



ACCESS2MOUNTAIN

**Sustainable Mobility and Tourism in Sensitive Areas of the
Alps and the Carpathians:
NARROW GAUGE RAILWAYS IN THE KOŠICE AND PREŠOV
REGION - GOOD PRACTICES**

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TABLE OF CONTENT

1	Basic information about regions	4
1.1	Košice Self-governing Region	4
1.1.1	Tourism.....	4
1.2	Prešov Self-governing Region.....	6
1.2.1	Tourism.....	6
2	Tatra Electric Railway	8
2.1	Traffic data.....	8
2.2	Integration and coordination	10
2.3	Transportation of passengers.....	11
2.3.1	Transportation of passengers pupils	12
2.3.2	Transportation of passengers commuters.....	13
2.3.3	Transportation of passengers tourists and traveling in leisure time.....	14
2.4	Organisation structure and co-operation of partners.....	15
2.4.1	Co-operating partners	16
2.5	Infrastructure and supplementary facilities.....	16
2.6	Costs, finance and investment	17
2.7	Marketing and information	18
2.8	Particular questions.....	19
2.8.1	Experience in managing traffic peaks.....	19
2.8.2	Bicycle transport and carrying luggage	19
2.8.3	Transport information	19
2.9	Conclusion on Tatra electric railway	20
3	Children’s railway	21

1 BASIC INFORMATION ABOUT REGIONS

1.1 Košice Self-governing Region

This administrative region was established in 2001 and includes some historical areas: Gemer, Abov, Spiš, Zemplín. It is the second most populated region with 760 000 inhabitants in 440 villages and seventeen towns. With 6 752 square kilometers it is the fourth largest region in the Slovak Republic.

1.1.1 Tourism

Košice region is multicultural area with many traditions and rich history. You can find there European Capital of Culture, mountains with unique caves and also the most beautiful English park in Slovakia.

1.1.1.1 Nature potential for tourism

You can find there two national parks – Slovak Paradise, Slovak Karst and two protected landscape areas – Latorica (unique alluvial forests complex) and Vihorlat (volcanic mountain). National Park Slovak Karst is the largest karstic area in the middle Europe. There are 1 100 caves and abysses, which were inscribed into the List of the World Cultural Heritage of the UNESCO. Košice region has the most caves which are open to the public in Slovakia – Dobsinska ice-cave, Domica, Ochtinska aragonite cave, Gombasecka cave, Jasovska cave a Krasnohorska cave.

1.1.1.2 Thematic routes in the Košice region

Via Gothica - The Gothic Route is the first thematic route which contents culture and history of two historic countries of Spiš and Gemer. The most interesting monuments are: St. James's Church in the town of Levoča, Spiš Castle, Roman Catholic Church in Žehra, The Krasna Horka Castle, The Manor House Betliar, evangelistic church in Štítnik and Roman Catholic Church in Chyžné. The Gothic route goes through some interesting and protected landscape areas. They include many natural phenomena inscribed into the UNESCO list.

Via Ferraria - The Iron Route connects areas of former ore mining or manufacturing iron and other metals. The Iron Route is the part of The European Iron Route. It presents mining and ironworks tradition of the region to the tourists. The rich history of Gemer is initially associated with the use of mineral resources in Slovak Ore Mountains. Region of Gemer like the most important producer in the former Kingdom of Hungary was called The Iron heart of Europe.

The unique Tokaj wine presentation of the Slovak part of the Tokaj viticultural regions, vine growing and processing of grapes and technological aspects of the Tokaj wine production, has led to the establishment of The **Wine Route - Via Vinaria**. The Wine Route is connected particularly with Tokaj wine region. It runs from the town Trebišov, continuous through villages of The Tokaj region: Bara, Černochoch, Malá Trňa, Slovenské Nové Mesto, Veľká Trňa a Viničky. Vine varieties like Furmint, Lipovina, and Yellow Muskat are grown in this viticultural area. From these varieties are made dry, sweet or varietal wines.

