



State-of-the-Art Analysis of the Transport System in the Košice Region Title: State-of-the-Art Analysis of the Transport System in the Košice Region Client: Agency for the Support of Regional Development Košice, n.o.



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The text did not undergo any linguistic revision.

Graphics and printing:

Year: 2017







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# Introduction

The aim of the "State-of-the-Art Analysis of the Transport System in the Košice Region" is to analyse the current transport system of the region focusing on the flexible transport - identifying the existing flexible solutions of the "last mile" in the region and identifying the shortages in the offer and demand related to the introduction of transport services on request. The concept "last mile" means the last section of the road the tourists have to overcome going from the railway station or bus station to their final destination – hotel, located in faraway place, while the tourists face the problem of insufficient connectivity of the different bus or railway lines. These situations might be settled by means of the flexible transport, serving not only for tourists, but also to the local citizens whom the applied flexible transport system would offer alternatives for their travelling needs.







# 1) Structural data of the region

The Košice Region is situated in the South-eastern part of Slovakia. On the North it borders with the Prešov Region, on the West with the Banská Bystrica Region. The southern and eastern borders are made by the state boundaries of Hungary and Ukraine. The Košice Self-governing Region is the fourth largest region within Slovakia as for its area (6 754,5 km²) and the second by the density of the inhabitants. The City of Košice is the second largest and most significant city in Slovakia. Based on the official territorial-administrative division, the Košice Region consists of 11 districts /okres/ from which 4 districts make up the territory of the City of Košice (Gelnica, Košice I, Košice II, Košice IV, Košice – okolie /Košice – Environs/, Michalovce, Rožňava, Sobrance, Spišská Nová Ves and Trebišov). In the territory of the region there are 440 municipalities from which 17 have the statute of cities.

Chart 1: Map of the Košice region

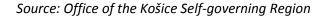








Chart 2: Map of the districts of the Košice region



Source: Office of the Košice Self-governing Region

The number of inhabitants in the Košice Region according to the census of 31.10.2016 makes 797 759 from which almost one third (239 393 citizens, - 30%) lived in the City of Košice - the centre of the region. The density of the inhabitants in 1 km² has achieved 117,87. The share of the Košice Region in the total number of inhabitants of the Slovak Republic is 14,7%. The densest regions are the four Košice city districts (Košice I, II, III, IV). Significantly lower number of people live in the districts of Sobrance, Gelnica and Rožňava. In 17 towns of the Košice Region there were 439 761 people by the end of 2014, the degree of the urbanization achieved 55,3%. In comparison by the year 2008 the number of the citizens in the towns and cities increased by 1,8% (almost 7,7 thousand people).

Tab. 1: Demographic data

	The number of residents at the end of the concerned period (Person) (31.10.2016)	Density (Person/square kilometre) (2015)
Košice	239393	981,95
Košice Region	797982	117,87
District Gelnica	31685	54,02
District Košice –		
okolie/environs	125738	80,79
District Košice I	68157	793,23
District Košice II	82236	1023,68
District Košice III	29012	1742,02
District Košice IV	59988	981,53
District Michalovce	110764	108,62
District Rožňava	62560	53,51
District Sobrance	22792	42,34







Distr. Spišská Nová Ves	99265	168,55
District Trebišov	105785	98,68

Tab. 2: Number of inhabitants in the largest cities of the different touristic districts

City (touristic area)	2015
Spišská Nová Ves (Slovenský raj)	37 594
Trebišov (Tokaj)	24 500
Michalovce (Zemplínska šírava)	39 455
Rožňava (Slovenský kras)	19 397
Košice	239 200

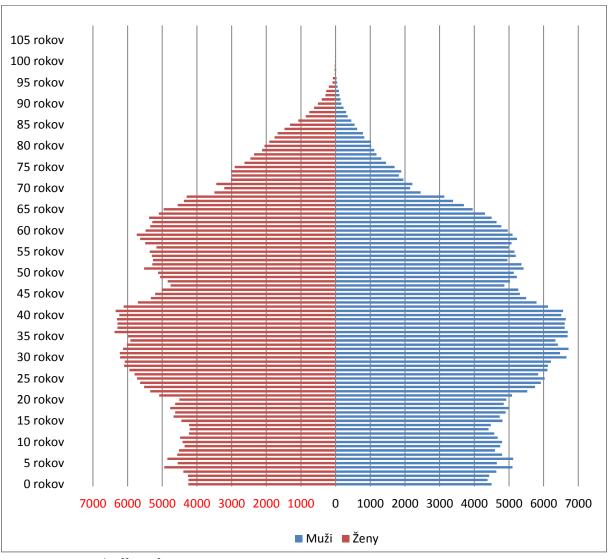
Source: Statistical Office of SR, 2016







**Chart 3: Age pyramide of Košice Region in 2015** 



From the aspect of the age structure of the inhabitants of the Košice Region we can state that 17 % of the inhabitants is in pre-productive age (0-14 years of age), 63 % is in productive age (15-59 years of age), and 20 % is in post-productive age (60 and more).

Tab. 3: Characteristics of the population

	Number of municipalities (2014)	Number of cities (2014)	Population of 1 999 people or less (2015)
Košice Region	440	17	37
District Gelnica	20	1	2
District Košice - okolie	114	2	10
District Michalovce	78	3	3







District Rožňava	62	2	11
District Sobrance	47	1	7
Distr. Spišská Nová Ves	36	3	1
District Trebišov	82	4	3

## The Region (exploitation of the land)

A characteristic feature of the South of the Košice Region is the dominant agricultural production. Parts of the agricultural rural area are the viticultural regions – the East Slovakian winemaking resorts (Kráľovský Chlmec, Moldava, Sobrance and Michalovce winemaking regions) and the Tokaj region. Nearly 40% of the territory of the Košice Region is covered by forests. The districts with the largest area of forests are Rožňava, Košice – environs and Gelnica. The smallest forests are in District Michalovce.

Tab. 4: Area of the agricultural land at the territory of the Košice Region according to the inidividual districts

Column 1	Agricultural land - total (in m²) (2015)
District Gelnica	110 364 273
District Košice - okolie	752 280 608
District Košice I	15 066 167
District Košice II	38 548 526
District Košice III	3 792 055
District Košice IV	33 791 397
District Michalovce	724 549 911
District Rožňava	365 211 835
District Sobrance	302 061 250
Distr. Spišská Nová Ves	207 559 746
District Trebišov	787 207 518
Total	3 340 433 286

Source: Statistical Office of SR, 2016

The agricultural land in the Košice Region takes 3 340 km<sup>2</sup> and the whole region has 14,00% of the agricultural soil in the Slovak Republic.

## Items of interest (conservation area, national parks, natural monuments, educational trails)

At the territory of the Košice Region there are two conservation areas with total area of 33 105 ha and two national parks with area of 54 374 ha, within which there are small conservation areas —







national natural parks, nature reserves, protected natural sites. Within the European network of nature reserves (NATURA 2000) in the Košice Region there are 10 bird nature reserves with total area of 394 537,07 ha and 50 territories of European significance. The share of the protected nature reserves in the Košice Region is in the long-term prospects 14,8%.

Tab. 5: Summary of the official large protected areas /National Parks, herein after also: NP/ in the territory of the Košice Region

Name	Area (in ha)
NP Slovenský kras	34611,08
NP Slovenský raj	19763,00
PLA Latorica	23198,46
PLA Vihorlat	17485,24

Source: ŠOP SR, Banská Bystrica, state of 31.12.2015.

## Definition and classification of the respective transport nodes serving for the target area

The territory of the Košice Region is intersected by significant supra-regional road-, railway- and energetic-, transport lines in direction of East – West and North – South. In the field of road traffic there are the European routes E 50 (Žilina – Prešov – Košice – Michalovce – state border with Ukraine), E 71 Košice – state border with Hungary – Miskolc) and E/58 (Zvolen – Rožňava – Košice – state border with Ukraine). The highway D1 is being implemented now in the section of Košice – Prešov, including the feeder road leading to Košice, the express road R4 up to the Hungarian border has also been constructed.

The length of the road network in the Košice Region is 2 382,46 km of roads (13,3% of the total length of roads in SR), from which in the regional centre - Košice there is 99,30 km of roads (4,2% of the total length in the entire region). The highest portion is represented by the roads of 3rd class in total length of 1 414,5km (59,4%), the lowest share pertains in long term to the express roads: 26,5km (1,1%) and highways with 5,4km length (0,2%). The density of the road-networks has achieved 0,353km/km², respectively 3,054 km/1000 inhabitants. In the Košice city districts, similarly as it is in the region, – the highest ratio is represented by the roads of 3rd class (37,1%) and 2nd class (25,6%).

