is, in addition to the above villages, the entire valley of Horný Hnilec, the area of Jasov Medzev, the surroundings of Turňa nad Bodvou, the villages north of Krompachy and Spišské Vlachy, Vojany and its surroundings, Veľké Slemence and Ptrukša.



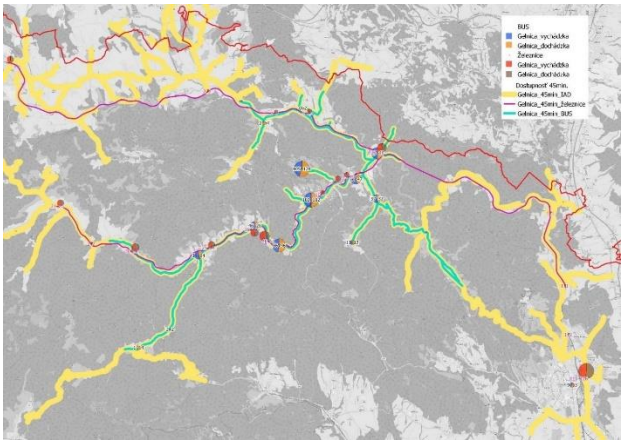
Accessibility of district towns by public transport

The figures below show the accessibility to district towns, Dobšiná, Krompachy, Margecany and Kraľovský Chlmec by public transport, where the accessibility is always shown within 45 min by car, public bus transport and railway. The proposed measures should aim to extend the area of accessibility within 45 minutes by public transport, particularly in the above areas which do not have accessibility within 45 minutes to any district town or catchment centre. The number of inbound and outbound passengers to/from the catchment centre is also shown in pie charts.

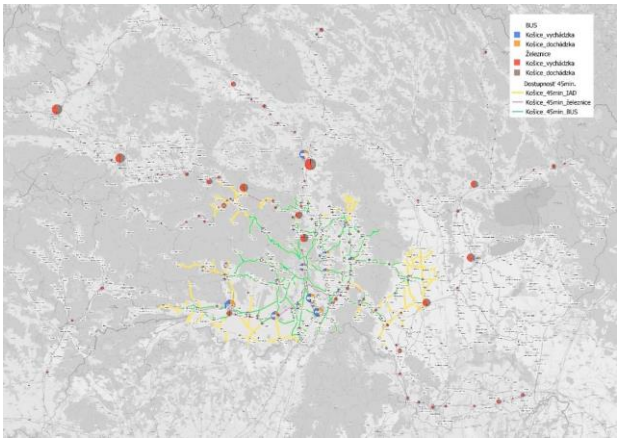
For some of the smaller catchment centres, it is clear that one of their highest commuter flows is actually a return from the larger towns to which passengers commute from these smaller centres. Such is the case of Rožňava for the catchment to Dobšiná, Poprad for the catchment to Spišská Nová Ves, Košice for the catchment to Spišská Nová Ves, Gelnica, Krompachy, Margecany, Moldava nad Bodvou and Trebišov. For some of the smaller catchment centres, such a larger town does not represent the largest source of journeys, but it is still a significant source of return journeys compared to commuting from other villages. This is the case of Košice for Kráľovský Chlmec, Michalovce and Rožňava, Spišská Nová Ves and Poprad for Krompachy and Margecany and Michalovce for Trebišov.



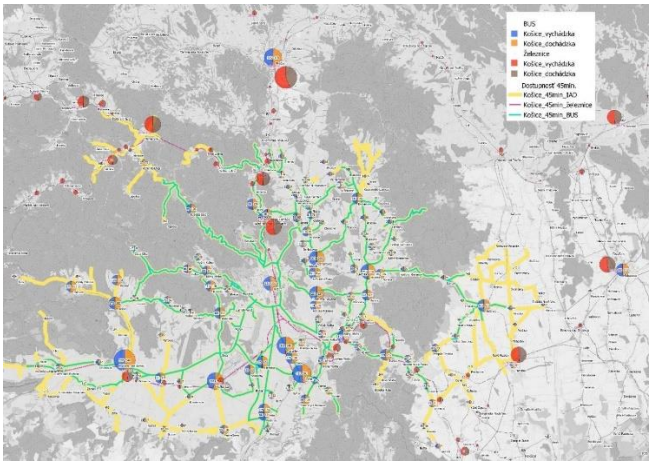
Accessibility and Commuting by Public Transport – Dobšiná



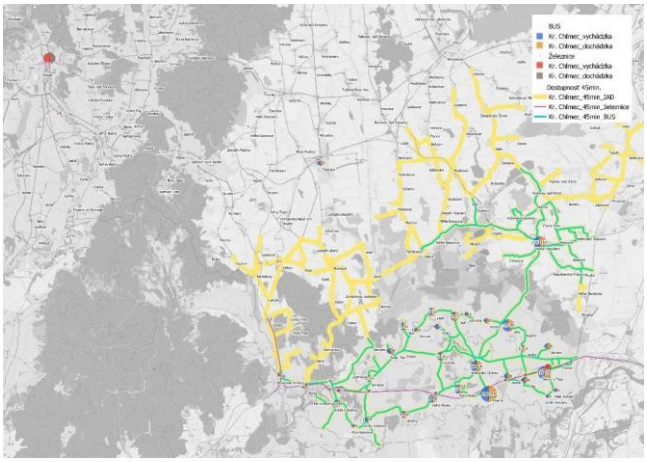
Accessibility and commute by public transport – Gelnica



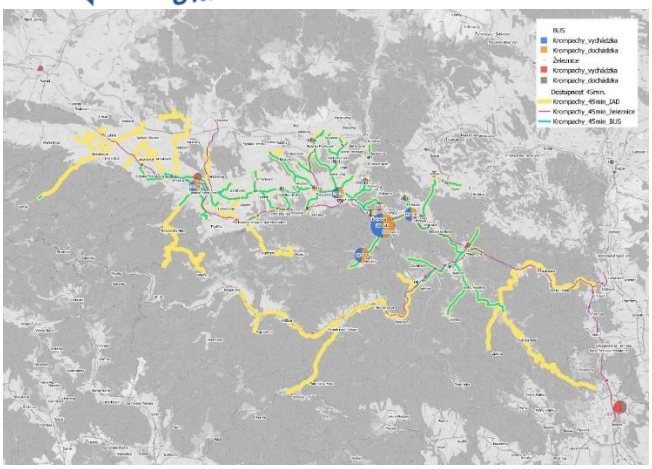
Accessibility and commuting by public transport – Košice



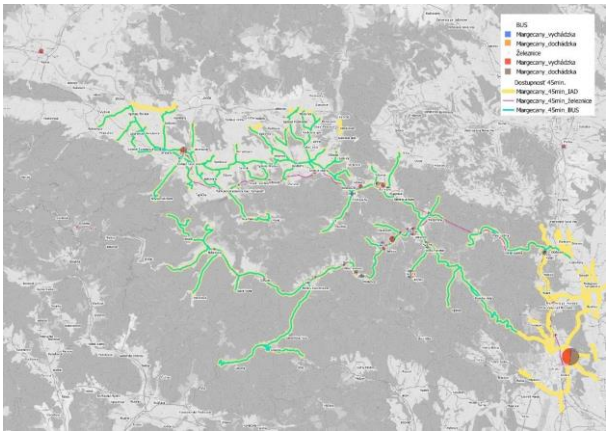
Accessibility and commute by public transport - Košice (detail)



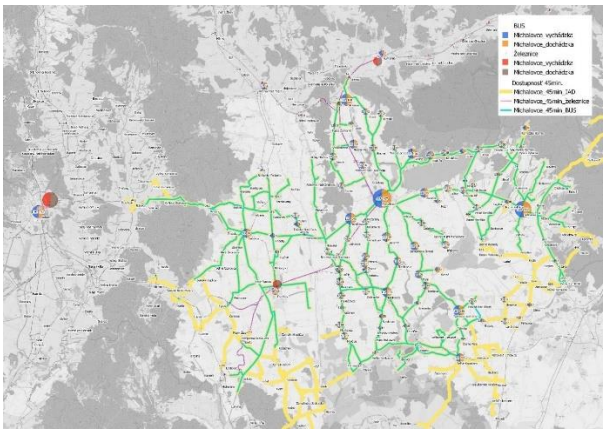
Accessibility and commute by public transport - Kralovsky Chlmec



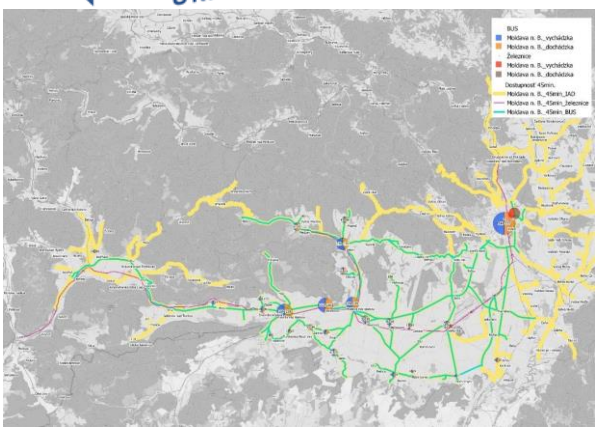
Accessibility and commute by public transport – Krompachy



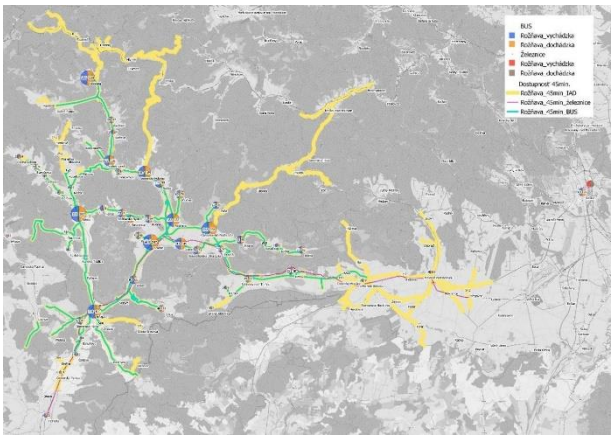
Accessibility and commute by public transport – Margecany



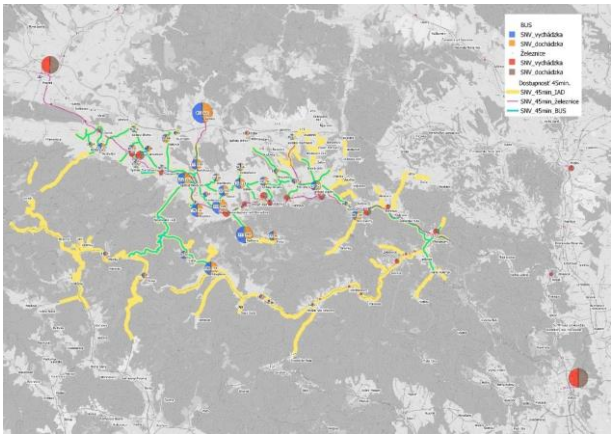
Accessibility and commute by public transport – Michalovce



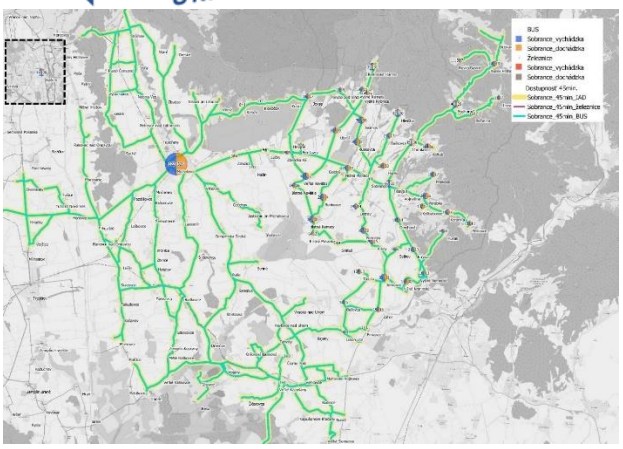
Accessibility and commute by public transport - Moldava nad Bodvou



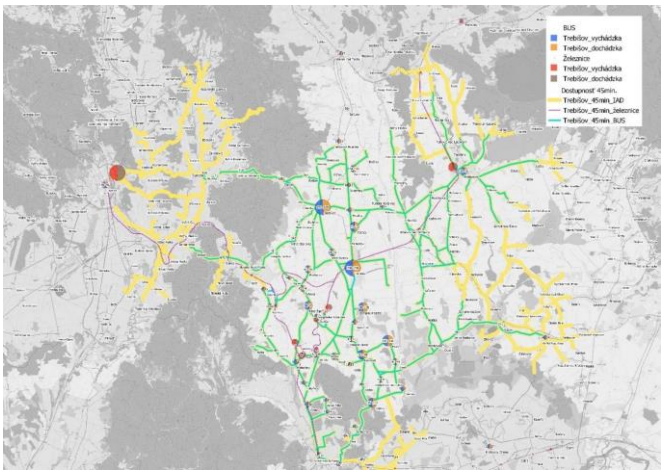
Accessibility and commute by public transport – Rožňava



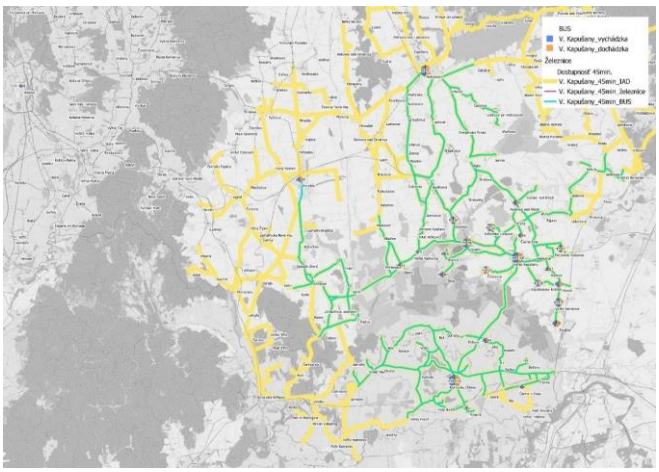
Accessibility and commute by public transport – Spišská Nová Ves



Accessibility and commute by public transport – Sobrance



Accessibility and commute by public transport – Trebišov



Arrangement of Public Bus Services

Public bus transport in the Košice Region is operated on the basis of Act No. 56/2012 Coll., the Road Transport Act, primarily as:

- regular licensed public transport outside the public service commitment, i.e. long-distance transport,
- regular licensed regional public bus transport on the basis of public service contracts with the Košice Region, but also with the Prešov and Banská Bystrica Regions,
- regular licensed regional public bus service transport for the purposes of the commercial interest of the carrier (e.g. KACOT, s.r.o)
- regular public transport organised and subsidised by cities,
- irregular occasional or special transport organised by municipalities, associations or businesses (e.g. tourist bus lines or lines for company employees), these types of transport are not covered in this analysis.

Long-distance transport in the Košice Region is operated by carriers at their own business risk without subsidies in the form of international or national routes. Revenues from long-distance transport have been declining for a long time. They were also negatively affected by measures such as scrappage and bus tolls. Since 2015, following the introduction of zero fares for some social groups on railways, the remaining domestic long-distance lines are also being phased out due to a decline in revenues from social groups eligible to travel free of charge on railways in Slovakia. In 2019, there are almost no **long-distance domestic lines** operating in the territory of the Košice Region, the two domestic long-distance lines that are operated by entities outside KSK.

- 102516 Bratislava-Nitra-Banská Bystrica-Poprad-Prešov-Bardejov, operated by DAKA Šamorín
- 102519 Bratislava-Trnava-Nitra-Zvolen-Lučenec-Rimavská Sobota-Rožňava-Košice-Michalovce-Humenné, operated by DAKA Šamorín
- 608502 Revúca-Rožňava-Košice, operated by SAD Lučenec (currently suspended)
- 609501 Rimavská Sobota-Rožňava-Košice-Prešov-Bardejov,Bardejovské kúpele, operated by SAD Lučenec (currently suspended).

The carriers eurobus and ARRIVA Michalovce did not operate any national long-distance bus lines in 2019. Long-distance services across Slovakia are offered by international long-distance bus lines in addition to the railway.

In 2019,international bus lines connected Košice with the following cities:

- Bradford, Geneva, Frankfurt, Munich, Berlin, Wien, Prague, Plzeň, Horní Planá, Budapest, Warsaw, Prešov, Poprad, Rožňava, Michalovce, Sobrance, Vyšné Nemecké, Uzhhorod, Mukachevo, Rachiv, Lviv (no long-distance buses to Romania are operated).