1.1.1.3 Cultural potential for tourism

The capital of The Košice region is the town Košice – centre of trade, craft, culture and education throughout the region. Košice is the second biggest city in the Slovak Republic with many historical

monuments. The centre of the city is the biggest Town Monument Reserve of Slovakia. The dominant of the town is the monumental Gothic Cathedral of St. Elisabeth. It is the easternmost situated Gothic cathedral of western type in Europe. Together with St. Michael Chapel and Urban tower form a complete unique Gothic set of the monuments. The symbol of Košice is the statue of the Marathon Runner. It reminds that the International Peace Marathon is organized in Košice every year in autumn. It is one of the oldest marathons in the world. The famous Košice Gold Treasure is situated in the Eastern Slovakia Museum. The unique collection of golden coins comes of 81 mints across Europe. The majority of coins are from the 15th to 17th centuries. The overall weight of the hoard is 11 kilograms.

Some of the interesting cultural, historical and technical monuments:

- The Krasna Horka Castle,
- The Manor House in Betliar,
- Children's Railway in Čermel' Valley with historical steam locomotive and vehicles,
- Monastery complex of the Premonstratesians in Jasov.

In summary 346 tourist accommodation facilities in Košice region were used by more than 289 400 visitors, thereof 33,5% of foreign visitors.

Table 1 Regional tourism in numbers - Košice region

	2011
Number of tourist accommodation facilities	346
Number of visitors	289 435
- domestic	192 413
- foreign	97 022
Overnights	618 308
- domestic	408 791
- foreign	209 517
Accommodation revenues (EUR)	15 559 000
Average number of nights	2,1
The use of permanent beds*	11,7%

Source: Statistical Office of the Slovak Republic

Note: The use of permanent beds records the important differences between districts. While the districts of Košice VI and Košice I. exceeded 23 and 26%, district of Sobrance (2.3%), district of Michalovce (5.0%) and district of Gelnica (6.2%) are well below the average.

1.2 Prešov Self-governing Region

This administrative region was established in 2001. It is situated in north-eastern part of Slovakia. Prešov region is the most populated region (801 939 inhabitants) between 8 administrative regions of The Slovak Republic. It is the second largest region with 8 974 square kilometers. It includes historical regions of the Northern, Middle and part of Southern Spiš, Upper and Lower Šariš and Upper Zemplín. There are 666 villages and 23 towns.

1.2.1 Tourism

The Prešov region has good conditions for the tourism – historical monuments, many providers of tourism and also natural phenomena. Big importance in this region belongs to the The High Tatras National Park– beautiful mountains in the north of Slovakia. Many parts of Prešov region belong to regions or areas with international importance in terms of tourism.

The Prešov region is known as a region full of tourist attractions and monuments, with natural or cultural potential. More than quarter of all cultural monuments of Slovakia is situated in this region.

1.2.1.1 Natural potential for tourism

The High Tatras National Park is the most attractive area in Slovakia. The tallest mountains of Slovakia are in fact the smallest in Europe in terms of area. However, as far as natural assets are concerned, they are among the most interesting in central Europe. We can find beautiful nature, tall peaks, and lovely high-mountains lakes and many hiking paths in this area. It attracts thousands of hikers, climbers and skiers each year, especially in summer (hiking, climbing) and winter (skiing) season. The tallest mountain of Slovakia is Gerlach peak (2 654 m). Symbol of the country though is the mountain Kriváň (2 494m).

The National Park Pieniny and the National Park Slovak Paradise are nature phenomena of the region Spiš. The National Park Pieniny and polish National Park Pieniński were part of the first international national park in Europe. Slovak Paradise National Park includes one of the biggest ice caves in Europe – Dobšinská Ice Cave –extremely interesting tourist showplace.

Another unique tourist attraction, Primeval Beech Forests of the Carpathians as the part of Eastern Carpathian Mountains located in the Prešov region, is inscribed to the list of UNESCO World Heritage.

The Prešov region is also the region of spas, with more than 400 mineral and hot springs. The most popular spas are situated in the northern part of region –Bardejov spas and Spas Vyšné Ružbachy, well-known thanks to their unique travertine quarry.

1.2.1.2 Cultural potential for tourism

The cultural and administrative metropolis of Prešov region is the city of Prešov. It is the third biggest city in Slovakia. The buildings in the historic centre are parts of the Town Monument Reserve. Roman Catholic St. Nicholas Church from the mid-14th century creates dominating factor of the city. The most valuable buildings are the Rákóczi Palace and Greek-Catholic Cathedral of St. John the Baptist from 18th century. Other attractions of the Prešov region:

- › The town Bardejov with its historical centre – part of UNESCO World Heritage

- › Spiš Castle (the largest medieval castle in the central Europe), little town Spišské Podhradie, church town Spišská Kapitula, the Gothic Church in Žehra – UNESCO cultural heritage
- › The town of Levoča – the biggest wooden altar in the world
- › The town castle in Kežmarok
- › Stará Ľubovňa Castle from 14th century
- › Carthusian monastery in Červený Kláštor (Red monastery)
- › Opal mines in Dubník
- › Salt mines in Prešov
- › Andy Warhol Museum of Modern Art in Medzilaborce

According to the data of 2011 there were 551 accommodation facilities situated in the region, used by 618 500 visitors per year.