The regional centre city - Košice is the second largest railway node in SR. The Košice Region has a very dense network of railway tracks connecting it with the surrounding EU member states. Košice is linked with Ukraine and Russia through the system of the East Slovak Transhipment - stations /Východoslovenské prekladiská/ and the wide-gauge railway track.

The railway transport serves in the Košice region to 83 municipalities from the total number of 440. The main line is: Spišská Nová Ves - Margecany - Košice - Trebišov - Michalovce/Čierna nad Tisou. The main technical problem of the railways is the low transport speed, the relatively old rolling stock and the inconvenient, low level of the railway stations in some towns and villages. The length of the railway tracks in operation in the Košice region showed a decreasing tendency in the monitored period. In 2013 there were 357 km railway tracks in operation; in comparison with 2008 there was a decrease by 91 km (20%). The overview of the railway tracks has been attached to the document.







The transport potential of the region has been raised by the Airport Košice a.s., which is of 1st category public airport with international importance. In the territory of the Košice Region there is also another public airport in Spišská Nová Ves, two heliports for aviation rescue-service and 16 airports for aviation assisted works in agriculture. The inland water-way transport is also activated at the river Bodrog from the village Ladmovce in direction to Hungary. In the southern borders of the territory in direction East – West there are the transit pipelines of gas and crude oil.

The city cycling routes and the roads of 2nd and 3rd class have been used for transport purposes and sometimes also the separated cycling communications built up between the villages. At the end of 2010 the Košice Self-government Region carried out a survey of division of labour in three cities of the region (Košice, Michalovce, Spišská Nová Ves). The share of cycling in the passenger transport made up in average 4,1%. The urban cycling routes are constructed in independent cycling paths, cycling lanes and zones or they are laid in the joint space with the pedestrian zones. The estimated length of the cycling network serving for transport purposes including the urban cycling routes is 31 km. The length of the cycling network in the territory of the City of Košice has achieved recently 26 km, from this 22,8 km are urban cycling tracks. In Košice region we have identified altogether 54 cycling routes of different categories under the mapping carried out in 2011; the total length of the cycling tracks is 1306,9 km. In the region there are traversing the international cycling tracks — Carpathian Cycling Track /Karpatská cyklistická cesta/ and the Cycling Route of the Good Soldier Švejk /Cyklotrasa dobrého vojaka Švejka/. Two new routes: The Zemplínska cyklomagistrála and the EUROVELO 11, have been designed recently.

## Economy (agriculture, industry, services – especially tourism)

The amount of GDP in the Košice Region in 2014 was 8 690,95 mil. Eur. The share of the Košice region in the GDP of the Slovak Republic is 11,50%. The share of 1 citizen of Košice Region in the total production of GDP in 2014 was 10919,994 Eur. In comparison with the Slovak average it makes only 78,38 %. The development of regional GDP is characterized by high sensibility in relation to the economic situation of the biggest employers as the incoming channel of significant, mostly foreign investments. The economy of the region is influenced by strong industrial basis of the Košice agglomeration and some individual districts like Michalovce, Spišská Nová Ves and Košice – environs, where the concentration of big, medium and small enterprises is the highest. The Košice region strongly benefits from the development of services with higher added value in the City of Košice that is the strategic development centre and also the main employer of the respective region. The significant economic potential of the Košice agglomeration is capable of strong development impulses directed to the whole East-Slovak region. The other districts, especially those lying near the borders, are less developed in comparison with the City of Košice itself, and they would need additional development stimuli in the upcoming years aimed at the stabilization and strengthening of their economic basis.







Tab. 6: Creation of GDP

	Regional GDP in mil. EUR (2014)	Share of the creation of GDP	Regional GDP / citizens in EUR (2014)
Banská Bystrica Region	6 536,39	8,65%	9 962,875
Prešov Region	6 853,52	9,07%	8 363,750
Trenčin Region	7 178,59	9,50%	12 130,018
Nitra Region	8 247,63	10,92%	12 026,628
Žilina Region	8 340,24	11,04%	12 079,903
Trnava Region	8 638,11	11,43%	15 476,788
Košice Region	8 690,95	11,50%	10 929,994
Bratislava Region	21 075,01	27,89%	33 895,518
Slovak Republic	75 560,46		13 944,751

In Košice Region there are several important sectors which boost the potential of the whole region from the aspect of human resources and material-stock basis (wood, minerals, building materials, traditional products). They are especially the industrial sectors of – machine engineering, wood-processing, metallurgy and electrotechnical industry, geology and mining, construction-building industry, agriculture, tourism and services. As for the industrial structure – the most important sectors of the region are: metallurgy, machine-engineering, chemicals, ICT and electrotechnical industry. The dominant segment is undoubtedly the metallurgy, making 60% of the industrial production of the region and 50% of its export capacity. This is the sector where the region's largest company operates – the U.S. Steel Košice. Increasingly higher economic importance with higher employment rate maybe ascribed to the information-communication technology.

In the region, however, the job market is characterised by high percentage of unemployment (14,39 %), especially the unemployment of young people and the number of continually unemployed is a negative fact. The structure of unemployment depends on the offer of working places, the distance of towns and villages of the jobseekers from the work places, from the structure of the population, and some other factors. The districts with the highest unemployment rates in the Košice Selfgovernment Region /hereinafter in the text: KSR/ are: Rožňava, Trebišov and Sobrance. A lower unemployment rate in comparison with the Slovak average figures we can find in the city districts of Košice I, II, III and IV.







Tab. 7: Unemployment in different districts of KSR

	Rate of registered unemployment (in %) (2015)
Slovak Republic	10,63
Košice Region	14,39
District Gelnica	16,96
District Košice I	8,65
District Košice II	8,65
District Košice III	6,97
District Košice IV	7,57
District Košice	17,66
District Michalovce	15,11
District Rožňava	21,58
District Sobrance	18,40
Distr. Spišská Nová Ves	14,10
District Trebišov	18,42

# 2) Tourism

The Košice Region lies in the territory of four historical regions: Abov, Gemer, Spiš and Zemplín. All of this regions have some unique features we can mark as "top" in Slovakia, Europe or even in the world.

The dominant city of the Košice Region and the second largest Slovak city is Košice. The city can boast of the largest, extraordinarily rich urban conservation area whose dominant building is the St. Elisabeth Cathedral /Dóm sv. Alžbety/, the most eastern situated western type gothic cathedral in Europe. Košice as a significant cultural-historical metropolis of East Slovakia became the European Capital of Culture in 2013 and in 2016 the European Sport City. Every year in October there is organised the oldest marathon run in Europe - the International Peace Marathon. The Zoological garden in Košice has the attribute - "the largest Slovak ZOO by its area".

In the region there are four large protected areas. A real jewel is the NP /National Park/ Slovenský raj with its attractive canyons, gorges and valleys and the Dobšina Ice Cave /Dobšinská ľadová jaskyňa/ and the NP Slovenský kras, the largest carst territory in Slovakia with unique accessible caves, among others the Ochtinská, Gombasecká, Jasovská, Krásnohorská and Domica cave. All of the mentioned caves have been entered on the list of the UNESCO world natural and cultural heritage and all of them are in some aspects top destinations. On the North – East there is the impressive volcanic mountain range Vihorlat with its wonderful – lake Morské oko /literally: Sea Eye/. In the South Zemplín there is the protected landscape park Latorica characterised by swamps and wetlands.







In the south-west bulges of the Zemplín Mountains of East Slovakia the unique Tokaj Region spreads out, famous for its Tokaj wine production.

The castles and stately homes are the proof of the rich history of this region. The largest castle is the Spiš Castle /Spišský hrad/ which jointly with the adjacent Spišske Podhradie and the church in village Žehra have been entered on the list of the UNESCO world heritage. Beside many sacral monuments among the top sights are the authentic wooden churches in Ruská Bystrá (UNESCO) and Inovec. One of the interesting monasteries in the region is the Premonstrate monastery in Jasov, being the most important baroque style building in Slovakia.

In the region there are ideal conditions for active holiday, whether cycling or touristic walks. The most suitable place for water sports is the reservoir Zemplínska Šírava. The mountain climbers can enjoy their hobby in the natural reservation areas (Zádiel, Dreveník) and the winter sport fans can ski in centres Plejsy, Mlynky or Jahodná.