Regional regular bus services are operated in the following configuration:

Lines ordered by the Prešov Self-Governing Region serving the territory of KSK:

- 701412 Bardejov – Prešov – Košice
- 707408 Prešov – Drienov – Lemešany – Košice
- 707410 Prešov – Lemešany – Košice
- 707416 Prešov – Sedlice – Klenov – Margecany
- 707449 Prešov – Vranov nad Topľou – Strážske – Humenné – Snina/Michalovce
- 708403 Vyšný Slavkov – Brezovica – Lipany – Prešov – Košice, U. S. Steel
- 708459 Sabinov/Prešov – Široké – Krompachy – Spišská Nová Ves – Levoča – Poprad – Tatranská Lomnica
- 712451 Giraltovce – Hanušovce n/T. – Bystré – Vranov n/T. – Michalovce
- 703420 Lendak – Kežmarok – Spišská Nová Ves
- 704404 Levoča – Spišská Nová Ves – Spišské Vlachy – Margecany – Košice
- 704410 Levoča – Prešov – Košice
- 704411 Levoča – Spišské Podhradie – Spišské Vlachy – Krompachy
- 704412 Spišský Štvrtok – Spišská Nová Ves
- 704415 Spišské Podhradie – Klčov – Spišská Nová Ves
- 704420 Levoča – Jamník – Markušovce – Spišská Nová Ves
- 704421 Levoča – Kurimany – Iliašovce – Spišská Nová Ves
- 704422 Levoča – Harichovce – Spišská Nová Ves
- 706405 Poprad – Stratená, Dobšinská ľadová jaskyňa – Dobšiná – Rožňava
- 706407 Svit – Poprad – Spišská Nová Ves
- 702417 Humenné – Vranov n./T. – Sečovce – Košice
- 702418 Humenné – Snina – Ubľa – Sobrance – Michalovce
- 702419 Humenné – Strážske – Michalovce – Sečovce – Košice
- 711406 Stropkov – Fijaš – Giraltovce – Prešov – Košice
- 712413 Svidník – Mestisko – Giraltovce – Prešov – Košice
- 712414 Svidník – Stročín – Giraltovce – Prešov – Košice
- 713419 Vranov n./T. – Rakovec n./O. – Michalovce
- 713420 Vranov n./T. – Cabov – Sečovce/Trebišov
- 713421 Vranov n./T. – Sečovce – Košice
- 713422 Vranov n./T. – Nižný Hrušov – Strážske – Michalovce/Humenné
- 710408 Stará Ľubovňa – Kežmarok – Vrbov – Spišská Nová Ves

- 707453 Prešov – Košice

Lines ordered by the Košice Self-Governing Region serving mainly the territory of KSK:

Lines serving mainly the Abov region (Košice and surroundings):

- 802402 Bidovce/Olšovany - Ďurkov - Vyšná Myšľa - Čaňa - Košice, USS
- 802405 Košice - Vyšná Myšľa - Vyšný Čaj/Rákoš - Bohdanovce - Ruskov - Ďurkov
- 802406 Košice - Sady nad Torysou - Košická Polianka - Košice, Krásna
- 802407 Košice - Sady nad Torysou - Košická Polianka - Olšovany - Vyšný Čaj/Ďurkov - Bohdanovce
- 802408 Košice - Bohdanovce - Vyšný Čaj - Olšovany - Ďurkov
- 802409 Košice - Slanec - Novosad - Vojany - Veľké Kapušany
- 802410 Košice - Slanec - Kuzmice - Byšta
- 802411 Košice - Slanec - Slančík/Slanská Huta
- 802414 Košice - Vyšná Hutka - Nižná Myšľa (a späť)
- 802415 Košice - Valaliky - Čaňa - Gyňov/Skároš/Trstené pri Hornáde
- 802416 Ždaňa/Skároš/Trstené pri Hornáde/Valaliky/Gyňov - Čaňa - Košice, USS
- 802417 Košice - Geča - Čaňa - Kokšov-Bakša
- 802418 Košice/Košice, USS - Bočiar - Belža - Seňa - Kechnec - Milhosť
- 802419 Košice/Valaliky/Skároš - Seňa - Kechnec - Perín-Chym/Milhosť
- 802420 Košice - Haniska - Bočiar
- 802427 Košice - Jasov - Poproč - Medzev - Štós - Štós, kúpele - Smolník
- 802428 Košice - Košice, USS - Malá Ida - Poproč - Medzev - Vyšný Medzev
- 802430 Košice - Košice, Myslava - Baška - Malá Ida - Bukovec
- 802431 Košice - Košice, Myslava - Vyšný Klátov - Hýľov - Zlatá Idka
- 802436 Košice - Košická Belá - Opátka
- 802437 Košice - Kostoľany nad Hornádom - Družstevná pri Hornáde - Sokoľ
- 802438 Košice - Sokoľ - Družstevná pri Hornáde - Obišovce - Malá Lodina
- 802401 Košice - Sečovce - Michalovce - Sobrance - Vyšné Nemecké
- 802403 Košice - Trsťany - Svinica - Košický Klečenov
- 802443 Košice - Budimír/Chrastné - Ploské - Vtáčkovce - Bunetice
- 802444 Košice - Budimír - Vajkovce - Kráľovce - Chrastné
- 802445 Košice - Hrašovík - Košické Oľšany - Beniakovce
- 802446 Košice - Hrašovík - Beniakovce - Čižatice - Kecerovce - Mudrovce/Opiná/Bunetice - Vtáčkovce
- 802447 Košice - Hrašovík - Ďurďošík - Trsťany - Čakanovce - Mudrovce/Opiná

- 802448 Košice - Ďurďošík - Trsťany - Bidovce - Ďurkov - Nižná Kamenica - Rankovce - Mudrovce/Kecerovce
- 802422 Košice - Košice, USS - Komárovce - Perín-Chym - Buzica - Rešica
- 802423 Košice - Košice, USS - Veľká Ida - Komárovce - Buzica - Rešica
- 802450 Košice - Košice, USS - Cestice - Mokrance - Moldava nad Bodvou - Zádiel - Turňa nad Bodvou/Dvorníky-Včeláre
- 802451 Košice, USS - Komárovce/Perín-Chym - Rešica - Buzica - Čečejovce - Mokrance - Moldava nad Bodvou
- 802452 Košice - Košice, USS - Cestice - Paňovce - Mokrance - Moldava nad Bodvou - Žarnov - Janík - Moldava nad Bodvou
- 802453 Košice - Košice, USS - Mokrance - Moldava nad Bodvou - Turňa nad Bodvou - Hosťovce - Turňa nad Bodvou - Moldava nad Bodvou
- 802454 Košice - Košice, USS - Cestice - Mokrance - Moldava nad Bodvou - Turňa nad Bodvou - Jablonov nad Turňou - Silická Jablonica
- 802455 Turňa nad Bodvou - Háj - Hačava
- 802456 Moldava nad Bodvou - Debraď
- 802457 Moldava nad Bodvou - Poproč - Medzev - Vyšný Medzev
- 802458 Košice, USS - Mokrance - Moldava nad Bodvou - Debraď - Jasov - Medzev/Vyšný Medzev
- 802460 Košice - Košice, USS - Mokrance - Moldava nad Bodvou - Debraď - Poproč
- 802461 Košice, USS/Moldava nad Bodvou - Čečejovce - Paňovce
- 802462 Kechnec - Perín-Chym - Buzica - Čečejovce - Moldava nad Bodvou - Poproč
- 802463 Kechnec - Perín-Chym - Veľká Ida - Cestice - Mokrance - Moldava nad Bodvou - Turňa nad Bodvou - Dvorníky-Včeláre - Zádiel
- 802433 Košice - Prešov - Bardejov - Bardejov, Bardejovské kúpele
- 802434 Košice - Lemešany - Kendice - Prešov
- 802435 Košice - Prešov - Stará Ľubovňa - Vyšné Ružbachy/Spišská Stará Ves - Spišské Hanušovce
- 802439 Košice - Budimír/Vajkovce - Ploské - Bunetice/Šarišské Bohdanovce - Varhaňovce - Brestov
- 802440 Košice - Lemešany - Šarišské Bohdanovce - Brestov - Varhaňovce
- 802442 Košice - Hrašovík - Košické Oľšany - Beniakovce - Chrastné/Ploské - Brestov - Varhaňovce
- 802449 Košice - Dargov - Sečovce - Vranov nad Topľou – Humenné

Lines serving mainly the Spiš region (Spišská Nová Ves, Levoča, Gelnica and surroundings):

- 801401 Gelnica - Žakarovce
- 801403 Kojšov - Margecany - Gelnica - Prakovce - Helcmanovce
- 801405 Margecany - Gelnica - Prakovce - Mníšek nad Hnilcom - Smolník - Úhorná
- 801409 Gelnica - Opátka - Košická Belá - Košice - Košice, USS
- 801415 Margecany - Kojšov
- 801419 Henclová - Nálepkovo - Závadka
- 801421 Nálepkovo - Nálepkovo, Surovec
- 810456 Krompachy - Richnava - Kluknava - Margecany
- 810406 Spišská Nová Ves - Danišovce
- 810412 Spišská Nová Ves - Jamník - Vítkovce - Hincovce - Olcnava - Spišské Vlachy
- 810418 Spišská Nová Ves - Krompachy - Margecany - Košice
- 810420 Spišská Nová Ves - Markušovce - Matejovce nad Hornádom - Rudňany - Poráč
- 810425 Spišská Nová Ves - Teplička
- 810435 Spišská Nová Ves - Čingov - Spišské Tomášovce - Spišská Nová Ves
- 810430 Spišská Nová Ves - Nálepkovo - Mníšek nad Hnilcom - Smolník - Úhorná
- 810433 Spišská Nová Ves - Hnilec - Mlynky - Dedinky - Stratená, Dobšinská Ľadová Jaskyňa/ Dobšiná
- 810451 Krompachy - Kluknava - Hrišovce
- 810458 Krompachy - Slovinky
- 810460 Krompachy - Kaľava - Slatvina/Vojkovce - Spišské Vlachy
- 810461 Krompachy - Slatvina/Vojkovce - Spišské Vlachy
- 810462 Krompachy - Spišské Vlachy - Oľšavka
- 810401 Spišská Nová Ves - Iliašovce - Kurimany - Levoča
- 810402 Spišská Nová Ves - Harichovce - Levoča
- 810408 Spišská Nová Ves - Baldovce - Spišské Podhradie - Ordzovany - Bijacovce
- 810410 Spišská Nová Ves - Spišské Podhradie - Krompachy
- 810414 Spišská Nová Ves - Domaňovce - Spišské Vlachy - Krompachy
- 810416 Spišská Nová Ves - Domaňovce - Krompachy - Široké - Prešov
- 810436 Spišská Nová Ves - Spišské Tomášovce - Spišský Štvrtok - Hrabušice/Vydrník - Stratená,Dobšinská Ľadová Jaskyňa - Dedinky/Telgárt
- 810437 Spišská Nová Ves - Letanovce - Spišský Štvrtok
- 810438 Spišská Nová Ves - Spišský Štvrtok - Hrabušice - Vydrník - Betlanovce - Hrabušice
- 810439 Spišská Nová Ves - Poprad - Svit

- 810441 Spišská Nová Ves - Poprad - Vysoké Tatry, Starý Smokovec
- 810453 Slovinky - Krompachy - Kluknava - Hrabkov/Široké
- 810463 Krompachy - Jablonov - Lúčka
- 810464 Krompachy - Spišské Vlachy - Žehra - Spišské Podhradie - Dúbrava
- 810465 Krompachy - Spišské Vlachy - Jamník - Klčov – Levoča

Lines serving mainly the Gemer region (Rožňava and surroundings):

- 808401 Dobšiná - Nižná Slaná - Štítnik - Slavošovce - Čierna Lehota
- 808402 Nižná Slaná/Dobšiná - Rejdová
- 808403 Dobšiná - Dedinky - Mlynky
- 808405 Dobšiná - Rožňava - Moldava nad Bodvou - Košice
- 808406 Nižná Slaná - Kobeliarovo
- 808413 Rožňava - Štítnik - Rozložná/Čierna Lehota
- 808415 Rožňava - Štítnik - Slavoška - Brdárka - Hanková
- 808436 Brdárka - Hanková - Štítnik - Čierna Lehota
- 808404 Dobšiná - Nižná Slaná - Rožňava
- 808411 Rožňava - Krásnohorské Podhradie - Pača
- 808412 Rožňava - Krásnohorská Dlhá Lúka/Krásnohorské Podhradie - Bôrka
- 808416 Rožňava - Čučma
- 808425 Rožňava - Krásnohorská Dlhá Lúka
- 808433 Rožňava - Silická Jablonica/Turňa nad Bodvou
- 808414 Rožňava - Plešivec - Štítnik
- 808417 Rožňava - Brzotín - Kružná
- 808422 Rožňava - Plešivec/Silica
- 808431 Rožňava - Plešivec - Silická Brezová
- 808432 Čoltovo/Gemerská Hôrka - Plešivec - Kečovo
- 808435 Meliata - Gemerská Hôrka - Plešivec - Kunova Teplica
- 808424 Rožňava - Dobšiná - Stratená, Dobšinská Ľadová Jaskyňa - Poprad
- 808430 Rožňava - Plešivec - Jelšava - Revúca
- 808445 Rožňava - Štítnik - Jelšava - Revúca
- 808448 Rožňava/Kečovo - Tornaľa - Rimavská Sobota

Lines serving mainly the Zemplín region (Michalovce, Trebišov, Sobrance and surroundings):

- 807401 Michalovce - Vinné - Trnava pri Laborci
- 807403 Michalovce - Zemplínska šírava - Poruba pod Vihorlatom
- 807407 Michalovce - Hažín - Hnojné - Poruba pod Vihorlatom

- 807408 Michalovce - Čečehov - Iňačovce
- 807409 Michalovce - Senné - Vojany
- 807411 Michalovce - Pavlovce nad Uhom - Vysoká nad Uhom - Pinkovce/Veľké Kapušany
- 807413 Michalovce - Lastomír - Budkovce - Drahňov
- 807415 Michalovce - Hatalov - Malé Raškovce/Drahňov
- 807416 Michalovce - Laškovce - Falkušovce - Kačanov
- 807417 Michalovce - Trhovište - Bánovce nad Ondavou - Petrikovce - Oborín - Vojany
- 807418 Michalovce - Hriadky - Trebišov
- 807420 Michalovce - Lesné - Pusté Čemerné - Strážske
- 807421 Michalovce - Oreské - Staré - Strážske
- 807425 Michalovce - Sobrance - Husák - Nižné Nemecké - Jenkovce - Tašuľa
- 807471 Beša - Vojany - Krišovská Liesková - Veľké Kapušany - Budince/Kapušianske Kľačany - Ptrukša
- 807473 Maťovské Vojkovce - Veľké Kapušany - Čičarovce/Vojany
- 807478 Veľké Kapušany - Zemplínske Jastrabie - Trebišov - Zemplínska Teplica - Košice
- 807419 Michalovce - Tušice - Parchovany - Sečovská Polianka
- 807422 Michalovce - Sobrance - Ubľa - Stakčín - Snina - Humenné
- 807423 Michalovce - Strážske - Humenné
- 807424 Michalovce - Strážske - Vranov nad Topľou - Prešov
- 809401 Remetské Hámre - Zemplínska šírava - Michalovce - Košice
- 809402 Sobrance - Kristy - Sejkov - Husák - Nižné Nemecké - Bežovce - Lekárovce - Záhor
- 809403 Nižné Nemecké - Vyšné Nemecké - Sobrance - Michalovce - Košice
- 809404 Sobrance - Kristy - Svätuš - Veľké Revištia - Úbrež - Sobrance
- 809405 Sobrance - Kristy - Bežovce/Záhor - Pavlovce nad Uhom - Veľké Kapušany - Vojany
- 809406 Sobrance - Nižná Rybnica - Bunkovce - Svätuš
- 809407 Bežovce - Svätuš - Veľké Revištia - Michalovce
- 809409 Sobrance - Jasenov - Úbrež - Remetské Hámre
- 809410 Remetské Hámre/Poruba pod Vihorlatom - Úbrež - Sobrance/Michalovce
- 809411 Sobrance - Horňa - Hlivištia
- 809413 Sobrance - Koňuš - Podhoroď - Inovce/Ruská Bystrá
- 809415 Sobrance - Porúbka - Priekopa - Kolibabovce - Petrovce
- 811401 Trebišov - Zemplínske Hradište - Novosad - Hraň - Brehov - Cejkov - Slovenské Nové Mesto
- 811402 Trebišov - Zemplínske Jastrabie - Cejkov - Borša - Streda nad Bodrogom

- 811404 Trebišov - Veľaty - Kašov/Luhyňa - Michaľany - Byšta - Brezina
- 811405 Trebišov - Nový Ruskov - Nižný Žipov - Stanča - Trebišov
- 811407 Malá Tŕňa - Veľaty - Trebišov/Michaľany - Slanec - Košice
- 811409 Trebišov - Čeľovce - Slivník - Kuzmice - Byšta - Michaľany
- 811410 Cejkov - Hraň - Novosad - Čeľovce - Košice
- 811419 Trebišov - Hriadky - Sečovce - Slanec - Rákoš - Košice - Košice, USS
- 811428 Trebišov - Zemplínske Jastrabie - Brehov - Oborín - Vojany - Veľké Kapušany
- 811416 Trebišov - Hriadky - Sečovce - Košice - Prešov
- 811424 Trebišov - Nový Ruskov - Sečovce - Bačkov - Stankovce - Višňov/Parchovany/Sečovská Polianka (a späť)
- 811431 Trebišov - Hriadky - Sečovce - Božčice/Vranov nad Topľou - Hanušovce nad Topľou - Prešov
- 811470 Pribeník - Kráľovský Chlmec - Bačka/Bieľ - Čierna nad Tisou - Veľké Trakany
- 811472 Pribeník - Kráľovský Chlmec - Vojka
- 811473 Kráľovský Chlmec - Veľký Horeš - Streda nad Bodrogom - Trebišov
- 811474 Pribeník - Kráľovský Chlmec - Strážne
- 811477 Pribeník - Kráľovský Chlmec - Svätá Mária - Somotor - Veľký Kamenec - Streda nad Bodrogom
- 811478 Pribeník - Kráľovský Chlmec - Svinice - Rad
- 811481 Pribeník - Kráľovský Chlmec - Somotor - Slovenské Nové Mesto - Trebišov
- 811482 Klin nad Bodrogom - Streda nad Bodrogom - Zemplín
- 811484 Pribeník - Kráľovský Chlmec - Boľ - Svinice
- 811486 Pribeník - Kráľovský Chlmec - Boľ - Leles - Veľké Kapušany
- 811487 Bieľ - Čierna nad Tisou - Boťany - Leles - Veľké Kapušany - Kapušianske Kľačany - Ptrukša
- 811488 Pribeník - Kráľovský Chlmec - Veľké Kapušany - Drahňov - Michalovce
- 811489 Kráľovský Chlmec - Veľké Kapušany - Trebišov – Košice

Ostatné linky

- 802301 Košice, Spaľovňa - Kokšov-Bakša (prevádzkuje DPMK, a.s.)
- 811490 Trebišov - Parchovany - Sečovce – Košice (prevádzkuje Kacot s.r.o.)