Table 2 Regional tourism in numbers - Prešov region

	2011
Number of tourist accommodation facilities	551
Number of visitors	618 470
- domestic	402 521
- foreign	215 949
Overnights	2 027 582
- domestic	1 347 375
- foreign	680 207
Accommodation revenues (EUR)	39 095 005
Average number of nights	3,3
The use of permanent beds*	26,4%

Source: Statistical Office of the Slovak Republic

2 TATRA ELECTRIC RAILWAY

The High Tatras area is the most popular touristic centre not only in the Prešov region but also in whole Slovakia.

Indispensable part of this area for the travelling visitors is Tatra Electric Railway (TER) and Rack Railway (RR). Both of these railways together create transport backbone of this important tourism area and they are described further as a single entity (called TER in further).

The biggest advantages of railway transport in High Tatras, represented by TER and RR systems, are mainly environmental dimension and capacity for many passengers. Where in the summer season two standard train sets cope with 440 passengers in 30 minutes interval, this is the capacity of 5 or 6 regular regional busses.



Picture 1 Tatra Electric Railway

2.1 Traffic data

The Tatra Electric Railways serve the transport on these tracks:

- Poprad-Tatry - Starý Smokovec - Štrbské Pleso,
- Starý Smokovec - Tatranská Lomnica.

The transportation is provided by modern low-floor electric train sets according to the highest European standards. Modular electricity unit no. 425.9 (first of the series) started drive in 2000. Together there are

15 low-floor trains set on tracks today between towns and places: Poprad – Štrbské pleso – Starý Smokovec – Tatranská Lomnica, with capacity of 200 passengers each.

Rack Railway, as a part of the system, transports tourist between stations Štrba and Štrbské Pleso – very important tourist point in High Tatras.

On the Tatra Electric Railway and Rack Railway tracks there is a self-service departure system implemented. To improve quality of services on the tracks with this system, some of trains are occupied by special train personnel. In such cases it is possible to buy tickets from the personnel.

Table 1 Description of TER and RR stops

Station	Length	Number of stuffed stations	Number of stops
Poprad – Štrbské Pleso	29 km	6	15
Starý Smokovec – Tatranská Lomnica	6 km	2	6
Štrbské Pleso – Štrba	4,8 km	2	3

Source: ZSSK, a.s. (Railway Company Slovakia)

Transport time between the first and the last station (Poprad – Štrbské pleso) takes 1 hour and 13 minutes by train. In compare with car journey it takes two times longer (approximately 30 minutes) between these stations.

On the other track between Starý Smokovec-Tatranská Lomnica it takes 14 minutes by train, where 10 minutes is needed when using a car. Lower difference between Rack Railway and car transport is between stops Štrbské Pleso and Štrba. It takes 15 minutes by train, and 13 or 14 minutes by car.

Table 2 Description of the trains according to connections

Station	Number of low-floor vehicles	Low-floor trains/are suitable for wheelchair users	Number of pairs of trains Mo-Fri/Sa/Su	Number of pairs of trains in fixed services Mo-Fri/Sa/Su
Poprad – Štrbské Pleso	12	100%	20/19/19	20/19/19
Starý Smokovec – Tatranská Lomnica	2	100%	19/18/18	19/18/18
Štrbské Pleso – Štrba	1	0%	16/16/16	8/8/8

Source: ZSSK, a.s. (Railway Company Slovakia)

All these train's sets are used by Tatra Electric Railways (including RR) since 2000. The number of vehicles is the maximum number of vehicles without back-up vehicles.

All of train's sets on the track Poprad – Štrbské Pleso and Starý Smokovec – Tatranská Lomnica are suitable for wheelchair users. The train's set of the Rack Railway between stops Štrbské Pleso –Štrba is not suitable for wheelchair users yet.