### Identification of touristic "hotspots" in the countryside

At the target territory there is the National Park Slovenský raj /Slovak Paradise/ - one of the nine national parks in Slovakia. It is mostly a carst plateau consisting of canyons, gorges and valleys. The national park together with the protected zones takes an area of 328 km<sup>2</sup>. There are 11 national nature conservation areas and 8 nature preserve areas. The Slovak Paradise / Slovenský raj is the second most visited tourist destination in Slovakia (right after the High Tatras / Vysoké Tatry), in spite of the fact that it has been a strictly protected nature reserve site since 1988 when it was awarded the status of National Park. The tourists can learn this National Park through 216,6 km of touristpaths that are made accessible for the tourists in difficult passages by means of installed technical means and premises. There are 108,5 km of cyclotourist routes and 32 km of education paths also. We can find here about 350 caves from which the Dobšina Ice Cave /Dobšinská ľadová jaskyňa/ is open to the public. It was entered on the list of the UNESCO world heritage in 2000. The most renowned tourist centres and summer residences in the Northern part of the national park are: Čingov, Podlesok, Košiarny briežok, Letanovský Mlyn /Letanovsky Mill/ and Hrabušická Píla /Sawmill/. The only touristic centre situated directly in the park is Kláštorisko /approximate meaning in English: Monastery site/ presenting the most important touristic crossroads in this region. In Kláštorisko the tourists may visit the site of the reconstructed Carthusian monastery built up in the beginning of the 14th century. The most visited tourist centres in the southern part are the Dobšina Ice Cave, Stratená, Mlynky and Dedinky. The most attractive gorge in the Slovak Paradise is Suchá Belá accessible from the resort Podlesok at village Hrabušice. The most beautiful and well-known canyon is Prielom Hornádu /Chasm of the Hornád river/. The highest waterfall is the Závojový vodopád /Veiled waterfall/ with height of 70 m. The largest water surface with area of 86 ha is the water reservoir Palcmanská Maša situated in the southern part. In the territory of the national park the tourists may do downhill and cross-country skiing, mountaineering, ice climbing and in the Palcmanska Maša they can go boating or swimming. In spite of the fact that the target area is characterised with natural beauties, there are also some gothic sacral monuments presented to the visitors within the Gothic Road. The Iron Road presents the history of the former mining of iron ore, production of steel in Dobšiná, Spišská Nová Ves and Stratená.







In the Slovak Paradise there are two towns. One of them is the district centre - Spišská Nová Ves the second one is Dobšiná on the South. From the aspect of the transport serviceability Spišská Nová Ves is considered one of the main entrance gates into the Slovak Paradise. In 1992 it was declared municipal conservation zone with a large number of historical monuments. The most valuable one is the Roman Catholic church of Ascension of Virgin Mary /kostol Nanebovzatia Panny Márie/ with its remarkable gothic portal, plastics of the famous sculpture Master Pavol from Levoča, bronze baptistery and the highest church spire in Slovakia. Dobšiná is an old miner city situated in the borderline of the Slovak Ore Mountains /Slovenské rudohorie/ and the National park of Slovak Paradise. The most important monument of the city is the Lutheran church considered to be the symbol of the mining business in the environs of Dobšiná.

The larger area of the Slovenský raj lies in the territory of 3 self-government regions, 4 districts and on cadastral lands of 16 villages and 2 cities.

Tab. 8: List of villages in the territory of Slovenský raj

			Number of inhabitants
Region / NUTS 3	District / NUTS 4	Village / NUTS 5	(2015)
Košický kraj	Spišská Nová Ves	Betlanovce	690
Košický kraj	Spišská Nová Ves	Hnilčík	554
Košický kraj	Spišská Nová Ves	Hnilec	434
Košický kraj	Spišská Nová Ves	Hrabušice	2469
Košický kraj	Spišská Nová Ves	Letanovce	2286
Košický kraj	Spišská Nová Ves	Mlynky	565
Košický kraj	Spišská Nová Ves	Smižany	8633
Košický kraj	Spišská Nová Ves	Spišské Tomášovce	1939
Košický kraj	Spišská Nová Ves	Spišská Nová Ves	37594
Košický kraj	Rožňava	Dedinky	270
Košický kraj	Rožňava	Dobšiná	5645
Košický kraj	Rožňava	Stratená	125
Prešovský kraj	Poprad	Hranovnica	3055
Prešovský kraj	Poprad	Spišské Bystré	2523
Prešovský kraj	Poprad	Spišský Štiavnik	2778
Prešovský kraj	Poprad	Vernár	576
Prešovský kraj	Poprad	Vydrník	1186
Banskobystrický kraj	Brezno	Telgárt	1542

Source: Statistical Office of SR, 2015

As the analyses deals only with one region (NUTS3), in the next parts of our project we will deal only with the villages situated on the territory of the Košice Region. The only exception is the village Vernár where the Košice Region operates public bus services. In the above villages there are living altogether 85 % of the overall population of the district Slovenský raj.







## **Accommodation facilities in 2015**

From the aspect of nights spent in the accommodation facilities, the most important centre is Spišská Nová Ves with its capacity of 602 beds; the next ones are the villages of Smižany (434), Hrabušice (342) and Dedinky (257). The remaining 4 villages have altogether less than 20 % of the overall hotel capacity of the region.

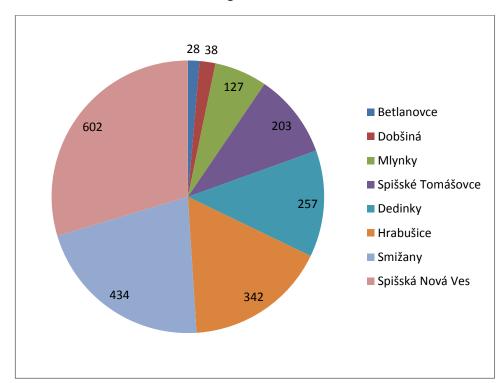


Chart 4: Number of hotel beds in different villages

Source: Statistical Office of SR, 2015







9000 8000 7000 6000 5000 4000 Number of visitors 3000 ■ Number of overnight stays 2000 1000 0 Movember February January March october June Nay

Chart 5: Tourists in the accommodation facilities in 2015

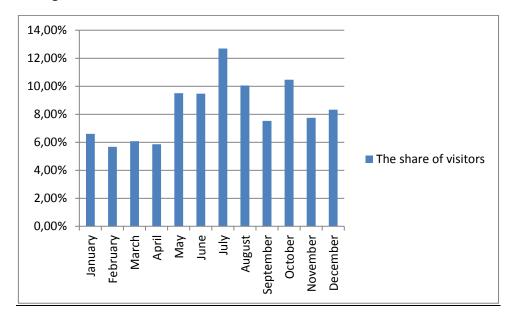


Chart 6: Percentage of visitors in hotels in different months

Source: Statistical Office of SR, 2015

Based on the previous figures we can state that the concerned area is characterised by seasonal visits of the tourists in 2015. The highest number of tourists in the local hotels was registered in July, and the lowest number in February. Taking into consideration that the average level of visits makes 2020 tourists / month, so the tourists' visits in the months of January – April and subsequently September and November are under the average.







The overall number of visitors in the local accommodation facilities and the nights spent there is the highest in the town of Spišská Nová Ves in 2015. With the overall nights in amount of 30 000 - Spišská Nová Ves has taken about 57 % of the total number of hotel nights. The number of guests in its accommodation facilities was 14589, — i.e. more than 60 % from the total number in the concerned region.

35000
25000
25000
15000
15000

Rumber of visitors
Number of overnight stays

Number of overnight stays

Chart 7: Number of visitors and hotel nights in different villages

Source: Statistical Office of SR, 2015

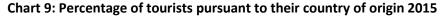


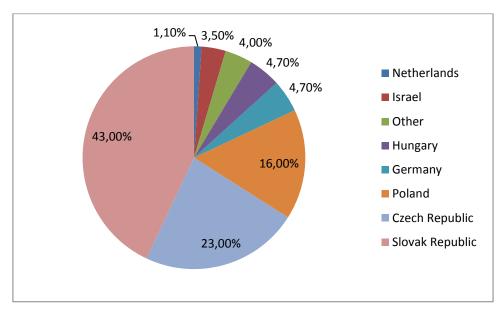




1,81%
9,02%
1,81%
■ Betlansyse
■ Dedinky
■ Dobšiná
■ Hrabušice
■ Mlynky
■ Smižany
■ Spišská Nová Ves
■ Spišské Tomášovce

Chart 8: Share of the hotel guests in different villages





Source: Report of NP Slovenský raj, 2015

The most significant share in the total number of tourists in Slovak Paradise pertains to the residents – Slovak tourists during domestic trips creating 43% from the total number of the tourists. Further countries sending tourists to the target area are the Czech Republic (23%) and Poland (16%).