Lines operated at own business risk:

Transport operator ***operated lines***

A-EXPRESS s.r.o., Štefánikova 22/300, 32600 Plzeň *709702: Plzeň – Prague – Brno – Poprad – Spišská Nová Ves – Prešov – Snina*
Alsa + Eggmann – strategická aliancia ALSA Autotourisme Léman inc. and Eurolines Eggmann Frey inc., Ruedu Mont Blanc 14, CH-1201 Genève, Suisse *802836: Geneva – Košice–*
B.P.V. bus s. r. o., Mierová 38, 064 01 Stará Ľubovňa *710443: Stará Ľubovňa – Košice–*
B.U.T. i H. TRANS-EUROPA Piotr Chorzępa, ul. Mickiewicza 12, 35-064 Rzeszów *802913: Košice – Rzeszów–*
CK EUROTOUR s.r.o. Hlavná 52, 091 01 Stropkov *712801: Svidník – Uzhhorod–*
D.M.D-GROUP, spol. s r. o., Sokolovská 32/22, 186 00 Prague 8 – Karlín *102919: Lviv – Liberec*Prague–
Daniel Čupa – BUS TRANS, Kutuzovova 19, 085 01 Bardejov *701801: Bardejov – Uzhhorod–*
FlixBus CZ s.r.o., Karolinská 650/1, Karlín, 186 00 Prague 8 *707902: Prešov – Horní Planá 802914: Plzeň – Košice–*
HORVAT Július Antonovyč *802857: Košice – Mukachevo–*
INTERBUS, s.r.o., Dénešova 77, 040 11 Košice *802801: Košice – Stuttgart* *807823: Michalovce -*

Bradford 807824: Bradford – Michalovce *802710: Košice - Plzeň*
Leo Express Global a.s, Řehořova 908/4, 130 00 Prague 3 *12024: Košice, AS – Kraków, MDA* *Bosacka 802905: Košice, AS – Rachiv, AS*
LUBJANO TRANS s.r.o., Mezibranská 1668/5, 110 00 Prague 1 *706912: Prague, ÚAN Florenc – Drahovo*
PAT Uzhhorodské ATP 12107, Radiščeva Uzhhorod *802906: Košice, AS – Uzhhorod, AS*
Peter Faltin – FALTOUR, Dlhé Stráže 51, 054 01 Levoča *704501: Levoča – Poprad – Brezno – Banská Bystrica – Zvolen – Nitra*

Transport operator ***operated lines***
PP Tranzit BUS, 89600 Mukachevo, Ukrajina *802902: Košice, AS – Mukachevo, AS*
REGA & R spol. s r.o., Podnikatelská 552, 190 11 Prague *502908: Prague, Želivského – Rachiv, AS*Prague
S.A.D. Zvolen a.s., Jarmočná 332/29, 992 01 Modrý Kameň *707506: Bratislava, AS – Prešov, AS*
SAD Humenné a.s., Fidlikova 99/1, 066 01 Humenné *707506: Bratislava, AS – Prešov, AS* *702502: Humenné, žel.st. – Banská Bystrica, AS 702701: Snina, nám. – Prague, ÚAN Florenc* *702702: Humenné, žel.st. – Brno, ÚAN Zvonařka*
SAD Prešov, a.s., Košická 2725/2, 080 01 Prešov *701506: Bardejov, AS – Rožňava, AS* *701704: Košice, AS – Prague, ÚAN Florenc* *707505: Prešov, AS – Vyšné Nemecké, št.hr. 707801: Prešov, AS – Uzhhorod, AS* *807818: Michalovce, žel.st. – Bradford, William Street*
SVD Trans s.r.o., Frýdecká 441, 199 00, Prague 9 *82: Ľvov, AS – Plzeň, CAN*

TOB ERABUS, Закарпатська обл. м. Мукачево вул. Свалявська, 79. *802904: Košice, AS – Mukachevo, AS*
Tourbus, a. s. Rosická 136/20, 602 00 Brno-střed-Trnitá *802702: Košice, AS – Prague, Hlavní nádraží*
Yatsiv Vladimir V., vul. B. Hmelnytskoho 3/9, 773 00 Kalush, Ukrajina *802911: Prague, ÚAN Florenc – Kaluš, AS*

Urban Public Transport (MHD)

Urban public transport is operated in the towns of Košice, Spišská Nová Ves and Smižany, Moldava nad Bodvou, Trebišov, Michalovce and Rožňava.

Municipality of Košice	Dopravný podnik mesta Košice, a. s.	Public transport services of MHD in Košice
Municipality of Smižany	eurobus, a. s.	Contract for public service in urban bus transport for the year 2008-2017 (extended by the addendum)
Municipality of Spišská Nová Ves	eurobus, a. s.	Contract for public services in urban regular bus transport
Municipality of Moldava nad Bodvou	eurobus, a. s.	On the basis of a contract between the city and the carrier Moldava nad Bodvou town - Moldava nad Bodvou NorthSubsidy
Municipality of Trebišov	ARRIVA Michalovce, a. s.	Contract for public services in urban bus transport for the period 2009-2018

Municipality of Michalovce	DZS-M.K.TRANS Michalovce, s. r. o.	Contract for urban bus transport services
Rožňava	eurobus, a. s.	Contract for public services in urban regular bus transport

Public Transport System in KSK

City	Population	Lines	Compensation €/year	per inhabitant €/year	Vehicles	€/vehicle.
Košice	239,171	67	17,917,173	74.9	332	53967
Smižany	8,652	15	86,977	10.1	1	86977
Spišská Nová Ves	37,558		719,260	15.6	21	34250
Moldava nad Bodvou	11,295	2	10200	0.9	0	-
Trebišov	25,547	3	100,898	3.9	2	50449
Michalovce	39,396	12	430,000	10.9	19	22632
Rožňava	19,349	2	68,564	3.5	1	68,564

Economy of Public Transport

MHD in Košice provides full-fledged public transport services with timetables with intervals of about 15 min and a dense network of lines 24 hours a day. The city of Košice compensates the carrier, DPMK, with €75 per inhabitant. Other public transport systems provide a different type of service. They allow those who need to travel longer distances on a regular basis and those with mobility problems to get around the city at longer intervals between lines. Compensation ranges from €0.9 to €16 per person, the difference being determined not only by the intensity of services but also by the size of the city.

MHD is not integrated with suburban transport, but it is often operated by the same carrier, and so transport integration occurs through the care of the carrier. The fares in public transport are different from the national ones. In smaller towns, there are often long overlaps between suburban and urban public transport.

Intermodal Transport Terminals

Public bus transport in the Košice Self-Governing Region is organised in the form of connections between catchment centres, connections from the regions and the Prešov Region to Košice and collections to catchment centres in Košice and the neighbouring Prešov Region. In principle, long-distance, inter-area and feeder lines in catchment centres always terminate at public transport terminals, which are usually bus stations in central areas of cities or at railway stations.

List of public transport terminals on the territory of the Košice Region:

- Spišská Nová Ves bus station
- Krompachy, train station
- Margecany, train station
- Rožňava bus station
- Gelnica, bus station
- Košice bus station
- Trebišov, bus station
- Michalovce, train station
- Strážske bus station
- Veľké Kapušany bus station
- Sobrance bus station
- Pribeník, train station

Source: PUM KSK

Performance of authority in road transport is ensured by the PSK through the PSK Transport Department.

Public transport in Slovakia is mainly provided by rail and bus. In cities, public transport as part of MHD can be provided by buses, trolleybuses, trams or taxis. Within PSK, trolleybuses run in the regional town of Prešov, trains and buses, long-distance, suburban and urban in other towns and villages of the PSK.

Bus Transport

The dominant mode of transport within the Prešov Region is bus transport, which

provides around 90% of the population ‘s transport. The problem with this transport is the large number of villages with small populations. At the same time, many of these villages are terminal and the cost of public transport is very high. PSK tries to take the requests of the mayors of these villages into account in mutual negotiations. Other disadvantages of PSK are the geomorphological division of the territory, continental winters, which also increases the cost of

1 person km. The EU's requirement for equal rights for all citizens with equal opportunities access to public transport can only be achieved with the introduction of multimodal passenger transport,
with the transition to ITS. Vehicles for up to 10 passengers or taxis will also need to be included in the ITS.
This option appears to be superior from the present point of view, but with the introduction of a single
fare it may be of interest to commercial carriers.
Public bus transport in PSK is provided on the basis of an order by four
most important carriers:

- - SAD Prešov
- - SAD Humenné
- - SAD Poprad
- - BUS Karpaty Stará Ľubovňa

Ordering party	Carrier	Contract name
Slovak Republic represented by the Ministry of Transport, Construction and Regional Development of the Slovak Republic	Železničná spoločnosť Slovensko,	Contract for public transport services
Prešov Self-Governing Region	Slovenská autobusová doprava Poprad, akciová spoločnosť	Contract for public services for the years 2019-2023
Prešov Self-Governing Region	SAD Prešov, a.s.	Contract for public services for the years 2019-2023
Prešov Self-Governing Region	SAD Humenné, a.s.	Contract for public services for the years 2019-2023
Prešov Self-Governing Region	BUS KARPATY, spol. s r.o.	Contract for public services for the years 2019-2023

From 1.1.2024 new carriers, which will emerge from a public tender, will operate suburban bus transport on the territory of the PSK.

Within its authority, PSK issues transport licences to carriers interested in national regular transport, i.e. a suburban or long-distance bus line on the territory of the Prešov Region or a suburban or long-distance bus line that starts on the territory of the Prešov Region.

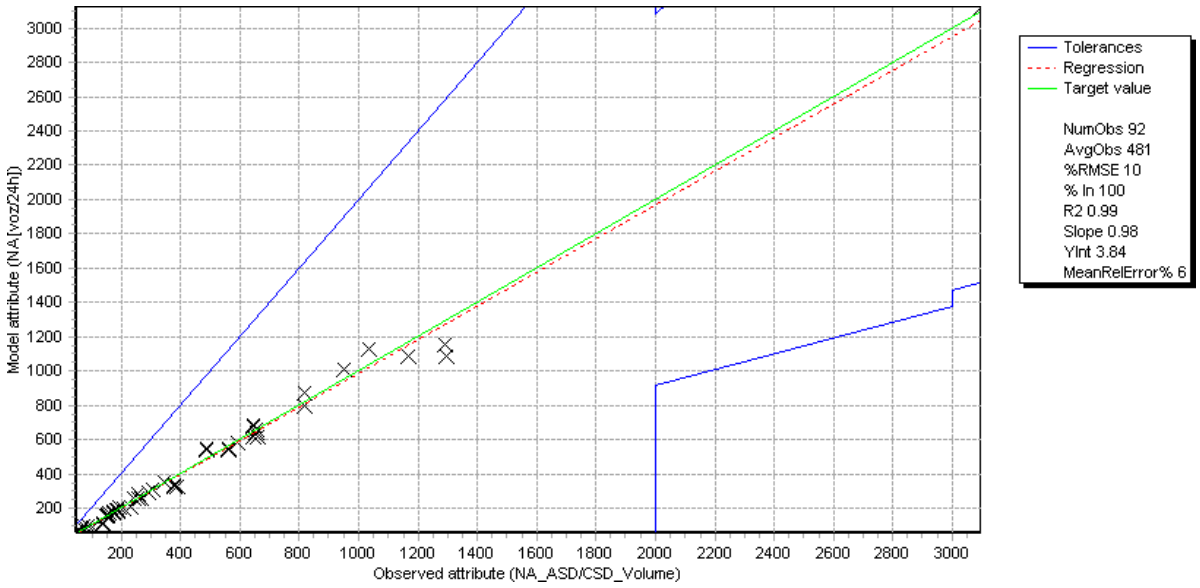
This authority in provided for in Section 10 of Act No. 56/2012 Coll. on road transport as amended.

Source: PUM PSK

3.3. Freight transport

Freight transport is modelled together with passenger transport from the beginning. There is much less information on the sources and destinations of freight transport compared to passenger transport, as it is mostly non-public data from private companies. For the generation and distribution of journeys, the basic premise is that freight transport is generated depending on human work, and thus that the amount of freight transport is directly dependent on the number of jobs in a given zone. In this way, a freight transport matrix was created, which was then calibrated according to the results of transport surveys.

Allocation to the network was performed similarly to that for cars using the Equilibrium iterative algorithm.



Quality of network lorry load calibration

Source: PUM KSK

3.4. Railway connection

Lines in the Košice region:

Line No. 190 Košice - Čierna nad Tisou

Trains serve practically the entire line with one major source/destination - the major regional city - Košice. Around 2,300 passengers in each direction per day (on a weekday) will use a train on this line.

Stops on the line:

Košice, Košice predmestie, Krásna nad Hornádom, Nižná Myšľa, Vyšná Myšľa, Bohdanovce, Ruskov, Slanec, Kalša, Kuzmice, Michaľany, Čerhov, Slovenské Nové Mesto, Borša, Streda nad Bodrogom, Somotor, Veľký Horeš, Pribeník, Dobrá, Biel, Čierna nad Tisou zastávka, Čierna nad Tisou

Line No. 169 Košice - Hidasnémeti

Only two pairs of EC trains Košice - Budapest run on this line. On Slovak territory, trains stop only in Košice. In the reported week, an average of 43.3 passengers per train departed from Košice on weekdays. In the opposite direction, an average of 34.6 passengers per train arrived in Košice.

Line No. 180 Košice - Žilina

This line - part of the former Košice-Bohumín railway - is the most important railway link in eastern Slovakia. On the line there is the section Košice - Poprad, while the Košice - Letanovce section lies in the Košice Self-Governing Region, stops and stations from Vydrník to Poprad are located in the territory of the Prešov Self-Governing Region.

Line No. 188 (Košice) - Kysak - Muszyna

This line is the oldest railway line in the region. The section from Košice to Obišovce lies in the Košice Region, from the Ličartovce stop the line is located in the territory of the Prešov Region.

Stops between Košice, Prešov and Lipany:

Košice, Ťahanovce, Kostoľany nad Hornádom, Trebejov, Kysak, Obišovce, Ličartovce, Drienovská Nová Ves obec, Drienovská Nová Ves, Kendice, Haniska pri Prešove, Prešov, Prešov mesto, Veľký Šariš, Šarišské Michaľany, Orkucany, Sabinov, Pečovská Nová Ves, Červenica Rožkovany, Lipany

Line No. 173 Margecany - Červená Skala

This line with an interesting history of its creation is located in the Košice Self-Governing Region up to the Dobšinská Ľadová Jaskyňa stop. From the Vernár stop in the Banská Bystrica Region (although the village of Vernár is located in the Prešov Self-Governing Region).

Passenger trains run on the line from Margecany mainly to Nálepkovo, some trains continue to Mlynkov or to Dobšinská ľadová jaskyňa . Moreover, two pairs of REx category trains run between Margecany and Banská Bystrica. Margecany and Gelnica are an important source and destination of rail passenger transport.

Line No. 191 Michaľany - Medzilaborce - Lupków

This line is one of the oldest railways in eastern Slovakia, the section to Humenné was put into operation on 25 December 1871. Up to the Strážske station the line lies in the Košice Self-Governing Region, the remaining part of the line from the Brekov stop belongs to the Prešov Region.

Although this line is listed in the passenger timetable under a single number, no passenger trains run over the entire line. In the Košice Region, passenger trains run between Michaľany and Humenné (some trains only to Trebišov) and partially passenger trains from Prešov to Humenné (via the Strážske junction station). Another group of trains is represented by REx category trains and fast trains of the national carrier ZSSK, as well as fast trains of the private carrier RegioJet, which operate on this line between Trebišov and Humenné.

Stops between Michaľany and Humenné:

Michaľany, Lastovce, Veľaty, Stanča, Úpor, Trebišov, Bánovce nad Ondavou, Laškovce, Michalovce zastávka, Michalovce, Petrovce nad Laborcom, Nacina Ves, Pusté Čemerné, Strážske, Brekov, Humenné

Stops for fast trains between Michaľany and Humenné:

Trebišov, Bánovce nad Ondavou, Michalovce, Strážske, Humenné

Stops for REX trains between Košice and Humenné:

Košice, Košice predmestie, Čeľovce, Trebišov, Bánovce nad Ondavou, Michalovce, Strážske, Brekov, Humenné

Line No. 160 Zvolen - Košice

The entire length of the line, known as the “southern main line”, was completed on 23 January 1955 with the opening of the section Turňa nad Bodvou - Rožňava. In the Košice Region lies the section of the line between Košice and Gemerská Panica, the section from Gemer to Zvolen lies in the Banská Bystrica Region. In the Košice Region, passenger trains run only in the section Košice - Moldava nad Bodvou mesto (on the secondary line No. 168 to Medzev, where passenger traffic is cancelled) and only fast trains run over the whole section of the line (5 pairs). All trains are operated by the national carrier ZSSK.

Stops between Košice and Plešivec:

Košice, Košice predmestie, Barca, Haniska pri Košiciach, Hutníky, Veľká Ida, Cestice, Čečejovce, Mokrance, Moldava nad Bodvou, Moldava nad Bodvou mesto, Rožňava, Plešivec

Stops between Košice and Moldova nad Bodvou:

Košice, Košice predmestie, Barca, Haniska pri Košiciach, Hutníky, Veľká Ida, Cestice, Čečejovce, Mokrance, Moldava nad Bodvou, Moldava nad Bodvou mesto

Stops for fast trains between Košice and Plešivec:

Košice, Haniska pri Košiciach, Moldava nad Bodvou, Rožňava, Plešivec

Source: PUM KSK

Lines in the Prešov region:

Line No. 194 Prešov - Bardejov

It should be noted that not all trains run over the entire route, for some services it is necessary to change trains in Kapušany fortrains from/to Vranov nad Topľou (Humenné), because Kapušany itself is not such a source or destination (for example, due to the relatively eccentric location of the railway station). Railway transport serves not only the end points but also the villages between Bardejov and Kapušany, especially Raslavice.

Stops on the line:

Bardejov, Kľušov, Šiba, Hertník, Bartošovce, Vaniškovce, Raslavice, Demjata obec, Tulčík, Fulianka, Kapušany pri Prešove, Šarišské Lúky, Prešov

Line No. 193 from Humenné (Strážske, Vranov nad Topľou).

Trains on this line provide connections to some services from Bardejov.

Stops on the line Humenné - Prešov:

Humenné, Brekov, Strážske, Nižný Hrabovec, Henclovce, Vranovské dlhé, Vranov nad Topľou, Komárany, Soľ, Hlinné, Čierne nad Topľou, Bystré, Hanušovce nad Topľou, Hanušovce nad Topľou mesto, Pavlovce, Lipníky, Lada, Kapušany pri Prešove, Šarišské Lúky, Prešov

Line No. 196 Humenné - Stakčín

Stops on the line Stakčín - Humenné:

Stakčín, Snina, Snina mesto, Snina predmestie, Belá nad Cirochou, Dlhé nad Cirochou obec, Dlhé nad Cirochou, Modrá nad Cirochou, Kamenica nad Cirochou dvor, Kamenica nad Cirochou, Hažín nad Cirochou, Humenné mesto, Humenné

Line No. 185 - Plaveč (Stará Ľubovňa and Kežmarok).

The branch of this line serves the route Studený Potok - Tatranská Lomnica. Regular passenger trains run between Poprad and Stará Ľubovňa. Only one pair of trains runs between Stara Ľubovňa and Plaveč on Friday afternoon and one pair of trains on Sunday afternoon.

Stops on the line Stará Ľubovňa - Poprad:

Stará Ľubovňa, Forbasy, Nižné Ružbachy, Podolínec, Toporec, Podhorany pri Kežmarku, Bušovce, Spišská Belá zastávka, Strážky zastávka, Kežmarok – Pradiareň, Kežmarok zastávka, Kežmarok, Huncovce, Studený potok, Matejovce pri Poprade, Poprad – Spišská Sobota, Poprad - Tatry

Tatra Electric Railways (TEŽ) core line No. 183 Poprad - Štrbské Pleso

TEŽ system practically fulfils the function of urban public transport in the territory of the High Tatras. Interestingly, the line between the town areas mostly runs through landscapes with high levels of nature conservation.

Stops on the line Poprad - Štrbské Pleso:

Poprad - Tatry, Veľký Slavkov, Nová Lesná, Pod Lesom, Dolný Smokovec, Starý Smokovec, Nový Smokovec, Sibír, Tatranské Zruby, Tatranská Polianka, Danielov Dom, Nová Polianka, Vyšné Hágy, Popradské Pleso, Štrbské Pleso

The second branch of TEŽ railway line No. 184 Tatranská Lomnica - Starý Smokovec.

Some trains on this line run to/from Štrbské Pleso or to/from Poprad.

Stops on the line Starý Smokovec - Tatranská Lomnica:

Starý Smokovec, Pekná Vyhliadka, Horný Smokovec, Tatranská Lesná, Stará Lesná, Tatranská Lomnice

Source: PUM PSK

3.5. Flights

Košice Airport

Letisko Košice - Airport Košice, a.s. was established on the basis of the Airport Companies Act No. 136/2004 Coll. After the privatisation process was completed in 2006, Vienna International Airport took over 66% of the company's shares. The remaining 34% of shares are still owned by the Slovak Republic represented by the Ministry of Transport and Construction.

The company is managed by a board of directors, of which Thomas Dworschak is the chairman and CEO.

The activities of the board of directors are regularly reviewed by the company's supervisory board.

Airlines operating within the airport: Ryanair, Eurowings, Austrian, Smart Wings, Wizz Air, LOT Polish airlines

Map of destinations

Source: https://www.airportkosice.sk

In relation to the Spatial Plan of the Large Territorial Unit (UPN VÚC) of the Košice Region, the following is stated in the context of air transport:

The following binding regulations apply to the management of the functional use, arrangement of the territory and the development of the settlement of the region, which are related to the approved principles and regulations of KURS 2001, approved by Government Resolution No. 1033 of 31 October 2001 and promulgated by Government Regulation No. 528/2002 Coll.

6.19. in the field of air transport development, to protect areas for

6.19.1. completion, modernization, lengthening and widening of the existing runway of the Košice International Airport,

6.19.2. construction of a freight transport centre with CARGO operation at the airport in Košice with special road and siding connections,

6.19.3. completion and equipment of the airport in Spišská Nová Ves as an airport of local importance,

Relevant nearby airports: Uzhhorod International Airport

Source: PUM KSK

The international airport Poprad - Tatry, the highest airport in Central Europe (718 m above sea level), provides air connections to the Prešov region. After a complete reconstruction carried out in 1992, regular and irregular passenger and cargo transport, as well as sightseeing flights are carried out from it.

Clients from the Prešov region make extensive use of the international airport in Košice, which is only 47 km away from the regional centre, the town of Prešov. The airport in Krakow, Poland, is also attractive.

In Prešov there is also a military airport in Nižná Šebastová.

There are several airports of regional importance in the Prešov Region, which are mainly used for sport purposes. These are the airports in Svidník, Mlynica, Kamenica nad Cirochou and Ražňany.

Source: PUM PSK

Together with Košice Airport, Poprad-Tatry Airport belongs to the aggregate network of airports of the Trans-European Transport Network TEN-T.

Thanks to its location, Poprad - Tatry International Airport is a gateway to the High and Low Tatras, which provide visitors a wide range of services and experiences for visitors, whether in winter sports or summer tourism resorts.

Source: http://www.airport-poprad.sk/sk/podstranky/letisko/oletisku.php

3.6. Perspectives of waterways connections

Watercourses in the Košice Region belong to the type of lowland, upland and mid-mountain rivers. The largest river is the Bodrog, which drains the easternmost part of the region. The Hornád drains the Hornád and Košice basins, the western part the Slaná River and at the south-eastern end the Tisa River. Ponds are represented by Zemplínska Šírava, Bukovec, Ružín, Dobšiná and Palcmanská Maša. The rivers are monitored in terms of flows primarily for recreational (tourist) transport.

There is no water transport in the territory of the Prešov Region. In PSK there is only regional recreational water transport on the Dunajec river with two ports (Červený Kláštor, Lesnica) in the border zone with Poland. The monitored sections include the middle stretches of the Poprad, Ondava, Topľa and Laborec rivers. Other rivers are not monitored for flows for recreational navigation.

Source: PUM PSK

3.7. Alternative means of mobility

Cycle paths

The managers of cycling paths are mainly civil associations. This model of non-state managers of cycle paths is characteristic of the Slovak Republic. This is also related to the funding for the implementation of new cycle paths, when most of the cycle paths were funded from grants. Most of the cycle paths in KSK are managed by SCK Gemerská Hôrka, which covers the whole of Gemer, and the civil association Rozvoj Spiš, which operates exclusively in the Spiš region.

	Organizácie	dĺžka cyklotrás	počet cyklotrás
ZEMPLÍN	ZOTR	64,5	3
	PBSK	32	1
	RRA Šírava	51	2
	KST Michalovce	47,1	4
	KTMK Košice	55	1
	spolu	249,6	11
SPIŠ	Organizácie	dĺžka cyklotrás	počet cyklotrás
	Rozvoj Spiš, SCK	308,3	17
	PBS Kostitras	45	1
	KST Levoča	2	1
	ZOM Sľubica	24	3
	OL Smolník	18	1
	SCK	2	1
	spolu	399,3	24
GEMER	Organizácie	dĺžka cyklotrás	počet cyklotrás
	SCK SK Gemerská Hôrka	380,5	15
	PBS Kostitras	53	1
	spolu	433,5	16
ABOV	Organizácie	dĺžka cyklotrás	počet cyklotrás
	ML Košice	68,5	4
	OZ Sosna	37	2
	Mikroregión Hornád	32,5	2
	PBSK Kostitras	53	1
	KTMK Košice	32,5	1
	spolu	223,5	10

More detailed structure of managers by region

In the current situation, the cycle paths in the territory of KSK are divided into four areas, which are not interconnected. This includes areas from the east around Sobrance, followed by north-south cycle paths from Slovenské Nové Mesto through Košice to PSK. These cycle paths are adjacent to the paths in the vicinity of Kavečany and Nižný Klátov, which, however, do not have a connection to Košice. More westerly paths are built in the area of the Slovenská raj and southern Spiš.

Cycle paths are divided into paths for road bikes and mountain bikes. They are marked with 5 colours - red, blue, green, yellow and black.

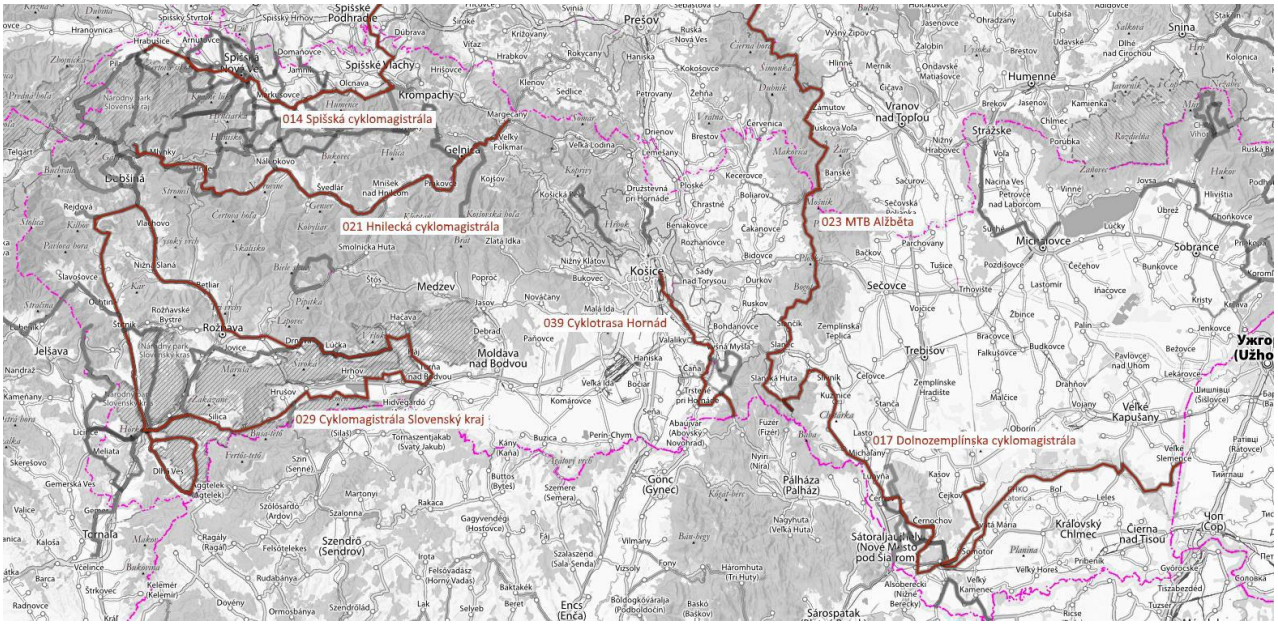
- Only EuroVelo paths, major cycle paths and long-distance paths are marked in red
- Blue parallel paths to EuroVelo and long-distance paths, these are longer

and more challenging paths off the major path

- Green - medium and easy paths, touristic in nature
- Yellow - links between cycle paths, short branches
- Black - easy educational paths

There are a total of eight main major cycle paths in the region, marked in red:

- CM 029 - Slovenský kraj major cycle path
- CM 014 - Spiš major cycle path
- CM021 - Hnilec major cycle path
- CM034 - Hornád major cycle path
- CM023 - MTB Alžbeta
- CM039 - Hornád cycle path
- CM017 - Lower Zemplín major cycle path



Eight existing main major cycle paths in KSK marked in red

As for supplementary facilities, shelters, benches and bicycle racks are more likely to be built on tourist paths than on paths more heavily used by transport cyclists. As it stands, the number of suitable bicycle racks located at the destinations of transport cyclist trips is insufficient. Bicycle rental is also a problem in KSK due to the low number of rental shops located only in tourist locations at best. However, the city of Košice is gradually starting to develop urban bicycle sharing, which is provided by the private sector (Antik).

The Košice Self-Governing Region is located in the south-east of Slovakia. The terrain in the territory of the Košice Region is not homogeneous. The south-east and south of the territory are lowlands and the area of Slovenské rudohorie mountains extends to the west, which is not attractive for daily transport by bicycle due to its predominantly mountainous character.

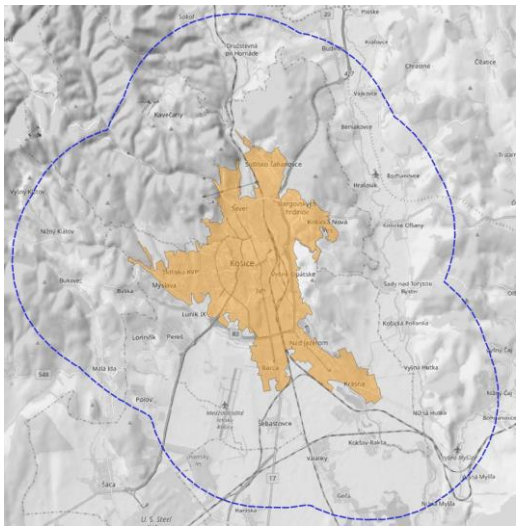
For regional transport cycling, as noted above, the most important links are within settlements and their immediate surroundings. In the Košice Region these are the following towns:

- Košice (240,688 inhabitants)
- Gelnica (6,076 inhabitants)
- Michalovce (37,575 inhabitants)
- Rožňava (19,450 inhabitants)
- Sobrance (6,289 inhabitants)
- Spišská Nová Ves (37,236 inhabitants)
- Trebišov (16,346 inhabitants)
- Moldava nad Bodvou (9,899 inhabitants)
- Veľké Kapušany (9,235 inhabitants)
- Kraľovský Chlmec (7,587 inhabitants)
- Strážske (4,398 inhabitants)
- Slovenské Nové Mesto / Sátoraljaújhely (1,088 / 16,299 inhabitants)

Selection of the above towns in the context of cross-border cooperation:

Košice

There are several cycle paths running through the city - the most important in terms of regional transport is the major cycle path No. 021 (Eurovelo 11), which runs from north to south. In the north, the cycle path continues to Družstevná pri Hornáde. Both paths are part of Eurovelo 11, which runs along the Hornád River. Connections from the city to cycle paths of regional importance are sufficient.