### One – day tourists:







The number of one day tourists in the National Park Slovenský raj has been estimated on the basis of the statistical data of the tourists using the existing tourist paths. The census was carried out by the Administration of the NP Slovenský raj, Spišská Nová ves twice annually. In 2014 the number of one day tourists was estimated about 334 thousand.

#### Description of the existing offers of transport services for the tourists

The NP Slovenský raj (target territory - destination) is accessible from outside by cars, buses and railway transport. From the aspect of cycling, - it is possible to use the marked cyclotouristic routes of IInd and IIIrd class. The closest airports are the international airports in Poprad-Tatry and Košice, the sport-airport in Spišská Nová Ves and the small airport in Hrabušice — Podlesok which is used mostly for sightseeing flights.

The road transport uses the network of communications made up of the roads of the following classes: I. (I/18, I/67), II. (II/533, II/535, II/536, II/546) and III. class. The distance of highway connection D1 from the NP is 5 km. The concerned towns and villages are accessible by the regular bus services which make a very important mode of public traffic in the environs of the locations being the entrance to the National Park (Poprad, Levoča, Spišská Nová Ves, Dobšiná, Rožňava etc.). The railway transport runs in two railway tracks. The line Červená Skala – Margecany connects the tourist centres in Slovenský raj – the Dobšina Ice Cave, Stratená valley, Dedinky, Mlynky, Hnilec. The North railway line connects the cities of Bratislava and Košice and enables travelling to the city of Spišská Nová Ves and the villages Smižany, Spišské Tomášovce, Letanovce and Vydrník.

For travelling inland it is possible to use the car, shuttle- and railway travel services. The road network is made up especially of roads of IIIrd class and the local road communications. The railway traffic is carried out by regular train services in the above mentioned railway lines. The cycling traffic can use up the network of the marked cyclotouristic routes of IInd and IIIrd class.

In spite of the existing regular bus services and trains, the travel access of the target territory — destination is lightly limited during the state holidays, bank holidays and school holidays. In order to improve the quality of the public passenger traffic the Regional Organization of Tourism Slovenský raj & SPIŠ (OOCR) has initiated to introduce the so called summer buses and SKI buses (winter bus). The summer bus has been designed for the tourists and visitors of the region Spiš and the adjacent destination Slovenský raj. It aims at strengthening the offer of the public transport among the touristic centres during the summer months July-August. The summer bus was initiated by the Regional Organization of Tourism in 2016 and they prepared it in cooperation with the bus operator Eurobus, a.s. Košice by expanding and modification of the existing bus connections. The timetable of the summer buses has been summarised into comprendious travel guide and it was published in the bus stops, web-sites of the Regional Organization of Tourism and at the web-sites of the hotel service providers. Besides the bus connections the *travel guide contained also the selected train connections enabling the transport of bicycles*. Tickets were accessible at the booking offices of the transport companies. The SKI bus has been designed for the skiers and tourists during the winter ski season. It was initiated by the Regional Organization of Tourism - OOCR Slovenský raj & Spiš in the winter time







2013-2014. In 2016 the SKI bus was substituted by connection riding within the regular public bus service. Its aim is to improve the accessibility of the ski resorts and attractive touristic sites. Introducing this connection is the result of the joint endeavours of the Regional Organization of Tourism - OOCR Slovenský raj & Spiš, the transport operator Eurobus, a.s. Košice and the Transport Department of the Office of the Košice Self-government Region. In the territory of NP there are 9 publicly accessible *park and ride* parking places (in the territory of villages Spišské Tomášovce, Hrabušice, Stratená, Dedinky, Mlynky, Dobšiná).

#### **Key stakeholders**

The development of the destination Slovenský raj is influenced by the character of the respective territory, administrative division and historical context.

1. As from the aspect of the character of the territory, - the NP Slovenský raj presents a mountainous region with special legislation in relation to protection of the countryside.

#### **Key entities:**

- State Nature Conservancy of the Slovak Republic
- Administration of the Slovak Paradise National Park
- State Nature Conservancy of the Slovak Republic
- Administration of the Slovak Caves
- Mountain Rescue Service
- Centre Slovak Paradise
- Association of Mountain Guides Slovenský raj
- Forests of the Slovak Republic, state company
- 2. The territory of the NP Slovenský raj is divided administratively among the villages located in three self-government regions and districts, see Tab. No 8:
- 3. In the territory of NP actively works the organization of destination management with powers at the territory of South Spiš, part of Gemer and Slovenský raj Key entity:
- Regional Organization of Tourism / Slovenský raj & SPIŠ

Further service providers, e.g. entrepreneurs, public, non-profit and private organizations and individuals, transport companies, forestry, agricultural and water management entities.

# The existing touristic information system

The communication with the visitors of Slovenský raj is carried out especially by means of web pages and touristic information centres. The mobile application "Košice region" is a new tool offering in a summary structure a large number of useful data divided into chapters: What to see; What to do; Events; Planner of trips; My favourite; Destinations; Useful info; Where to find accommodation and QR scanner.







Tab. 9: Overview of the www-sites of the entities working in the territory of the Slovak Paradise /Slovenský raj

Address	Description	Administrator	Active language versions
www.slovenskyraj.eu	Destination portal	Microregion Slovenský raj, City of Spišská Nová Ves	SK
www.slovenskyraj.sk	Database of offers	Private person	SK,CZ,PL,EN,DE,HU
www.slovensky-raj.sk	Brief information portal		SK,EN
www.slovenskyraj-info.sk	Partial propagation of the destination and offer of services	Association of mountain guides	SK
www.vraji.sk	Complex information portal of the destination	Regional tourist organization /OOCR/ Slovenský raj&SPIŠ	SK,CZ,FR,HU,DE,EN, PL,RU,ESP
www.mapaslovenskyraj.sk	Database of offers	enthusiastic individuals	SK
www.sopsr.sk/slovenskyrajweb	Brief information portal	SOPSR	SK
http://www.npslovenskyraj.sk	Brief information portal	Administration of NP Slovenský raj	SK
www.slovenskyraj-juh.sk	Information portal of the southern part of NP (serving as booking portal of the Hotel Mlynky)	Hotel Mlynky	SK
www.spis-region.sk	Destination portal - South Spiš/Spiš region	Regional tourist organization /OOCR/ Slovenský raj&SPIŠ	SK,EN,DEJ,HU

Source: Office of the Košice Self-governing Region, 2016

The chart gives an overview of the accessible internet platforms presenting especially the primary touristic offers in the NP Slovenský raj. Half of the presented internet sites communicate only in Slovak language.

The Slovak touristic portals present Slovenský raj as a TOP destination in Slovakia. The communication is organised in the language of the target groups of the tourists.







The regional touristic portal is operated by the Regional Organization of Tourism /Krajská organizácia cestovného ruchu Košický kraj. This portal provides information in Slovak and English. The Regional Organization uses for the communication also the **mobile application Košice region.** Part of the propagation of the primary offer of tourism in Slovenský raj is implemented through the www pages of the provider of tourist services (hotel services, operators of tourist sites etc.) The offer of NP Slovenský raj has been communicated through FB, YouTube, Twitter and Instagram. The most frequently used tool is the FB. The active Facebook profiles have 7 entities, 3 of which are the self-government authorities. The social networks Twitter and Instagram have been used just minimally. In world-wide prospects the National Park Slovenský raj as a touristic destination was communicated at pages: nationalgeographics.com, Lonelyplanet.com, Foursquare.com, Wikitravel.org.

Tab. 10: List of tourist information centres

Name	Location	Operation
TIC Spišská Nová Ves	Spišská Nová Ves	all year round
TIC Smižany	Smižany	all year round, Mondays closed
TIC Čingov	Spišské Tomášovce, Trek Café Čingov	all year round
TIC Hrabušice	Hrabušice	During the business hours of the Municipal Office
TIC Autokemping Podlesok	Podlesok	all year round
TIC Podlesok (Správa NP)	Podlesok	Seasonal
TIC Dobšiná	Dobšiná	all year round
TIC Dobšinská ľadová jaskyňa	Stratená	all year round, from 1.1031.5. MON-FRI

Source: Office of the Košice Self-governing Region, 2016

In the concerned territory there are 8 information centres communicating the offers of NP Slovenský raj. 6 touristic centres are operated by the local self-government authorities, 1 is operated by the Administration of NP and 1 by an entrepreneur entity. Touristic information centres with all year round operation have modified their business hours during the winter season, or they are open only from Monday to Friday.