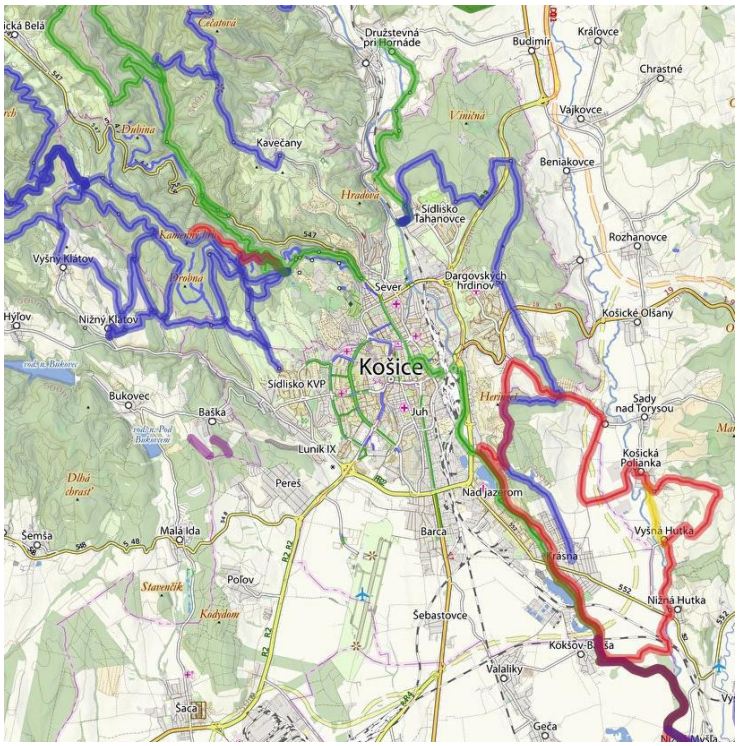


5-km isoline showing potential cycling opportunities for transport cyclists to the city of Košice

From the above 5-km isoline showing potential cycling opportunities for transport cyclists based on data from the mobility survey (Chart 62), it is clear that the following villages are located in the 5-km

zone - Družstevná pri Hornáde, Kostoľany nad Hornádom, Budimír, Vajkovce, Beniakovce, Rozhanovce, Hrašovík, Košické Oľšany, Sady n. T., Košická Polianka, Vyšná Hutka, Nižná Hutka, Kokšov-Bakša, Valaliky, Geča, Malá Ida, Bukovec, Nižný Klátov; and the following extra-urban areas of Košice - Šebastovce, Poľov, Pereš, Lorinčík and Kavečany.

In the above municipalities, new users of the cycle network can be expected if cycling transport is made more attractive.



Cycle paths in the territory of the city of Košice (www.kosicky-kraj.oma.sk)

Problems:

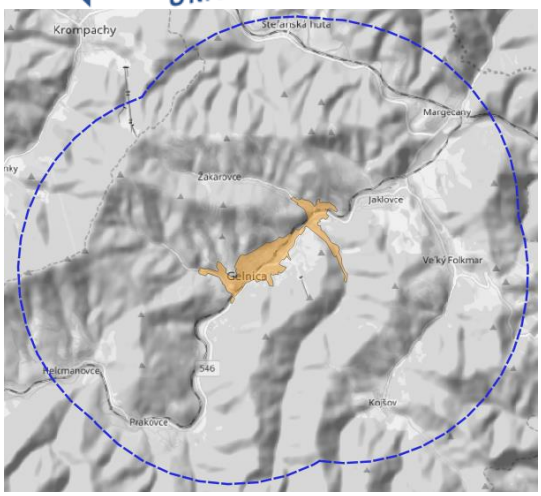
- Ununified or missing cycle path signage
- Connection of villages in the south and north-east of the territory
- Limited number of Hornád bridges

Potential:

- Completion of Eurovelo 11, cycling infrastructure in Košice

Gelnica

Several cycle routes pass through the town - the most important from the point of view of regional transport is the cycle route No. 021 (Hnilecká cyklomagistrála, Carpathian cycle route), which passes through almost the whole of Gelnica along the Hnilec river. The connection from the town to the cycling routes of regional importance is sufficient.



5 km isoline showing potential cycling opportunities for transport cyclists to the town of Gelnica

From the above 5 km isoline showing potential cycling opportunities for transport cyclists based on data from the mobility survey (Figure 62), it is clear that the following villages are located in the 5 km zone - Žakarovce, Jaklovce, Margecany, Kojšov, Veľký Folkmar, Prakovce, Helcmanovce.

In the case of the above mentioned villages, new users of the cycling network can be expected in case of making cycling more attractive.

Cycle routes on the territory of the town of Gelnica (www.kosicky-kraj.oma.sk)

Problems:

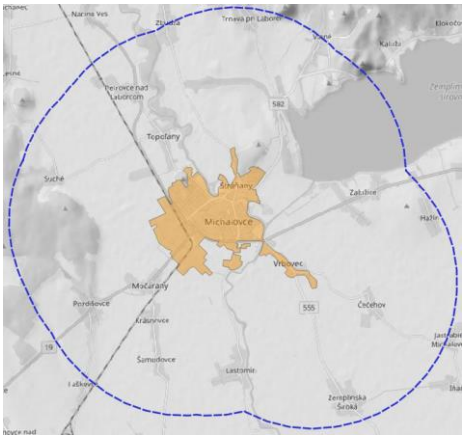
- Disconnected or missing cycle route markings
- Cycling measures in Gelnica
- Limited number of bridges over the Hnilec river

Potential:

- Cycle route 021

Michalovce

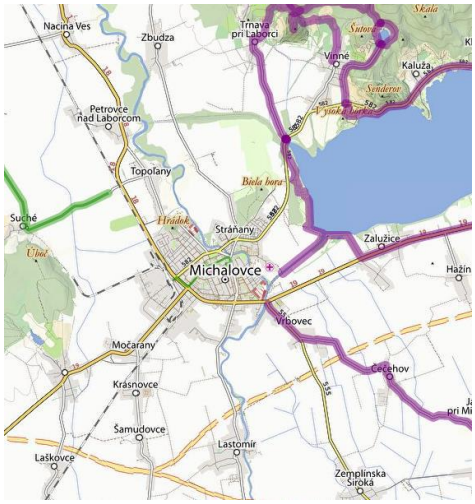
None of the significant cycle paths in terms of regional transport pass through the town. Cycle paths provide connections from the town of Strážske and the villages of Trnava pri Laborci, Zalužice and Jastrabie pri Michalovciach. Other cycle paths are located in the east around Zemplínska Šírava.



5-km isoline showing potential cycling opportunities for transport cyclists to the city of Michalovce

From the above 5-km isoline showing potential cycling opportunities for transport cyclists based on data from the mobility survey (Chart 62), it is clear that the following villages are located in the 5-km zone - Trnava pri Laborci, Vrané, Zalužice, Hažín, Čečehov, Zemplínska Široká, Lastomír, Šamudovce, Krásnovce, Močarany, Pozdišovce, Suché, Petrovce nad Laborcom, Topoľany.

In the above municipalities, new users of the cycle network can be expected if cycling transport is made more attractive.



Cycle paths in the territory of the town of Michalovce (www.kosicky-kraj.oma.sk)

Problems:

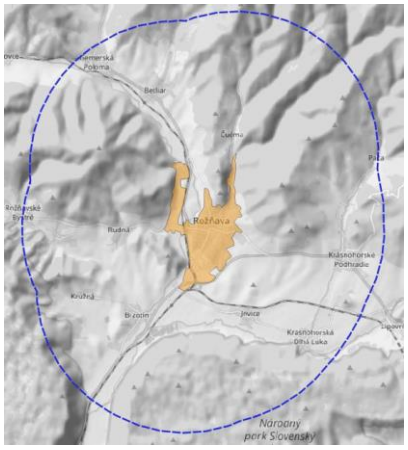
- Ununified or missing cycle path signage
- Cycling measures in the town of Michalovce

Potential:

- Connection of surrounding villages

Rožňava

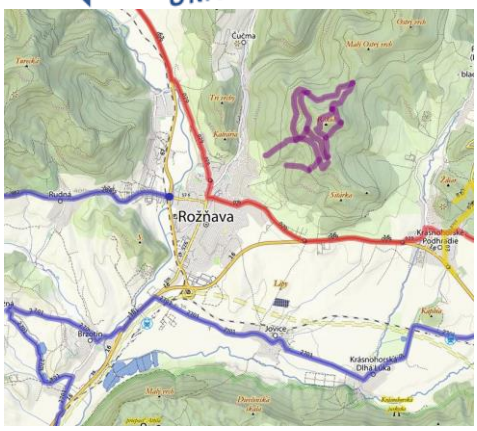
There are several cycling routes through the town - the most important from the point of view of regional transport is cycling route No. 029 (Cycling route Slovak Region), which passes through Rožňava. The surrounding villages are connected by cycle routes from all directions in the existing situation. The connection from the town to the cycle routes of regional importance is sufficient.



Isolinia 5 km showing potential cycling opportunities for transport cyclists to the city of Rožňava

From the above 5 km isoline showing potential cycling opportunities for transport cyclists based on data from the mobility survey (Figure 62), it is clear that the following villages are located in the 5 km zone - Gemerská Poloma, Betliar, Čučma, Pača, Krásnohorské Podhradie, Jovice, Brzotín, Kružná, Rudná Rožňavské Bystré.

New users of the cycle network can be expected in the case of making cycling more attractive in the above mentioned municipalities.



Cycle routes on the territory of the town of Rožňava (www.kosicky-kraj.oma.sk)

Problems:

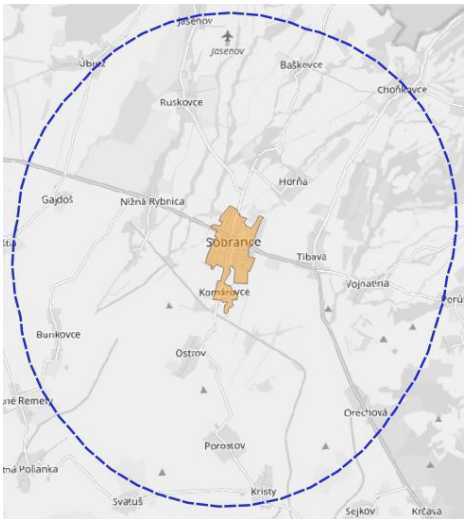
- Disconnected or missing cycle route markings
- Cycling measures in Rožňava

Potential:

- Improvement of cycling measures at the connection of surrounding villages

Sobrance

None of the significant cycle paths in terms of regional transport pass through the town. Cycle paths connect the direction from the north from Zemplínska Šírava and Baškovce and from the south from Kristy.

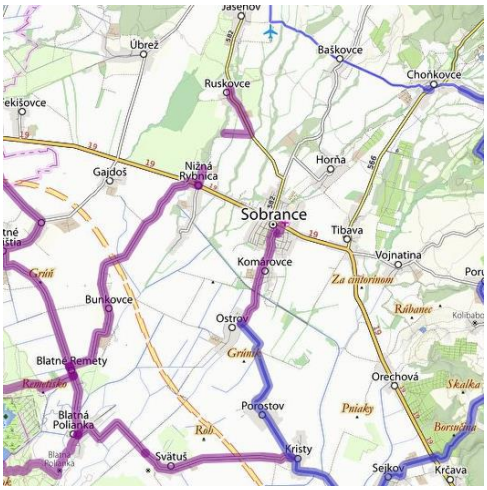


5-km isoline showing potential cycling opportunities for transport cyclists to the town of Sobrance

From the above 5-km isoline showing potential cycling opportunities for transport cyclists based on data from the mobility survey (Chart 62), it is clear that the following villages are located in the 5-km

zone - Jasenov, Ruskovce, Baškovce, Choňkovce, Horňa, Tibava, Vojnatina, Orechová, Kristy, Porostov, Ostrov, Bunkovce, Gajdoš, Nižná Rybnica.

In the above municipalities, new users of the cycle network can be expected if cycling transport is made more attractive.



Problems:

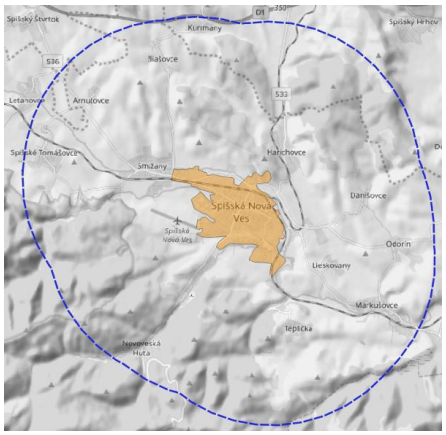
- Ununified or missing cycle path signage
- Cycling measures to connect the surrounding villages, especially from the north

Potential:

- Improvement of cycling measures to connect surrounding villages

Spišská Nová Ves

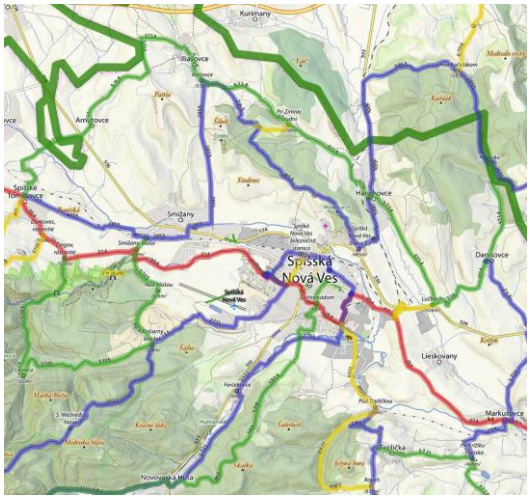
There are several cycling routes through the town - the most important from the point of view of regional transport is cycling route No. 014 (Hnilecká cyklomagistrála), which runs through the whole Spišská Nová Ves. The surrounding villages are connected to the existing cycling routes from all directions except from the north. The connection from the town to the cycle routes of regional importance is sufficient.



Isoline 5 km showing the potential possibilities of cycling for transport cyclists to the town of Spišská Nová Ves

From the above 5 km isoline showing potential cycling opportunities for traffic cyclists based on data from the mobility survey (Figure 62) it is clear that the following villages are located within the 5 km zone - Kurimany, Harichovce, Danišovce, Markušovce, Lieskovany, Novoveská Huta, Spišské Tomášovce, Arnutovce, Smižany, Iliašovce, Teplička.

In the case of the above-mentioned villages, new users of the cycle network can be expected in case of making cycling more attractive.



Cycle routes on the territory of the town of Spišská Nová Ves (www.kosicky-kraj.oma.sk)

Problems:

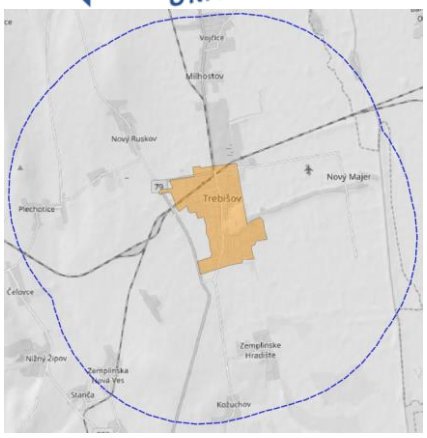
- Unconnected or missing markings of cycle routes from neighbouring villages, especially from the north
- Bridging the Hornád river

Potential:

- Paths along the Hornád and its tributaries

Trebišov

There are no cycle paths in the territory of Trebišov, Moldava nad Bodvou, Veľké Kapušany, Kráľovský Chlmec. The options for transport cyclists are very limited.



From the above 5-km isoline showing potential cycling opportunities for transport cyclists based on data from the mobility survey (Chart 62), it is clear that the following villages are located in the 5-km zone - Milhostov, Vojčice, Nový Majer, Zemplínske Hradište, Kožuchov, Zemplínska Nová Ves, Plechotice, Nový Ruskov.

In the above municipalities, new users of the cycle network can be expected if cycling transport is made more attractive.

Problems:

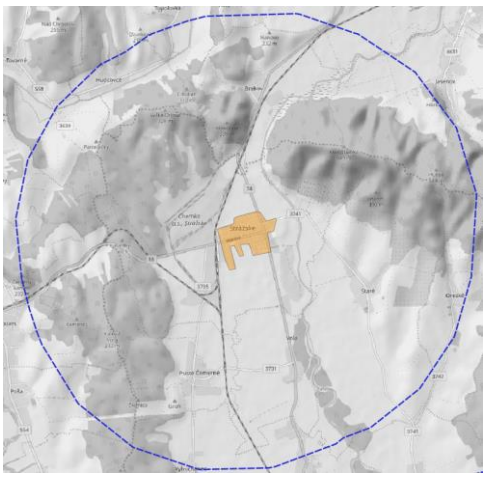
- Absence of cycling measures

Potential:

- Connection of surrounding villages

Strážske

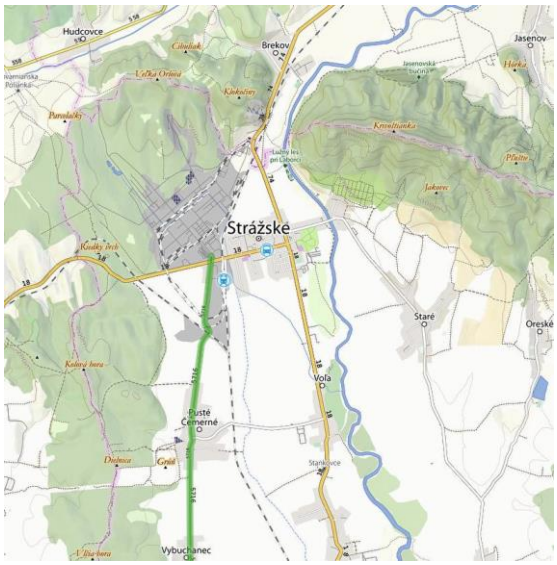
To the western edge of the town there is a cycle route No. 5716 leading from the south to connect the settlements from the south (Pusté Čemerné, Vybúchanec and Lesné).



5 km isoline showing potential cycling opportunities for transport cyclists to the town of Strážske

From the above 5 km isoline showing potential cycling opportunities for transport cyclists based on data from the mobility survey (Figure 62), it is clear that the following villages are located within the 5 km zone - Nacina Ves, Pusté Čemerné, Hudcovce, Brekov, Staré and Oreské.

In the case of the above mentioned villages, new users of the cycle network can be expected if cycling is made more attractive.



Cycle routes in the territory of the town of Strážske (www.kosicky-kraj.oma.sk)

Problems:

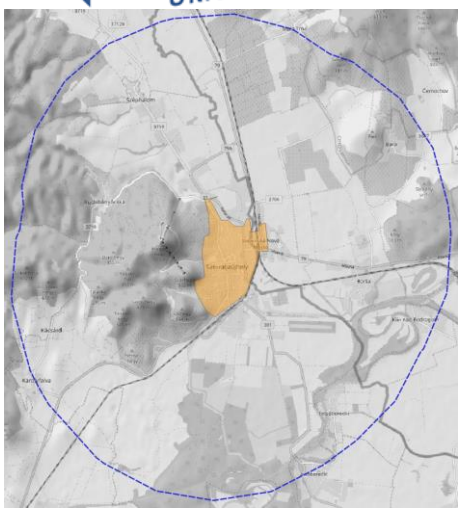
- Absence of cycling measures
- Cycle route ends at the edge of the town

Potential:

- Connection to surrounding villages
- Connecting the industrial area to the west of the city

Slovenské Nové Mesto / Sátoraljaújhely

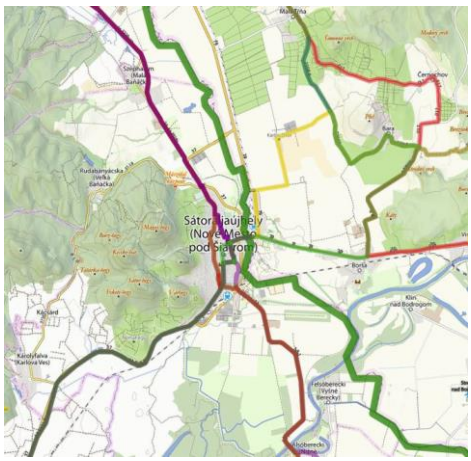
Several cycling paths from the Slovak side pass through the town - the cycle path “In Rákoczi’s footsteps” and the cycle route “Tokaj cycle paths”. On the Hungarian side, there are also several cycle paths leading to the city centre. In the current situation, the surrounding villages are connected by cycle paths from all directions. Connections from the city to cycle paths of regional importance are sufficient.



A 5-km isoline showing potential cycling routes for transport cyclists to the town of Slovenské Nové Mesto / Sátoraljaújhely

From the above 5-km isoline showing potential cycling opportunities for transport cyclists based on data from the mobility survey (Chart 62), it is clear that the following villages are located within the 5-km zone - Borša, Karlov Dvor, Bara, Malá Tŕňa, Klin nad Bodrogom.

In the above municipalities, new users of the cycle network can be expected if cycling transport is made more attractive.



Cycle routes in the territory of Slovenské Nové Mesto / Sátoraljaújhely (www.kosicky-kraj.oma.sk)

Problems:

- Cycle routing along the I/79 road
- Barrier in the form of a river and a railway line

Potential:

- Cross-border cooperation

Cross-border cooperation

Summary of problems and potentials in selected metropolises:

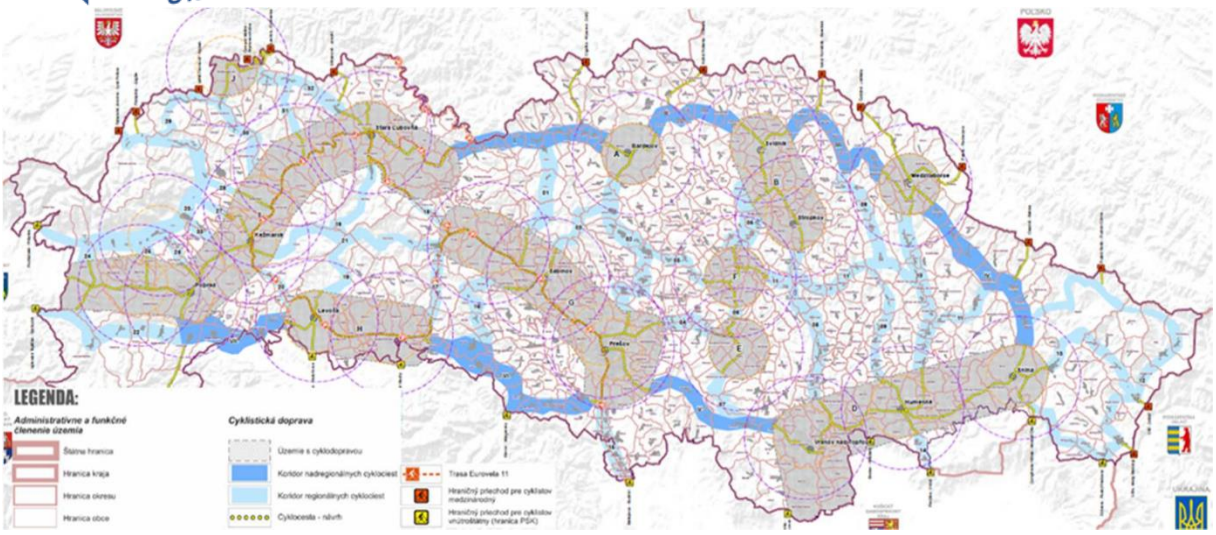
City	Problems	Potencial
Košice	Disjointed or missing cycle route markings Connection of villages in the south and north-east of the territory Limited number of Hornád bridges	Completion of Eurovelo 11, cycling infrastructure in Košice
Gelnica	Disjointed or missing cycle route markings Cycling measures in Gelnica Limited number of bridges over the Hnilec river	Cycling route 021
Michalovce	Disjointed or missing cycle route markings Cycling measures in Michalovce	Connection of neighbouring villages
Rožňava	Disjointed or missing cycle route markings Cycling measures Rožňava	Improvement of cycling measures at the connection of surrounding villages
Sobrance	Disjointed or missing cycle route markings Cycling measures to connect surrounding villages, especially from the north	Improvement of cycling measures at the connection of surrounding villages
Spišská Nová Ves	Unconnected or missing cycle route markings from neighbouring villages,	Paths along the Hornád and its tributaries

	especially from the north Bridging the Hornád river	
Trebišov	Lack of cycling measures	Connection of neighbouring villages
Moldava nad Bodvou	Lack of cycling measures	Connection of neighbouring villages
Veľké Kapušany	Lack of cycling measures	Connection of neighbouring villages
Kráľovský Chlmec	Absence of cycling measures Terrain obstacles in the west of the city - Big Hill and Small Hill	Connection of surrounding villages Railway connection in Pribenik
Strážske	Absence of cycling measures Cycle route ends at the edge of the city	Connection of surrounding villages Connection to the industrial area in the west of the city
Slovenské Nové Mesto / Sátoraljaújhely	Cycle route along the I/79 road Barrier in the form of a river and a railway line	Cross-border cooperation

The basic network in the **Prešov Region** consists of the basic network of cycle paths in the areas with cycle transport, which are connected to basic cycle paths in corridors of trans-regional level in areas with cycling corridors (trans-regional and regional).

In order to reduce the share of motor transport and increase the share of cycling in all centres of settlement of the Self-Governing Region and in areas showing agglomeration connections, the basic network of cycle paths and cycle routes of the Prešov Self-Governing Region is proposed within the scope of the draft spatial prognosis.

For the needs of the Self-Governing Region, the cycling corridors are hierarchically divided into two levels. Trans-regional cycling corridors together with border cycling transport areas follow the borders of the municipality. Regional cycling corridors are designed to serve closed rural regions, particularly in the north-south and east-west direction.



Cycling corridors in PSK

The priority international cycle path currently passing through the territory of PSK is the proposed EuroVelo 11 major cycle path. It runs from the Poland/Slovakia border crossing Mníšek nad Popradom through the territory of the project and through the territory of the Košice Self-Governing Region to the Slovakia/Hungary border crossing Skároš.

Source: PUM PSK

3.8. Traffic management

Integrated Transport System ITS East

The target state of the integrated transport system (ITS) in Eastern Slovakia is a modern public transport system attractive for customers, consisting of all modes of public transport (trains, buses, public transport), covering the entire territory of the Prešov and Košice Self-Governing Regions and enabling travel with one travel document (single or time pre-paid) regardless of transfers or modes of transport used, with uniform transport and fare conditions and mutually harmonised timetables. The name/brand of this system is ITS East.

In particular, as ITS is gradually built, the benefits for passengers will be as follows:

- Unified transport and fare conditions on trains, buses and MHD.
- New types of fares: transfer tickets, season tickets (monthly, quarterly, etc.), etc.
- Technological innovations: mobile app, NFC payments, etc.
- More regular, faster and more comfortable connections within the region and within cities.
- Harmonised public transport system (regular guaranteed connections/lines).
- Simple and clear transport system (route diagrams, timetables, etc.).

- Timely information about traffic incidents (delays, diversions, etc.).
- Generally higher quality of transport services.

The benefits for carriers and ordering parties of transport services will be in particular:

- Growing demand for transport (more passengers).
- Higher efficiency of vehicle circulations.
- Stabilisation of transport performance.

The integrated transport system represents the most efficient form of public transport coordination, where the authority necessary for the integration of public transport in a given region is transferred from the ordering parties of transport services (self-governing regions, cities or the state) to the so-called independent ITS organiser. Integration refers to transport, fare and information integration. For the needs of creation and organisation of the integrated transport system in the territory of Eastern Slovakia under the ITS East brand, the ITS organiser company IDS Východ, s.r.o. was established on 8.10.2019 - whose founders are the Košice Self-Governing Region and the Prešov Self-Governing Region (with equal shares).

The main tasks of the ITS organiser, the company ITS Východ, s.r.o., include, for example:

- Coordination of transport services, in particular timetables.
- Preparation of fare integration of suburban bus transport, rail transport and urban transport within the Eastern Slovakia region (creation of a common fare).
- Negotiations with towns operating MHD on the issue of ITS, transfer points or preference for public passenger transport.
- Negotiations with municipalities on comments on traffic solutions, ideas for changes to traffic solutions and changes to timetables.
- Preparing, issuing and continuous updating of the ITS transport rules.
- Improving transfer links within the public transport system.
- Information services for passengers and carriers.
- Information, marketing and promotional activities related to ITS.

ITS Central Dispatching

Central dispatching is one of the fundamental pillars of any functional integrated transport system. It is superior to the dispatching of individual carriers involved in ITS, ensuring real-time coordination of traffic operations. It is necessary, among other things, for the introduction of so-called guaranteed

transfer links between pairs of services, i.e. a system of mutual waiting of connecting services in case of delays.

Central dispatching is also a key tool for improving the quality of timetables based on real-time monitoring of the traffic operations of all carriers (all vehicles), or timely notification of drivers and passengers of transport incidents (closures, delays, diversion routes, replacement services, etc.).

In August 2022, an application for a non-repayable financial contribution for the creation of a central dispatching and information system ITS East was approved. A public procurement is currently being prepared to secure it. The expected date of completion of the tender is December 2022.

ITS Information System

The **ITS information system** is a technical condition for the information integration of public transport. It is closely linked to the central dispatching, with its main function being the continuous and reliable provision of static and dynamic real-time traffic data, which is essential for the proper functioning of devices and software applications such as information boards, announcements, service search, and mobile applications.

The aim is to provide information to the travelling public in a unified and transparent manner. This includes scheduled departures, current delays, locations of services on the map, important warnings or transport incidents at stations/stops, in public transport vehicles and in virtual space.

In August 2022, an application for a non-repayable financial contribution for the creation of a central dispatching and information system ITS East was approved. A public procurement is currently being prepared to secure it. The expected date of completion of the tender is December 2022.

ITS Clearing Centre

The **ITS Clearing Centre** is a system element of fare integration of different carriers falling under different public transport ordering parties - municipalities, cities or the state.

The Clearing Centre ensures fair distribution of revenues from the sale of common tickets among all carriers involved in ITS according to a contractually defined key, agreed between the ordering parties of public transport (self-governing regions as ordering parties of suburban bus transport, cities as ordering parties of public transport and the Ministry of Transport and Construction of the Slovak Republic as ordering party of railway passenger transport).

The introduction of the clearing centre will take place after the pilot operation of the dispatching centre.

ITS East Fare

In the suburban bus transport of the Košice and Prešov Self-Governing Region, the fares will change. The current mileage-based fare will be replaced by a zonal fare with a substantially extended range

of fare types. Single transfer tickets will be added, as well as daily, monthly, quarterly, half-yearly and annual pre-paid tickets. The longer the validity of the ticket, the better the price per journey.

Fares will no longer be determined by mileage zones, as is the case today, but by the number of zones on the route. Especially for regular daily passengers and longer distance passengers, the newly introduced advantageous pre-paid and transfer tickets will be a benefit. The structure of discounts will also be simplified and made more transparent.

Seniors aged 63 to 70 who currently pay the full fare will now also be entitled to a half fare discount. At the same time, the discount for all categories of passengers who are entitled to so-called discounted fares (50% discount) will be unified and increased from the current 40-45% to 50%.

The ITS East fare should be launched from the beginning of the validity of the new contracts with bus carriers of the Prešov Self-Governing Region, i.e. from 1 January 2022. In the Košice Self-Governing Region, new contracts with carriers started to be valid on 1 April 2022.

The basic division of fares in terms of the discount provided:

- **Basic fare** - full fare
- **Discounted fare** - 50% discount
- **Special fare** - 80% discount
- **Weekend fare** - 1 euro per person per service, under **specified** conditions

The ITS East fare should be launched from the beginning of the validity of the new contracts with bus carriers of the Prešov Self-Governing Region, i.e. from 1 January 2024. In the Košice Self-Governing Region, new contracts with carriers started to be valid on 1 April 2022.

New ticket types:

- **Single transfer ticket:**
  - A ticket valid for 2 services within a journey (including 1 transfer), where the price of a transfer ticket for 2 services will be better than the price the passenger would paid if he/she purchased a ticket for each service separately.
  - *The purchase of single transfer tickets will be conditional on payment by transport card (physical or virtual).*

- **Time pre-paid tickets:**
  - **One-day network-wide ticket** - unlimited travel within all ITS East fare zones until the end of the day.

- **Monthly zone ticket** - unlimited travel within the purchased fare zones for 30 days. **Monthly network-wide ticket** - unlimited travel within all fare zones of ITS East for 30 days.
- **Quarterly zone ticket** - unlimited travel within purchased fare zones for 90 days. **Quarterly network-wide ticket** - unlimited travel within all fare zones of ITS East for 90 days.
- **Half-yearly zone ticket** - unlimited travel within the purchased fare zones for 180 days.