Besides the above information the visitors can find some additional information also at the site <a href="https://www.mojbus.sk">www.mojbus.sk</a> and application Ubian that are designed mainly for the mobile phone users. They provide information on the following:

- a) current position of buses,
- b) observance of the timetable or potential digression,
- c) the nearest bus stops pursuant to the position of the passenger (at the map),







- d) actual departure of buses from the bus stops, giving the exact time of departure /arrival,
- e) the nearest bus connections in the location pursuant to the position of the passenger (at the map),
- f) current transport connection between the defined bus stops,
- g) arrival of buses at the stated bus stops.

# 3) Regional sustainable transport situation

#### Regular bus service in public interest

The Košice Self-government Region /hereinafter also: KSR/ in accordance with Law 56/2012 Coll. - Law on road transport, as amended later, has concluded contracts with the company Eurobus, a.s. and ARRIVA Michalovce, a.s. on public services within regular bus services. Through these transport companies the transport services of the entire region is ensured by suburban regular bus services.

Based on the above contracts, KSR provides payments for public services which the carrier would otherwise not provide for the stated fare at all or partially due to its economic disadvantage. The payments serve for ensuring the transport services of the region and at the same time they serve also for compensation of the provided fare discounts (students, disabled people, seniors over 70 years of age and some others). The public transport services have been defined as ensuring the transport of people to schools, healthcare institutions, offices and to places of employment.

The aim of this service contract is to provide for the public safe, efficient and high quality transport services against the stated basic fare. The amount of fare is the main reason why the transport company does not gain profit, and this social aspect effects also that the difference between the economically justified costs and profits shall be compensated for the transport company from the budget of the customer - public operator. In the case of the above transport companies the Košice Self-government Region is obliged by contract (pursuant to law) to pay the transport companies the payment which is calculated as the difference between the economically justified costs (including the adequate profit) and revenues of the transport companies.

Since taking over the original powers in the field of regular bus services, the respective laws on road transport (No. 168/1996 Z. z. and No. 56/2012 Z. z. as amended later) have defined the financing mechanisms of the regular public transport services.

The level of the contribution of the KSR as the contracting party-customer has been defined in the contract as the difference between the economically justified costs of transport companies (including the adequate profit) and revenues. The stated tariffs are the component parts of the contracts, defining the amount of the fare and social discounts that subsequently define the level of the revenues and finally also the amount of KSR contribution.

It follows from the above facts that the contracting party, ordering services of the public transport, provides public resources in fact directly to the passengers by means of the contracted transport companies in order to provide the passengers fares for bargain prices, and to support this way the







use of public transport which is more efficient, more ecological and more economical alternative in comparison to the individual transport modes.

The support of the public transport is a constituent part of the European strategy to reduce the consumption of fuels in Europe as they are imported materials and the financial means invested to their purchasing are going out from the European economy.

The passengers can buy the tickets directly from the bus driver or they may use the contactless chip card (CCC) within the system TRANSCARD - system of mutual recognizing of CCC of all transport companies working in urban and suburban bus transport in the Košice and Prešov Self-government Regions.

#### **Railway Traffic**

The most important centre of the East Slovakian region is the two cities region Košice – Prešov. The crucial railway track is the double-track electrified line Košice – Bratislava. Prešov is connected onto this line by single-track electrified line Kysak – Prešov which goes on after Prešov to Plaveč in direction to the state boundaries with Poland.

The non-electrified single-track line departs from the main line Bratislava – Košice at the railway-station Margecany moving in direction to Červená Skala, Brezno and Banská Bystrica (the border of the region is signalised by the town Telgárt near Červená Skala).

An important railway node in the region is Košice. A double-track line leads from Košice to Plešivec and Zvolen (electrified only at the section of Košice – Haniska pri Košiciach). The crucial railway line running southward from Košice is the double-track electrified line Košice – Čierna nad Tisou (boundary with Ukraine), which is connected to single-track line going to Humenné and Medzilaborce (Polish borders; this line is electrified only in its segment Michalany – Bánovce nad Ondavou). An important railway node in this line is the city Humenné where the main line is adjoined by single-track non-electrified line from Prešov, Stakčín and Snina.

The passenger railway transport in the territory of Slovakia is managed by the Ministry of Transport and Construction of the Slovak Republic. Regarding the relatively large area of the concerned self-government regions and strong links between the regions, it is possible to administer the regional transport very efficiently thanks to the central ordering system. The regional transport in the territory of Košice and Prešov region is managed by the Slovak Railway Company /ZSSK/.

The powers of the KSR in the field of railway lines and transport involve the regional trains and city tracks. KSR can comment the creation of the timetables in the Slovak passenger traffic from the aspect of ensuring the adequate transport services for the region, villages, association of municipalities and city agglomerations.

Regional railway lines in the Košice Self-government Region where the railway transport is operated:

Track No. 160: Košice – Plešivec – (Zvolen)

Track No. 173: Margecany – Červená Skala







Track No. 180: Košice – Spišská Nová Ves – (Žilina)

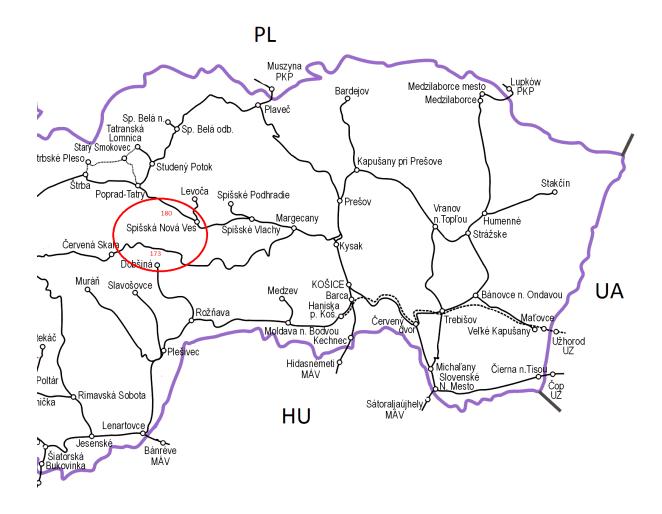
Track No. 188: Košice - Prešov - Plaveč - (Muszyna)

Track No. 190: Košice – Čierna nad Tisou

Track No. 191: Michalany – Strážske – (Humenné)

Tickets are available to buy personally at the railway stations or online through the internet shop, or through the mobile application.

Chart 10: Map of the railway lines



Source: http://www.zsr.sk, 2017







#### Cycling

Based on the survey from 2010/2011 carried out within the project "BICY — Cities and Regions of Bicycles" - it followed that the share of the cycling in the overall transport in Košice made 3 %, in Michalovce it was 6,1% and in Spišská Nová Ves 3,1% .

#### **Cyclotouristic infrastructure**

Under the mapping of the Office of KSR made in 2016, in the Košice Self-government Region there is a network of marked cyclotouristic tracks in total length of 1555,4 km. The condition of the cyclotouristic infrastructure in Kosice region is presented in the following charts showing the length of the respective cyclotouristic lines regarding the individual sub-regions.

Tab. 11: Length of the marked cyclotouristic tracks of the subregions of KSR in 2016

Subregion KSR	Red lines	Blue lines	Green lines	Yellow lines	Total
Spiš	120,40	283,90	136,20	58,9	599,4
Abov	105	60	78,1	6,5	249,60
Gemer	198,5	155,8	60,5	41	455,8
Zemplín	50	82	78,5	40,1	250,60

Source: Office of the Košice Self-governing Region, 2016

At the territory of the Košice Self-government Region there are cycling trails having first of all cyclotouristic character (cyclotouristic tracks). The existing cycling trails, however, do not fulfil the requirements of the efficient and safe traffic in the territory. The cycling trails are often isolated and out of the recreation locations, often leading on the existing road communications of 1st and 1Ind class where no conditions have been created for the safe cycling. The cyclotouristic lines leading out of the normal transport routes have in most of the cases not sufficient construction—technical technology that makes it impossible to use them all year round.

For that reason the Košice Self-government Region implemented in its territory in 2015 a "Survey study of the framework network of the cycling tracks in the Košice region", that defined the direction of the main long distance cycling corridors — branches in assumed length of 520 km. This framework network has been defined as cyclotouristic emphasizing the functioning transport services of the concerned territory. Its aim is to connect the most important touristic destination in the region with the touristic destinations of the neighbouring regions (Prešov and Banská Bystrica regions) and the neighbouring countries (Ukraine, Poland and Hungary). The basic axis of the network in the Košice Self-government Region will be made of the international long distance cycling route Eurovelo 11. It will consist of long distance cycling routes connected onto the existing local cyclotouristic networks. The elaborated draft contains also proposals of connections on the existing cyclotouristic network and lining-up sections on the transport services network.