  Half-yearly network-wide ticket - unlimited travel within all fare zones of ITS East for 180 days.
- **Annual zone ticket** - Unlimited travel within purchased fare zones for 365 days. **Annual network-wide ticket** - unlimited travel within all fare zones of ITS East for 365 days.
- *Time pre-paid tickets will not be available in paper form. The carrier of the pre-paid tickets will be exclusively a transport card (physical or virtual).*

In the first phase, the zonal fare will be applied only in suburban bus transport, but then it is planned to gradually extend it to rail transport and public transport in individual towns of the Košice and Prešov Self-Governing Regions. The ultimate goal is for one ticket to be valid without restrictions in bus, rail and public transport throughout the whole territory of eastern Slovakia.

ITS East Mobile App

The **ITS East mobile app** will offer practical functions and simplify travel for passengers. It will include a modern search engine for better orientation in transport services, the possibility of easy and advantageous purchase of tickets, or information about current delays to services.

The application will allow finding the nearest stop on the map according to the current location of the user, provide the passenger with information service concerning news or incidents in transport, and also include the possibility to participate in the rating of the quality of public transport services.

The launch date of the ITS East mobile application depends on the introduction of the dispatching and information system.

Source: https://idsvychod.sk

3.10. Participation process - Relevant actors

3.11. Financing of the transport sector

3.12. Data collection, transport network development, transport demand, data calibration and validation, forecasts and foreseeable evolution of mobility variables

NDCon s. r. o.

The company has developed the Sustainable Mobility Plan of the Prešov Self-Governing Region, from which information was used for the creation of this document. This Czech company has authorisation for transport construction, urban engineering and water and landscape engineering. It also holds certificates of professional competence to design, carry out and evaluate geological works in the field of hydrogeology and engineering geology and authorisation to prepare documentation and reports pursuant to Section 19 of Act No. 100/2001 SB (Czech Republic).

Transport Department of the Košice Self-Governing Region

Since 1 January 2004, KSK has been the owner of class II and class III roads in its territory, except for the passable sections through the city of Košice and through customs areas. In total, this amounts to 557.944 km of class II roads and 1,372.076 km of class III roads, as well as 660 bridge structures. KSK provides planning, preparation and modernisation of the road network. For the purpose of road management, routine and winter maintenance, the KSK Road Administration was established as a subsidised organisation

In the field of road transport, KSK is the transport administrative body for regular bus transport (it grants transport licences, approves timetables, and carries out professional supervision). It also orders and finances suburban regular bus services, i.e. provides a contribution to the carriers which is the difference between the carriers' costs and the revenue from passengers.

Authority in the field of railways and rail transport includes regional trains and urban railways. Regional trains are trains whose departure and terminal stations are in the same self-governing region. KSK expresses its opinion on the development of the timetable of national passenger transport in terms of ensuring transport serviceability of the region, municipalities, associations of municipalities and urban agglomerations. Currently, railway transport is operated on six railway lines in the Košice Region.

KSK as a delegated state administration body mainly exercises the authority of a special construction authority for the construction of urban railways, performs tasks resulting from the status of a safety authority and regulatory authority towards the operators of urban railways. It performs state professional supervision on urban railways, issues and revokes permits for operation of urban railways, issues and revokes licences for driving urban rail vehicles, decides on the cancellation of urban railways. It also performs the functions of a licensing authority and safety authority for urban transport and state professional supervision in urban transport.

ITS East staff assisted internal experts in providing information, especially about carriers in the territory of Eastern Slovakia and their fleet. The target state of the integrated transport system (ITS) in Eastern Slovakia is a modern public transport system attractive for customers, consisting of all modes of public transport (trains, buses, public transport), covering the entire territory of the Prešov and Košice Self-Governing Regions and enabling travel with one travel document (single or time pre-paid) regardless of transfers or modes of transport used, with uniform transport and fare conditions and mutually harmonised timetables.

3.11. Financing of the transport sector

For the new programming period, KSK and PSK will use funds (also) for mobility mainly from the **Slovakia Programme.**

The key areas for development are divided into five objectives in line with European legislation:

- A more competitive and smarter Slovakia
- A greener Slovakia
- A more connected Slovakia
- A more social and inclusive Slovakia
- Europe closer to citizens

The specific objective is the Fair Transformation Fund

The programme will be able to finance repairs of class I, II and III roads, local roads, as well as investments in sustainable urban mobility, green public transport and cycling.

As one of the three eligible regions under the specific objective of the Fair Transformation Fund, the Košice Self-Governing Region can finance measures related to the transition to carbon neutrality.

3.12. Data collection, transport network development, transport demand, data calibration and validation, forecasts and foreseeable evolution of mobility variables

The analysis of future transport demand was carried out on the basis of socio-economic, demographic, traffic and transport factors that significantly influence and shape the transport system and the transport behaviour of the population in the Košice Self-Governing Region. These factors were analysed in three possible scenarios - high, medium and low. The medium scenario, which is the most likely to occur, is based on the previous development of the analysed factors and a demographic forecast.

On the basis of the analysed data, the development trends and the prediction of the indicators in the individual scenarios, it is advisable to continue to follow the medium scenario. Based on current data, the medium scenario is the scenario with the highest probability of feasibility in the future period in terms of traffic demand. The medium scenario parameters analysed below were input into the traffic model to calculate the forecast traffic demand.

The future development of the following factors was analysed:

Demographic development of the population - number of inhabitants

It is based on a demographic forecast for the Košice Self-Governing Region using coefficients for the development trend derived from the mobility survey in 2015.

Population forecast of the Košice Self-Governing Region

year	low scenario	medium scenario	high scenario
2018	799,217	799,217	799,217
2025	807,221	810,709	810,823
2030	809,173	817,205	818,412
2035	807,826	821,175	826,283
2040	804,118	824,258	834,446
2045	800,650	827,556	842,909
2050	797,196	830,867	851,458

Gross Domestic Product (GDP)

The data on GDP and GDP per capita were obtained based on two sources. The first source was the Ministry of Finance of the Slovak Republic and a GDP forecast (published in September 2018) for 2016-2025. The OECD projection for 2026-2050 was then used. For the calculation of GDP in the different development scenarios, coefficients for the development trend derived from the 2015 mobility survey were used.

GDP forecast (mil. EUR) in the Košice Self-Governing Region

year	low scenario	medium scenario	high scenario
2018	10,088	10,088	10,088
2025	12,275	12,570	12,770
2030	14,122	14,708	15,112
2035	14,695	15,717	16,509

2040	15,291	16,796	18,034
2045	15,912	17,949	19,701
2050	16,557	19,182	21,522

Forecast of GDP per capita (EUR) in the Košice Self-Governing Region

year	low scenario	medium scenario	high scenario
2018	12,622	12,622	12,622
2025	15,207	15,505	15,749
2030	17,452	17,998	18,465
2035	18,191	19,140	19,980
2040	19,016	20,377	21,612
2045	19,874	21,689	23,373
2050	20,769	23,087	25,277

Number of motor vehicles and passenger cars

Data was obtained based on the current data of the Ministry of Interior of the Slovak Republic on previous development up to 2018, data on population development and GDP development in the Košice Self-Governing Region using coefficients for the development trend derived from the mobility survey in 2015.

Forecast of the development of the number of motor vehicles in the Košice Self-Governing Region

year	low scenario	medium scenario	high scenario
2018	347,955	347,955	347,955
2025	406,071	417,627	424,332
2030	417,878	439,538	452,278
2035	424,635	461,673	487,953
2040	429,193	483,244	525,275
2045	433,086	504,945	564,515
2050	436,227	526,734	605,636

Forecast of the development of the number of passenger cars in the Košice Self-Governing Region

year	low scenario	medium scenario	high scenario
2018	275,497	275,497	275,497
2025	307,102	314,482	319,486
2030	317,051	330,207	339,277
2035	316,809	338,842	355,917
2040	315,823	346,908	372,478
2045	314,255	354,485	389,086
2050	312,151	361,640	405,756

Degree of motorisation and car ownership

The calculation of the predicted values was carried out in the same way as for the calculation of the population and the number of motor vehicles or passenger cars in the individual scenarios.

Prediction of the development of the degree of motorization in the Košice Self-Governing Region

year	low scenario	medium scenario	high scenario
2018	2.30	2.30	2.30
2025	1.99	1.94	1.91
2030	1.94	1.86	1.81
2035	1.90	1.78	1.69
2040	1.87	1.71	1.59
2045	1.85	1.64	1.49
2050	1.83	1.58	1.41

Prediction of the development of the degree of motorisation in the Košice Self-Governing Region

year	low scenario	medium scenario	high scenario
2018	2.90	2.90	2.90
2025	2.63	2.58	2.54
2030	2.55	2.47	2.41
2035	2.55	2.42	2.32
2040	2.55	2.38	2.24

2045	2.55	2.33	2.17
2050	2.55	2.30	2.10

Identified Shortcomings in the Road Network of the Košice Region

In terms of the national road network and the investment plans of NDS and SSC, the following main shortcomings were identified:

- Congested road I/19 at the entrance to Košice, it regularly causes traffic jams
- High traffic volumes in the urban areas of Sečovce, Trebišov, Strážske, Michalovce and Sobrance
- High prospective traffic volumes in the villages on the I/67 road between Rožňava and Dobšiná
- High volumes on I/79 in Hriadky, Vojčice, Dvorianky and Parchovany
- high prospective traffic volumes in the villages on class I roads: Slovenské Nové Mesto, Čerhov, Svätuš
- The missing feeder road from D1 to Spišská Nová Ves even after the connection of the new road I/82 to the road II/533 (which is an arrangement that is not even allowed by law - a road of class I must be connected to another road of class I or a motorway),
- Lack of direct connection of the planned D1 to the II/555 road from Veľké Kapušany,
- Inappropriate layout of the planned intersection Moldava nad Bodvou on the R2 road to the east of the town, which will not allow the connection of the current location or the planned bypass of the II/550 road to the expressway in the direction of Košice.
- Shortcomings on the backbone network - class II roads:
- II/536: road II/536 is very congested in the section Spišský Štvrtok - Jamník, where the volume reaches 6 - 7 thousand vehicles per 24 hours with a forecast of increase to as many as 12 thousand by 2050. The traffic on the road II/536 already has a very negative impact on the villages of Smižany, Spišská Nová Ves (here also from the road III/3244), Odorín and Jamník, the impact on Spišský Hrušov and Spišské Vlachy will also have to be addressed in the future,
- II/547: the road II/547 has a negative impact on the town of Krompachy, through the centre of which the road passes, in the future it will be necessary to also address the passage through Veľký Folkmar, as the traffic volume in 2050 may reach as many as 8,300 vehicles/24 hours,

- II/552: the road II/552 already has capacity problems in Košice, it will be necessary to increase the capacity of Slanecká street and the Krásná bypass, on the continuation of II/552 towards the south-east the traffic volume reaches high values above 5 thousand vehicle a day in Bohdanovce and Rákoš. The passage through Slanec, Zemplínska Teplica, Egreš and Čeľovce is also set to reach high values
- The passage of the II/550 road through Moldava nad Bodvou is on along road with a bad subgrade and the traffic volume causes the noise limits to be exceeded
- There is no connection between the roads I/79 and II/552 across the Latorica in the direction Kráľovský Chlmec - Trebišov. Its construction would also increase the volumes in the villages of Zemplínsky Branč and Novosad and there would also be a need to build bypasses.
- On the road II/555 the traffic is projected reach volumes that will lead to the need to build a bypass of Veľké Kapušany and bypasses of the villages of Pavlovce nad Uhom, Stretava and Palín.
- Second connections of some end villages (e.g. Husák or Rešica) are missing.

The Košice Region has a significant share of inter-district traffic on Class II backbone roads. In the future, these roads will have to be gradually equipped with bypasses of settlements where the traffic volume grows significantly above 5 thousand vehicles per day. At least an additional €10 million is needed for such investments, if at least one construction is to be started each year. Only then will it also be possible to build new connections for better bus services and to build border crossings. The optimal amount should be €30 million to be able to launch about three projects a year. Without this "third" amount for road management, improving the standard of roads will not in principle be possible (with good road maintenance, it will be possible to save a part of the restoration funds after a 20-year cycle and allocate them for investments in, for example, bypasses, but these will be exceptional individual cases only).

Analysis of the Future Development of the Transport Network

The plans and projects for the development of the road network in the territory of KSK mentioned in this chapter come from several sources. Major projects of trans-regional character are included in the Government Policy Statement 2016-2020, others are in the investment plans of NDS and SSC. The following are constructions included in the Spatial Plan of the Košice Region, amendments and supplements from 2017. In this case, these are not plans, but rather reserved territories mainly for the relocation of class II roads adopted from ÚP VÚC. The constructions in this list will be assessed

and, using a traffic model, it will be proposed which to implement and within what period. Those projects will be proposed that are part of investment plans and, in addition, those that address the described road network issues and are feasible.

Plans for the development of the motorway and expressway network

journey	**construction**	**Source**
D1	Budimír - Bidovce	under construction
D1	Bidovce - Dargov	NDS
D1	Dargov - Pozdišovce	NDS
D1	Pozdišovce - Michalovce	NDS
D1	Michalovce - Sobrance	NDS
D1	Sobrance - border crossing SR/UA	NDS
I/82	Spišská Nová Ves feeder - connection of II/5333 in the territory of PSK	NDS
R2	Tornaľa - Gombasek (2 lanes)	NDS
R2	Gombasek - Rožňava (2 lanes)	NDS
R2	Rožňava - Jablonov nad Turňou (2 lanes)	PVV
R2	Jablonov nad Turňou - Včeláre (2 lanes)	NDS
R2	Včeláre - Moldava (2 lanes)	NDS
R2	Moldava - Košice, Šaca (2 lanes)	NDS
R2	Košice, Šaca - Košice Oľšany I. section (4 lanes)	PVV
R2	Košice, Šaca - Košice Oľšany II. section (4 lanes)	PVV

Development plans for class I roads

journey	**construction**	**resource**
I/18	Nižný Hrabovec - Petrovce	SSC

	nad Laborcom	
I/18 and I/74	Strážske intersection	SSC
I/18	Sečovce, SW bypass	ÚPN VÚC
I/18	Sečovce, SE bypass	ÚPN VÚC
I/18	Sobrance, bypass (reserve)	ÚPN VÚC
I/67	Betliar - Gemerská Poloma	ÚPN VÚC
I/67	Henckovce – Gočaltovo,	ÚPN VÚC
I/67	Vlachovo	ÚPN VÚC
I/79	Hriadky - Vojčice - Trebišov, relocation	SSC
I/79	Čierna - Solomonovo	SSC
I/79	Parchovany, bypass	ÚPN VÚC
I/79	Dvorianky, bypass	ÚPN VÚC
I/79	Veľaty, bypass	ÚPN VÚC
I/79	Čerhov, bypass	ÚPN VÚC
I/79	Slovenské Nové Mesto bypass	ÚPN VÚC
I/79	New connection to road 37 in Hungary	ÚPN VÚC
I/79	I/79 and II/555 Kraľovský Chlmec intersection	SSC
I/79	Svätuše, relocation	ÚPN VÚC

Upcoming projects for IROP

project
II/547 border of districts KE/KS - Spišské Vlachy Stage I
II/547 border of districts KE/KS - Spišské Vlachy Stage II
II/576 Bohdanovce - Herľany Stage I
II/576 Bohdanovce - Herľany Stage II
II/533 Gemerská Poloma - Spišská Nová Ves - Harichovce - D1 (Jánovce - Jablonov)
II/536 Spišské Vlachy - SNV - border of districts SNV/LE (I/18)
II/552 border of districts KE/KS - Veľké Kapušany - UA border

II/550 and II/548 Moldava nad Bodvou - Jasov - Košice
II/555 Michalovce - V. Kapušany - Kráľovský Chlmec
II/582 Michalovce - Sobrance

Significant development plans for class II roads according to the ÚP VUC

journey	**construction**	**resource**
II/536	Smižany, SW bypass	ÚPN VÚC
II/533 and II/536	Smižany and Spišská Nová Ves, northern bypass	ÚPN VÚC
II/533 and II/536	Smižany and Spišská Nová Ves, southern bypass	ÚPN VÚC
II/533	Gemerská Poloma	ÚPN VÚC
II/535	Mlynky - Hnilec, relocation	ÚPN VÚC
II/536	Spišská Nová Ves - Spišské Vlachy, relocation	ÚPN VÚC
II/546	Helcmanovce - Prakovce	ÚPN VÚC
II/547	Spišské Vlachy - Granč-Petrovce, relocation	ÚPN VÚC
II/547	Krompachy, bypass	ÚPN VÚC
II/547	Veľký Folkmar, bypass	ÚPN VÚC
II/548	Jasov, relocation	ÚPN VÚC
II/548	Šemša - Pereš, relocation	ÚPN VÚC
II/549	Smolnik	ÚPN VÚC
II/550	Moldava n. B. bypass - terminal connection	ÚPN VÚC
II/550	Medzev (reserve)	ÚPN VÚC
II/552	Košice, Slanecká Street	City/Zip code
II/552	Košice-Krásna, bypass	ÚPN VÚC
II/552	Bohdanovce, bypass	ÚPN VÚC
II/552	Rákoš, bypass	ÚPN VÚC
II/552	Slanec, bypass	ÚPN VÚC
II/552	Zemplínska Teplica, bypass	ÚPN VÚC

II/552	Čalovka - Nižný Žipov, relocation	ÚPN VÚC
II/552	Zemplínsky Branč - Novosad, relocation	ÚPN VÚC
II/536	Smižany, SW bypass	ÚPN VÚC

Existing roads to be examined for transfer to class III roads

communication	**length**
Perín-Chym - Kechnec	5.9km
Komárovce - Cestice	2.5km
Košice Polianka (III/3321) - Košice, Krásna	4.4km
Bukovec - Hýľov	1.5km
Slancik - Ruskov	5.1km
Ruskov - Vyšný Čaj	1.6km
Priekop - Porúbka	2.5km
Malá Trňa - Bara	5.2km
Malá Tŕňa - Černochov	4.9km
Choňkovce - Baškovce	2.6km
Iňačovce - Zemplínska Široká	3.9km
Vysoká nad Uhom - Bajany	2.8km
Čičarovce - Vojany	3.6km
Slivník - Kuzmice	2.8km
Sady nad Torysou - Košice Oľšany	3.1km
Košický Klečenov - Nižná Kamenica	3.6km
Nižná Kamenica - Vyšná Kamenica	1.6km
Rozhanovce - Hrašovík	1.8km
Hrašovík - Beniakovce	2.7km
Silica - Silická Jablonica	9km
Beniakovce - Vajkovce	1.7km
Čižatice - Chrastné	3.2km
Čakanovce - Nižná Kamenica	1.6km
Kráľovce - Budimír	2km

Malá Lodina - Košice Belá	5.2km
Odorín - Danišovce	1.9km
Veľké Trakany - state border	1.5km
Pribeník - state border	1km

Missing road links to examine

non-existent connection
Matejovce nad Hornádom – Chrasť nad Hornádom
Janík – Rešica
Trsťany - Čižatice
Zemplínske Hradište - Malčice
Oborín – Zatín
Zemplín – Svätá Mária
Pribeník - Dobrá
Boťany – Ptrukša
Vysoká nad Uhom – Bežovce
Tašuľa – Svätuš
Husák – Koromľa
Senné - Iňačovce - Blatná Polianka
connection II/535 to II/546 Hnilec - Nálepkovo
Oľšavka - Dúbrava
Nacina Ves - Nižný Hrušov
Inovce - Ruský Hrabovec

3.13. Expected evolution of the fleet of vehicles –

The most important contractual partners of KSK for public passenger transport are Eurobus, a.s. and Arriva Michalovce, a.s. The Region has two main instruments for contractual carriers in this area. One instrument is the setting and regular enforcement of vehicle standards and the second instrument should be regular financial support for the renewal and development of the vehicle fleet. The development should consist in particular in the accessibility of vehicles and the promotion of electric or other environmentally friendly propulsion.

Activities leading to the reduction of CO2 emissions in transport are defined in the Low Carbon Strategy of the organisations under the jurisdiction of the Košice Self-Governing Region. The Energy Policy of the Slovak Republic defines transport as one of the serious problems of the future also from the point of view of air pollution, especially in view of the increasing trend of final energy consumption in the field of automobile transport. KSK has developed a strategic document on transport issues, the Sustainable Mobility Plan of the Košice Self-Governing Region 2019 (PUM KSK). The main aim of the Low Carbon Strategy is to address transport at the organisational, operational and infrastructural level by emphasising public passenger and non-motorised transport and the effective use of new technologies, intelligent transport systems to ensure environmentally and financially acceptable transport, respecting the basic principles of sustainable mobility.

Due to the age structure of vehicles, the largest investment is required by the measure aimed at modernisation of the KSK car fleet. By 2050, this investment amounts to almost € 260 million. Investments are estimated from current prices (excluding VAT). Non-investment measures usually require the allocation of temporary or permanent staff responsible for the task and earmarked from KSK resources. Furthermore, they may require only slightly increased resources that are normally allocated to operating costs (e.g. marking of dedicated lanes). EU operational programmes can be used to finance more projects.

3.14. Border infrastructure

The border crossings provide a link to the road infrastructure of the neighbouring countries - Ukraine and the Republic of Hungary.

With the accession of the Slovak Republic to the Schengen area at the end of 2007, the conditions of border crossing within the area (in the context of the region of the Republic of Hungary) changed. In terms of the movement of people and goods, internal borders are virtually non-existent. The abolition of border barriers and the complete opening of the region in the north-south direction gives the area new opportunities for more effective use of the situation. Therefore, in terms of the territorial and transport function, but also the state of access roads, the existing, as well as the envisaged border crossing points in the Schengen area are divided into:

a. border crossing points for unrestricted travel and goods traffic

b. border crossing points for unrestricted travel but restricted goods traffic with vehicles up to 3.5 tonnes (selected crossing points under international agreement up to 7.5 tonnes)

c. border crossing points for local, so-called local border traffic.

These will be set up based on the initiative and with the resources of the authorities of the border regions of the neighbouring countries.

A legislative barrier is a problem for the development of cross-border regular bus services to Hungary. Currently, further potential for increasing the attractiveness of public transport in KSK is limited by the Agreement between the Government of the Slovak Republic and the Government of Hungary on the traffic character of roads crossing the common state border, which in KSK defines only 3 border crossings on the first class roads and one on the R4 road, which can be crossed by bus. At 24 border crossing points there is a restriction of traffic up to 3.5 t .

In order to reduce the share of individual car traffic, the possibility should be created for introducing an exemption for buses at selected border crossings with the MR, especially in connection with the planned arrival of the Volvo in the territory immediately adjacent to the Republic of Hungary.

Roads Towards Ukraine

Regulation (EC) No 562/2006 of the European Parliament and of the Council of 15 March 2006

For unrestricted traffic in passenger and freight transport:

- road I/19 Vyšné Nemecké - Uzhhorod international crossing projected on the planned highway D1 Záhor - Storožnica, after completion it will take over the function of the crossing from Vyšné Nemecké, mainly for long-distance TIR transport
- proposed Čierna - Solomonovo (UA) on the I/79 road preferably for lorries for loading on the railway in the Dobrá terminal
- proposed Matovské Vojkovce - Pavlovo (UA) with restriction of freight transport to 3.5 t.

For pedestrians and cyclists:

- Veľké Slemence - Mali Selmenci - for pedestrians and cyclists

Roads Towards Hungary

Border crossings:

For unrestricted travel and goods traffic

- road I/17 Milhosť - Tornyosnémeti, direction Miskolc, Budapest. A substantial increase in traffic load is expected after the completion of the international route “North-South” on the European route E 71. After the completion of the R4 expressway, certain corrections may occur after the completion - continuation of the construction of the expressway from the state border to Miskolc on the Hungarian side,
- road I/79 Slovenské Nové Mesto - Sátoraljaújhely with international importance for unrestricted passenger and goods traffic (existing),
- planned eastern bypass of Sátoraljaújhely for unrestricted passenger and goods traffic,

For unrestricted travel and restricted goods traffic with vehicles up to 3.5 t:

- road II/587 Dlhá Ves/Domica - Aggtelek
- road III/3299 Hostovce - Tornanádaska
- road III/3300 Hostovce - Hidvégardó
- road III/3304 Janík - Perecse
- road III/3400 Buzica - Büttös
- road III/3315 Perín - Hidasnémeti
- road III/3342 Trstené pri Hornáde - Kéked
- road III/3416 Skároš - Hollóháza
- road III/3374 Michaľany - Felsőregmec
- road III/3683 Slovenské Nové Mesto - Sátoraljaújhely
- road III/3686 Streda nad Bodrogom - Karos
- road III/3689 Streda nad Bodrogom - Pácin
- local road (connected to III/3698) Pribeník - Lácacséke
- local road (connected to III/3699) Veľké Trakany - Zemplánagárd

National and Cross-Border Transport

The national transport network and connection to neighbouring regions in a cross-border context consists mainly of the following roads

- I/17/expressway R4 - Košice - state border of SR/HU

- I/19 Košice - Michalovce - Sobrance - Vyšné Nemecké, state border of SR/UA Uzhhorod,

-I/79 border of the KSK/PSK regions - Trebišov - Slovenské Nové Mesto state border of SR/HU Sátoraljaújhely - Kráľovský Chlmec (- Čierna, state border of SR/UA with planned Solomonovo crossing)

Proposed new border crossings

border crossing	**commissioning**
Vyšné Nemecké - Uzhhorod (UA) for pedestrians and cyclists	2025
Čierna - Solomonovo (UA) - the date of completion depends on the agreement of the Ministry of Interior of the Slovak Republic and the Ministry of Finance of	after 2025

the Slovak Republic with Ukraine	
Matovské Vojkovce - Pavlovo on the road II/552	by 2030
Hostovce - Tornanádaska (H - also for freight transport up to 12 t with connection to R2)	by 2040
Lekárovce - Botfalva (UA)	by 2050

Source: PUM KSK

Proposals for cross-border cooperation towards Ukraine

A number of strategic plans are defined in the framework of the KSC PUM. In view of the current situation, the following measures in particular need to be implemented as soon as possible (The implementation of such projects is in the strategic interest of the Slovak Republic, in view of the future reconstruction of Ukraine and its integration into the EU):

a. Construction of the D1 motorway Košice - Ukraine with a rest area and a parking lot at the state border, including a modern customs office, as it is a Schengen border.

b. A rest area with a holding car park on the I/19 Vyšné Nemecké road.

c. Modernisation of the railway line No. 190 Košice - Čierna nad Tisou.

d. Modernization of the broad gauge line Haniska - Matovské Vojkovce, including the transhipment points at Košice and Dobrá. The project is mainly important for freight transport, but in the case of modernisation of the line on Ukrainian territory also to Uzhhorod, also for passenger transport.

Activity c. is of great importance for both passenger and freight transport. Projects a. and b. are the responsibility of the State and NDS a.s.

Projects c. and d. are the responsibility of the State and the NDS.

In this context, it is also necessary to propose:

- interchange terminal with a parking lot in front of the Krásna municipality between II/552 and railway line No. 190 (at the crossing of II/552 with R2/R4),

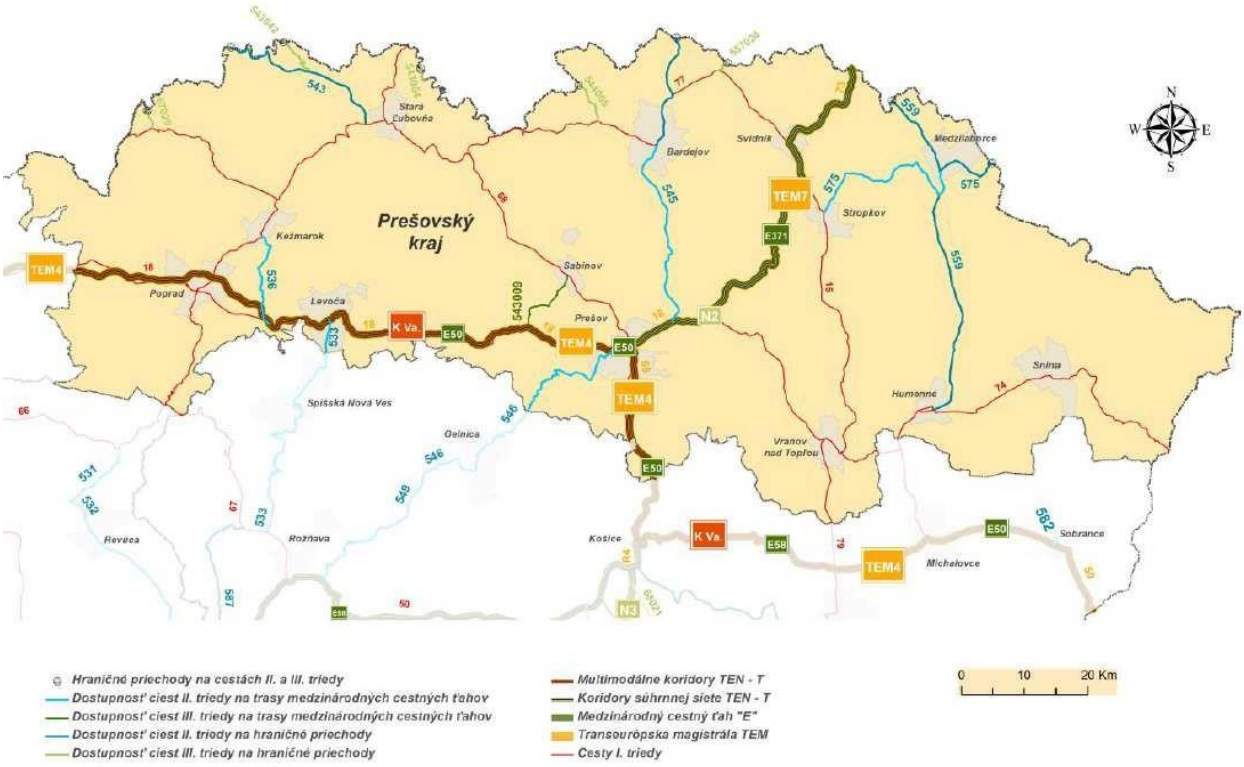
- modernisation of the transfer terminal Čierna nad Tisou - also the bus part is owned by ŽSR,

- modernisation of the Pribeník transfer terminal,

- modernisation of the transfer terminal Streda nad Bodrogom,

- modernisation of the transfer terminals Slanec, Čeľovce, Kuzmice, Kalša, Čerhov,

Other intentions from PUM KSK to support cross-border transport are electrification and connection of about 4 km of the line section near Sátoraljaújhely, whereby mobility on the circuit Košice - Slovenské Nové Mesto - Sárospatak - Bodrogkeresztúr - Miškovec - Košice could be efficiently carried out on railway electric traction, or trains from Hungary could terminate at TIOP Trebišov - with a connection to other trains of the Rex category.



Connection of district towns in PSK to routes of international importance

Source of data: Strategic Plan for the Development and Maintenance of Class II and III Roads

Connection of district towns to the above routes of international importance is achieved by roads of class I and II, but exceptionally also class III. The largest cities of the region - Prešov, Poprad, but also the towns of Levoča and Svidník lie in direct contact with the TEN-T network corridors passing through the region. Direct connection of the district town of Bardejov to the TEN-T network is achieved by the road II/545. Road II/559 can be considered an alternative connection of the towns of Humenné and Snina with this branch. In the case of the town of Medzilaborce it is the road II/575 with subsequent connection to the road I/15 in Stropkov. Kežmarok is connected to the main corridor of the TEN-T network by road II/536. The district town of Sabinov is connected to the D1 motorway to the west via the III/3177 road or to the east via the I/68 road. It can be stated that the town of Snina in the north-east of the region, connected to this road system by the I/74 road from the town of Humenné, is the most distant

from the international corridors. The southernmost town of the region, Vranov nad Topľou, has an alternative to connect to the TEN-T routes via the road I/18 near the village of Lipníky or the southern variant of the connection situated in the territory of the Košice Self-Governing Region via the connecting road - road no. I/79.

The accessibility of the territory of the Prešov Self-Governing Region in the context of the trans-European road network according to the latest description used by EU institutions is ensured through the TEN-T Rhine-Danube main network corridor running along the D1 motorway Liptovský Mikuláš - Poprad - Prešov - Košice - Sobrance - Uzhhorod and the section of the comprehensive network running along the roads I/18 and I/21 along the route Prešov - Svidník - Rzesów towards Poland and Ukraine. Figure 35 shows the TEN-T corridors of the core and comprehensive network in the east of Slovakia.

Road border crossings in the network of class II and III roads in the region are now already built and may be extended in the future on the northern border with Poland and the eastern border with Ukraine. More specifically, in the case of the Republic of Poland, these are the constructed crossings provided by the following roads: III/3078 (Podspády - Jurgów), II/543 (Lysá nad Dunajcom - Niedzica), II/545 (Becherov - Konieczna), III/3483 (Kurov - Muszynka), III/3519 Nižná Polianka - Ozenna and II/575 (Palota - Radoszyce). The border road connection between the Prešov Region and Ukraine is currently only provided by one crossing on the road I/74 Ubľa - Malyj Bereznyj. The long-term plan of the Prešov Region is to complete the unbuilt border crossing for the connection: the village of Ulič - the state border of SR/UA - Zabriď with a length of 1,050 m based of the study and the conclusions of negotiations of representatives of both states. This unfinished border crossing creates an obstacle to cross-border contact between the residents of the villages of the so-called Ulič valley and the Ukrainian side. The connection is possible by a 60 km detour through the village of Stakčín on the road II/558 and then I/74.

Source: PUM PSK