#### Basic corridors:

#### **North-South axis**

**BRANCH A** - track EuroVelo 11 - connection Prešov - Košice - state boundary Hungary

**BRANCH B – Zemplínska cyklomagistrála / cycling route –** connection to Zemplínska Šírava – Tokaj region – links to Hungary

**BRANCH C – Gemerská** – connection of Slovenský kras and Slovenský raj – links to Prešov region , Banská Bystrica region, Hungary

## West – East axis

**BRANCH D – Hornádska -** connection of Košice and Slovenský raj, links to Prešov region

**BRANCH E – Abovská -** Slovenský kras – Zádiel – Košice – links to Banská Bystrica region

**BRANCH F – Tokajská** - Košice – Tokaj region – links to Hungary

BRANCH G - Dolnozemplínska – Zemplín (district) – Veľké Slemence – state boundary Ukraine

Chart 11: Framework network of the cycling tracks in the Košice Self-government Region



Source: Office of the Košice Self-governing Region, 2016

### **Air Transport**







The Košice Airport (codes of the airport IATA: KSC, ICAO: LZKZ) is an international airport in the City of Košice. It is the second largest airport in Slovakia as for the number of passengers and regular airlines.

It is situated in the city part Barca 6 km southward from the city centre in the altitude of 230 m over the sea level.

The area of the airport is  $3.5 \text{ km}^2$  and the total area of the terminal is  $4.456 \text{ m}^2$ , from which more than  $3.500 \text{ m}^2$  is reserved for the passengers. The biggest airplanes capable to land in the airport are the Boeing 767 and Airbus A300. The capacity is 700 000 persons annually, or thousand persons/hour. The number of the transported passengers in 2016 was at the level of 425 000 – 430 000 passengers.

### **Regular destinations:**

- Bratislava (Czech Airlines)
- Bristol (Wizz Air)
- Doncaster Sheffield (Wizz Air)
- Istanbul Ataturk (Turkish Airlines) from 16/06/2016
- Kyjev (Czech Airlines)
- London Luton (Wizz Air)
- Praha (Czech Airlines)
- Varsaw (LOT Polish airlines)
- Vienna (Austrian Airlines)

## **Regular seasonal destinations:**

- Burgas (Smartwings)
- Heraklion (Smartwings)
- Rodos (Smartwings)

#### **Charter destinations:**

- Antalya
- Burgas
- Catania
- Corfu
- Gran Canaria
- Heraklion
- Izmir
- Lamezia Terme
- Monastir
- Rijeka
- Rodos







- Thessaloniki
- Tirana
- Varna

#### http://www.kosiceletisko.sk/info/

The Airport Poprad-Tatry (in Slovak: Letisko Poprad-Tatry) (IATA: TAT, ICAO: LZTT), is an international airport in the Slovak territory. It is the airport situated in the highest altitude in Central Europe.

The international airport Poprad – Tatry makes thanks to its location an entrance gate to the region of High and Low Tatras region /Vysoké and Nízke Tatry/ providing for the tourists a wide range of services and experiences whether in the winter sport centres or in summer touristic resorts. The number of the transported passengers was 85 224 passengers in 2015.

## **Regular destinations:**

• London Luton (Wizz Air)

## Regular seasonal destinations:

- Riga
- Varšava
- Kyjev

### **Charter destinations:**

- Antalya
- Burgas
- Tirana
- Araxos

### http://www.airport-poprad.sk/

### Transport in the target territory Slovenský raj

The public transport in the target territory – Slovenský raj is based on the bus service and railway traffic. As for the accessibility of the territory, the international railway line Bratislava – Košice plays an important role which runs on the northern part of the territory. The Southern part of the Slovenský raj district is intersected by the railway line Margecany – Červená Skala. As for the accessibility of the target territory we can identify there two transport nodes. On the South – the city of Dobšiná, and on North-East the city of Spišská Nová Ves. Spišská Nová Ves has its own railway station and bus station, it has its city transport system also and there are taxi-service providers. The urban transport buses run also to the city part Novoveská Huta through Ferčekovce and village Smižany. The City of Poprad is also important from the aspect of the accessibility of the region, especially for the foreign tourists. Poprad has an international airport and a busy railway station







where the IC trains stop. However the bus services have the most connections in this target territory providing services for all the 16 villages and 2 cities situated here.

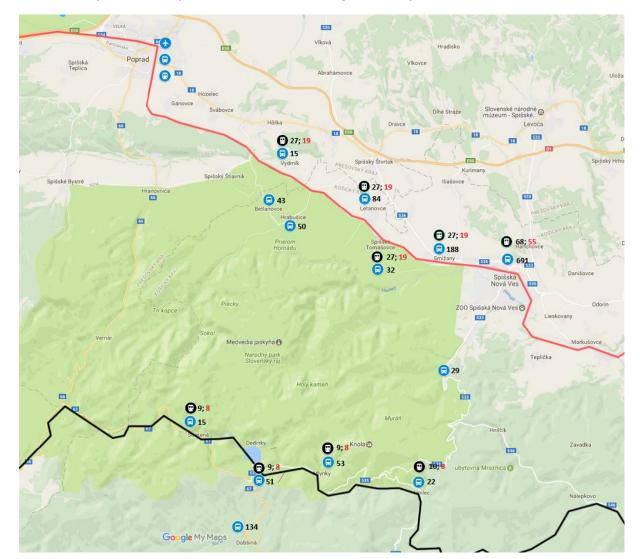


Chart 12: Map of the transport connections in the target territory

Bus; 
☐ - Train; 
☐ - international airport; 
☐ - number of connections in workdays; 
☐ - number of connections in weekend; 
☐ Railway line: Bratislava – Košice; 
☐ Railway line: Margecany - Červená Skala

Source: Own materials, map documentation: http://maps.google.sk/







# 4) Existing flexible transport services in tourism

At the territory of Slovenský raj and the whole Košice region there are only following categories of flexible modes of transport:

- 1) Shuttle seasonal/temporary (operates only seasonally or at specific occasions) with fixed route and stops, mostly small distances:
- seasonal seasonal summer and winter buses
- events event trains.
- 2) Sharing
- bikerental.
- 1) As an existing flexible transport service for tourists in the territory of Slovenský raj there are *summer buses* and *winter buses* (SKI buses). The initiator for introduction of these buses was the Regional Organization of Tourism Slovenský raj & Spiš (OOCR) and the offer was prepared in close cooperation with the bus operator Eurobus, a.s. Košice and the Transport Department of the Office of the Košice Self-governing Region.

The summer bus is designed for the tourists and visitors of the region Spiš and the adjacent destination Slovenský raj. It aims at strengthening the offer of the public transport among the touristic centres during the summer months July - August. The timetable of the summer buses has been summarised into comprendious travel guide and it was published in the bus stops, websites of the Regional Organization of Tourism and at the web-sites of the hotel service providers.

The SKI bus is designed for the skiers and tourists during the winter ski season. It was also initiated by the Regional Organization of Tourism Slovenský raj & Spiš (OOCR) in the winter time 2013-2014. In 2016 the SKI bus was substituted by connection riding within the regular public bus service. Its aim is to improve the accessibility of the ski resorts and attractive touristic sites.

The tourist destinations are also accessible by *the event train* that runs only for the previously specified events. For example the Košice Region Tourism organisation dedicated the 2017 year to UNESCO sites and prepared together with the OZ Detská železnica organisation (Childrens´ railway, non-profit organisation) nostalgic rides by trains to 6 UNESCO sites within the Košice region.

2) Bike rental is another type of flexible transport services that is available at the territory of Slovenský raj. Tourists can rent a bike at Podlesok, Čingov, Mlynky and Dobšinská Ľadová Cave with the possibility of returning the bike to any of these centers.

In the target territory there are also taxi services in Spišská Nová Ves and Dobšiná available. In the city of Spišská Nová Ves 12 taxis provide their services in three main localities: railway station, main post office and the bus-station. (http://www.spisskanovaves.eu). The City of Dobšiná has 1 taxi service company.













# 5) Plans and projects

- 5.1 Results of the previous projects in the field of flexible transport In the territory of the Košice Self-government Region no projects have been implemented so far aimed at flexible transport systems.
- 5.2 Existing systems of planning / action plans / concepts of mobility

  There are several strategic documents on the national, regional or local levels dealing with the concept of mobility. The most significant are the following:

#### Law 56/2012 Coll. - Law on road transport,

This law regulates the access to the profession of operator of road traffic, rules of entrepreneur activity in road traffic, providing regular transport services in the concerned territory, rights and duties of the transport companies and passengers in bus services and taxi services, conditions of transporting dangerous materials, public administration in road traffic. The law does not refer to the road traffic performed for own needs.

Plan of transport services – the content of the document has been defined in Law No. 56/2012 Z. z. (Law on road traffic). In order to provide the relevant transport services, the contracting party will make up a plan of transport serviceability and concludes with the transport companies contracts on services. During making the plan of transport serviceability the contracting party ordering services takes into consideration the justified requests of the public, the operated railway and bus lines and their transport capacity and the other capacity characteristics of the transport companies, the technical conditions of the roads along the operated buses, the capacity of the parallel railway traffic and the urban traffic, the economy of transport and financial opportunities of the public budget aimed at paying services performed in public interests. During the creation of the plan of transport serviceability the customer /KSR/ shall cooperate with the contracting party ordering the railway transport services in order to coordinate the capacity and operation alternatives in the railway transport and in the regular bus services. The contracting party shall work out a plan of transport serviceability in order to settle the efficiency and economy of ensuring the transport serviceability, especially the rational organisation of the regular transport services with purpose to minimize the concurrent transport services and to create functional continuity of the regular transport with the existing railway transport and the urban traffic. They have to support the integrated transport systems. The plan of transport serviceability shall be the basis for awarding transport licenses, concluding contracts on services and for drafting the timetables in regular transport services.

The plan of transport serviceability contains especially the following:

- a) list of bus lines or their parts where the regular public transport is implemented,
- b) requests of appropriate extent of the transport services,
- c) way of settlement of the parallel transport, measures of coordination and connectivity to the railway transport or the urban traffic,
- d) methods of calculation and a schedule of providing contributions from the public budget,







- e) possibilities of modification of the basic fare or awarding exclusive rights 36) to transport services on certain bus lines or certain bus-stops,
- f) goals and intentions of settlement of the disproportion of demand and offer in a certain territory including the needs of investments into car park, technical basis or organization of routes of the bus lines.

This time is being implemented the preparation of updating of the Plan of Transport Serviceability of the Košice Region.

Regional integrated territorial strategy of the Kosice region /RITS/- is a starting and implementation document for implementing the program IROP (Integrated Regional Operation Program). At the same time RITS presents an obligatory action plan of specific planned activities of IROP in the Košice region, defining specifically planned measures emphasizing the integrated approach to development of the territory. The document deals with the development of local and regional plans of the sustainable mobility as preconditions for the interventions into the transport system and also with ensuring the modern tariff, information and dispatching systems and implementing the ITS (Integrated transport system).

Marketing strategy of the destination Slovenský raj – The Strategy has been elaborated in harmony with the Strategy of development of tourism until 2020 (Ministry of Transport, Construction and Regional Development of the Slovak Republic) and Marketing strategy of the Slovak Tourist Agency /Slovenská agentúra pre cestovný ruch/ 2014 – 2020. The Marketing Strategy respects some other relevant documents also dealing with the territory of Microregion Slovenský raj. Within the strategy the topics of transport and accessibility are discussed in an independent chapter. The document, however, does not deal with the functioning of the flexible transport system.

Methodical guidelines to creation of plans of sustainable mobility (Ministry of Transport, Construction and Regional Development of the Slovak Republic - 2015). The Document deals with the content and structure of the Plan of sustainable mobility and it presents a certain handbook for preparation of the plan at the level of cities or regions. This document is linked to the GUIDELINES – Developing and implementing a Sustainable urban mobility plan (2014), The Poly-SUMP Methodology - How to develop a Sustainable Urban Mobility Plan for a polycentric region (2014). Based on the above document it is being prepared the elaboration of the Plan of sustainable mobility of the Košice Region.







# 6) Cooperation and Communication

The Regional Organization of Tourism - Slovenský raj & Spiš cooperates with the regional transport company Eurobus, a.s, with the Košice Self-government Region and the Regional organization of tourism — Košice Region, in order to increase the local mobility. The cooperation of the above stakeholders is inevitable from the financial and organization aspects and because of the legislative guarantee of the sustainable transport in the concerned territory. The Organization of Tourism provides especially information on demand and offer in the field of transport in the target territory, it ensures the marketing communication towards the tourists — potential passengers, and it takes part in financing some types of the transport. The Košice Self-government Region orders public services, provides financing of the transport system and it approves the timetables. It is the owner of the roads of IInd and IIIrd classes, and as the authority of the regional self-government, at the same time it is an important entity in the application of necessary legislative changes concerning the introduction of the flexible transport system.







# 7) Analysis of shortages and potentials (opportunities)

In the analysis of the shortages and potentials of the transport serviceability of the Slovenský raj district we are focusing on the following fields.

#### **Road Infrastructure**

The roads in the surrounding districts of Slovenský raj run mostly in difficult mountainous terrain with non-stabile slopes, and their construction - technical conditions are not optimal, especially regarding the fact that in the concerned area there are only road communications of Ilnd and Illrd class. It is unavoidable to build up there new supporting and frame walls, drainage systems and safeguarding premises. The climatic conditions are more complicated too, especially in winter time with negative impacts on the technical conditions of the roads. For these reasons the repairs and maintaining of the road communications are technically and financially difficult in this region.

The construction - technical conditions of the local road communications in most of the local villages located in Slovenský raj are in bad, emergency state - Hrabušice, Spišské Tomášovce, Vernár, Hnilčík, partly Telgárt and Betlanovce. They need repairs and new asphalt cover; no drainage systems have been built there for conducting away the rainwater. In the villages there are no pavements and no cycling routes. The related access roads from villages into the recreation localities are in poor conditions (Smižany – Košiarny briežok, Dedinky, access road to Dobšinská Maša). The main reason of poor conditions of the construction - technical conditions of the access roads into the touristic centres is the unsettled property rights relationships and the following limited possibility of financing the road repairs.

In Slovenský raj the tourists have at their disposal park and ride parking places in the following locations:

- Čingov near Lesnica 100 parking places, Čingov lower parking lot: 18 parking places and car park Ďurkovec (this time under reconstruction), in the territory of Sp. Tomašovce they need further 76 parking places,
- Podlesok 120 parking, Hrabušická Píla 35 places,
- Smižany Košiarny briežok 25 parking places with necessary construction of further 40 parking places in this location,
- Betlanovce needed 20 new places,
- Hnilčík 85 parking places, needed further 110, from which 70 at the Ski Centre Mraznica
- Dobšinská Ice Cave 250 parking places,
- Dedinky 205 parking places,
- Mlynky 140 parking places (120 at ski centre, 20 at motorest Hámor), 20 to built up next to the Municipal Office,
- at Ranč pod Ostrou Skalou 15 parking places,
- Vernár 50 parking places, further 50 necessary parking lots at the ski centre,
- Telgárt 300 parking places, further 230 needed from which 200 at the Recreation sport centre.







The overall capacity of the official public parking lots in Slovenský raj makes cca 1208, from which only 383 parking places are to find in its northern part; 85 places are in the far away situated Hnilčík. Based on the information given by the local villages, it is necessary to build up further more than 500 parking lots from which a large number is necessary in the northern part of Slovenský raj (see the above data).

In the territory of Slovenský raj there are parking lots near the hotels, pensions (near 300 premises). There are also some unofficial parking lots though increasing their total capacity, however negatively impacting the parking issues as being established in not suitable or not permitted places /locations. The parking places do not satisfy the needs of the tourists, especially in the mentioned Northern part of Slovenský raj.

#### **Transport**

From the aspect of bus services the surveyed villages are accessible by means of the regular bus lines. This is the basic means for travelling between the close cities in the region and entrance gates to Slovenský raj. The entrances to Slovenský raj and touristic centres are accessible by walking from the bus stops; in some cases the bus stops are located right next to the touristic centres.

The frequency of bus lines is insufficient especially in summer and winter touristic seasons, and the access to the tourist centres, especially in weekend days is very low. The overview of public transport in the destination identified a very few direct bus lines between the locations in the North and South of Slovenský raj. The shortest time of travelling from South to North, takes about three hours and in the opposite direction it makes cca 2,5 hours. The transport operator reasoning the extent of the bus transport services argued with the financial difficulty of the bus connections used by the passengers unevenly.

Recommendations of the villages for complementing the bus lines during the weekends, free days and holidays:

- Bus lines 810 435 at Čingov to complement in the afternoon by minimally one line, in the morning at 7.00 h. to Čingov and at about 17.00 h. back,
- Bus lines 810 438 shall be complemented (e.g. cyclobuses assisting to cyclists from North of Hrabušice to ride through route, e.g. Kopanec towards South of Slovenský raj) to add minimally one line, morning at 7.00 h. to and about 17.00 h. back,
- To tackle the line Košiarny briežok
- No complete line during weekends connecting Sp. Nová Ves, Košiarny briežok, Čingov, Sp. Tomášovce, Hrabušice and Podlesok,
- line 810 438 Hrabušická píla is absolutely insufficient, the existing single line is not sufficient, it is necessary to strengthen the line to centre Podlesok,
- change of the afternoon departure time of the line 810 433 to Dobšinská Ice Cave, to change to 8.00 h., and the departure of the line back shall be shifted to 15.00 h.,
- line 810 437 to Letanovce is insufficient, no weekend and holiday lines,







- to include into the timetable in months December March the SKIBUS on the route SNV Čingov – SNV – Mlynky and back,
- to consider the introduction of some tourists buses in the summer touristic season with the support of active transport connection of the northern and southern parts of Slovenský raj.

From the aspect of the transport accessibility to the destination Slovenský raj, we can state several important facts concerning the speed and opportunities of the tourists' access to the relevant destination:

- The quality and comfort of suburban bus transport fulfils the highest standards and in the last years it is constantly growing (renewed car park, lowfloor buses, monitoring through GPS, WIFI for the passengers, application Ubian, renovated all the signs at bus stops name of the stop, information on bus lines).
- In spite of the regular bus and train lines, the transport accessibility to the target destination is limited during the statutory and bank holidays, moreover also the existing lines show problems with insufficient marking of the Slovenský raj destinations in the relevant bus timetables.

From the aspect of the railway traffic the further development and improving of the transport serviceability is hindered by the fact that the timetables have been created on the national level with minimal possibilities to comment them by the local self-governments.

## Legislation

The barriers of improvement of the transport serviceability of Slovenský raj are the current valid legislation rules which do not allow the development of the flexible transport system. As far as the analyses of the flexible transport is defined as service operated only under the relevant request (i.e. if there is a demand), so the present legislation state of affairs enables the flexible transport only as:

- a) Taxi-services,
- b) Occasional transport services.

This service may be implemented only at commercial basis or it can be financed on the level of tourist organizations, or associations of entities doing business in hotel or touristic services.

The concerned traffic types face the following barriers in their practice:

- a) Absence of the organizer or coordinator coordinating with the other types of public transport,
- b) Economically not attractive for the operator, if there is no synergy with some other business activities,
- c) Financing from public resources is not possible (problematic integration of the system into the system of the public transport),
- d) difficult process of getting the necessary permissions for operating the public transport services, and
  - e) Absence of information platforms.







A significant conceptual solution might be the application of the elements of the flexible transport services within the system of the regular transport performed in public interest after some mild modification of the present laws.

- 1. Defining some rarely used regular bus connections as "dial-a-bus" would enable the more economical transport services, amendment of Decree No. 124 of Annex no. 3 by adding the informative sign "dial- a-bus".
- 2. Creating alternative routes of the regular bus transport and detours from the normal routes only if necessary, by amendment § 7 sect. 1 by point j) in wording "data on alternative routes of bus connection and detours provided only on request".
- 3. Allowing the co-financing of bus services as services carried out in public interest by amendment of § 21 sec. 2 of Law No. 56/2012 Coll. by deleting from the text: "recreational and touristic" or § 22 sec. 4 by amending it by the alternative to provide contribution from entrepreneur entities to support tourism by way of co-financing public services.

Regardless to the way of the implementation of the flexible transport services and the extent of its application in the territory of the Košice Self-government Region, the main aim is to integrate the elements of the flexible transport into the coordinated transport system providing complex transport services that will ensure the economical use of public resources, and in the best case scenario it will also provide unified tariff and information system.

In Košice Self-government Region there are prepared new projects aimed at improvement of the existing information system and applying the flexible elements in the regular bus service.

The implementation of the project "Tariff-information safeguarding of the integrated transport system", aims at drawing resources for the new bus service administration- and information system from the program IROP in amount of cca 6 mil. €. The new system besides the constant watching of the position of buses and registering the number of passengers getting on and off at the bus stops, will allow also the on-line communication with the information panels placed at the transfer busstops in order to inform the passengers in more detailed way.

Further planned projects from the program IROP, as for example the "Central dispatching system of Integrated Transport System, will enable the coordination of the transport services at the level of transport operators and the organizer of the ITS.







## 7.1 SWOT analyses of the transport servicebality in Slovenský raj

The following SWOT analysis aims at defining the most important variable quantities in tourism having impact on the transport serviceabilty of the territory of Slovenský raj. Drafting this analysis, we have taken into consideration the opinions and comments of several stakeholders acting in tourist industry, transport companies, entrepreneurs and representatives of the local and regional self-government authorities.







#### **Strengths**

- Partnership of Regional Tourism
   Organisation /OOCR/ + KSR + EUROBUS + villages
- existence of taxi-services in Spišká Nová Ves and Dobšiná
- Introducing shuttle buses as part of public bus services (ski bus and summer bus); 4 year experience in operating buses
- close location of international airports in Poprad and Košice
- wide network of local communications
- significant railway line Žilina Košice (see corridor)
- favourable distance from bigger Slovak cities (Košice cca 240 thous. citizens, Prešov 89 thous., Poprad 51 thous., Spišská Nová Ves cca 38 thous. citizens)
- near highway connections from North
- villages centres of entrance are relatively well-proportioned and connected with roads around and from inside, there is a transport connection of several transport modes
- built up network of park and ride parking places
- dense network of cycloturistic/cycling tracks in the destination with connection to cycling routes leading to wide vicinity

## **Opportunities**

- Creation of unified tickets within ITS
- implementation of regional cards (applying also in transport)
- founding a central dispatching ITS
- •synchronized Train Bus transport
- •starting the operation of steam locomotives on route Telgárt Červená skala
- development of integrated transport on the territory of KSR
- renewal of railway traffic Spišská Nová Ves - Levoča (as alternative form of transport)
- using the Kopanecká road for transport connection North and South of Slov. raj (as alternative form of transport)
- Extending the Ski bus and Summer bus traffic as a part of public traffic, or as a combination of public and private transport
- Change in behaviour of transport companies in relation to the passengers (willingness to help, advice)

#### Weaknesses

- bad road infrastructure
- insufficient marketing communication
- insufficient information transport system (absent infos at the highway D1)
- insufficient communication and cooperation of the entities responsible for development of transport and mobility
- absence of possiblities of transport of bicycles in coaches
- absence of railway connections SNV -Levoča
- insufficient connection of North South in the territory of Slovenský raj
- absence of connection of the local buses onto the trains
- need of strengthening the cooperation and communication with the public transport operators (KSR, PSR, BSR)
- lack of shuttle bus connection in weekends and holidays
- weak infrastructure of cycling traffic
- long duration of transport connections to Southern parts of Slovenský raj
- excessive load of parking places in days of high number of vistors

#### **Threats**

- unsuccessful iniciative of legislative changes concerning mobility
- railway transport directively limited from the state (Slovak Railway Company/ŽSSK)
- complicated conditions of mountainous terrain during the reconstructions of roads
- insufficient financial means for renewal and development of transport infrastructure
- •complicated property settlement of the lands needed for the development of the transport infrastructure







Source: Own work

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This material was issued by the Agency for the Support of Regional Development Kosice, n.o., Strojárenská 3, 040 01 Košice, <u>www.arr.sk</u>

Published within the project LAST MILE - Sustainable mobility for the last mile in tourism regions (Posledná míľa - Udržateľná mobilita pre poslednú míľu v turistických regiónoch), financed from the program of the European Union Interreg Europe and implemented in partnership of the following organizations:

Environmental Agency, Austria (lead partner)

East Tyrol Regional Management, Austria

Agentúra na podporu regionálneho rozvoja/ Agency for the Support of Regional Development Kosice, n.o., Slovensko

Club "Sustainable Development of Civil Society", Bulgaria

Government of Catalonia, Spain

Upper Sûre Nature Park, Luxemburg

Regional Office for Spatial Planning of Westpomeranian Voivodeship, Poland

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