Table 3 Trains with fixed interval services

Station	Percentage of trains in fixed interval services: Mo-Fri/Sa/Su	Vehicles suitable for wheelchair users	Travel time between the terminals by train	travel time between the terminals by car
Poprad – Štrbské Pleso	100%/100%/100%	100%	1 hod. 8 min.	30 min.
Starý Smokovec – Tatranská Lomnica	100%/100%/100%	100%	14 min.	10 min.
Štrbské Pleso – Štrba	50%/50%/50%	0%	15 min.	13 min.

Source: ZSSK, a.s. (Railway Company Slovakia)

Tatra Electric Railways can be described as very precise. Regular transport with low fluctuation in travel time belongs undoubtedly to their strengths. Accuracy of trains measured by train's operator is admirable:

- Štrbské pleso 99,81%,
- Starý Smokovec 99,9%.

According to train kilometers on the tracks Poprad – Štrbské Pleso a Starý Smokovec – Tatranská Lomnica in six years transport system operates relatively stable. This attribute means a very important precondition for regular and reliable transportation of passengers to the area of High Tatras.

Table 4 Transportation of passengers in the number of train kilometers

Train-kilometers	2005	2006	2007	2008	2009	2010
TER- Poprad – Štrbské Pleso	401 375	400 679	395 701	405 447	400 463	418 916
TER - Starý Smokovec – Tatranská Lomnica	75 480	75 504	71 280	72 060	70 992	69 810
RR - Štrbské Pleso – Štrba	78 505	73 530	51 810	55 650	56 740	62 980

Source: ZSSK, a.s. (Railway Company Slovakia)

2.2 Integration and coordination

All of Tatra Electric Railway trains timetable (including Rack Railway) is coordinated with long-distance network trains.

Base on internet information it can be concluded, that:

- At the station Poprad-Tatry 13 out of 40 trains have a possibility to change to or from trains of the long-distance network within 15 minutes.
- At the station Štrba 11 out of 32 trains have a possibility to change to or from trains of the long-distance network within 15 minutes.

Table 5 Overview of coordination transportations passengers

Operator / transporter	TER	RR	Long distance trains	Regional trains	Bus line
Tatra electric railway (TER)	ŽSSK, a.s.*	A	B	C	D
Rack railway (RR)	A	ŽSSK, a.s.	B	C	D
Long-distance trains (Inter city, Euro city, express)	B	B	ŽSSK, a.s.	C	D
Regional railways	C	C	C	ŽSSK, a.s.	D
Bus line	D	D	D	D	Regional companies

Source: ZSSK, a.s. (Railway Company Slovakia), own processing

**ZSSK, a.s.: Railway company Slovakia – operator of trains in Slovakia.*

A - Closed common tariff system - coordination connections, times and fares

B – Separate tariff system – good coordination connections and times

C - Separate tariff system – coordination connections and times

D - Separate tariff system - weak or no coordination

Integration and coordination of train timetables in the Tatra Electric Railways allows numbers of tourists to travel to High Tatras smoothly and without complicated transfers. This system makes packages of transport services and tourism services more attractive.

The coordination of transportation costs between Tatra's railway and long distance network makes possibility to create an advantageous tariff. The tariff system of long-distance network and Tatra's railways is separated these days. (Separate tariff has Tatra Electric Railway and also Rack Railway).

According to the railway operator, transportation should be extended in rush hours. It is necessary particularly in the summer season. When Intercity arrives from Bratislava to High Tatras it is impossible for one Rack train set takes all the people. Despite of shorter intervals between trains (from 60 minutes to 30 minutes interval) they have to wait for the next one.

Coordination with regional transportation has to be improved, especially between buses and trains and coordination tariffs between them. It does not currently exist.

2.3 Transportation of passengers

Tatra Electric Railway and Rack Railway are designed only to transport passengers. Their train sets are not intended for freight traffic.

Development in numbers of passengers in 2005 – 2011 is more evident than it is for train-kilometers. Although number of usual tickets sold was lower – meaning fewer passengers, this decline was compensated on the other hand by increased sale of time sheets in 2005 – 2008. Nevertheless, in 2009-2010 sale of both decreased due to world economic and financial crisis and because of bad weather conditions as well.

Table 6 Number of transported passengers

Ticket type	2005	2006	2007	2008	2009	2010	2011 *
TER	1 399 203	1 288 193	1 170 944	1 140 623	989 428	978 400	1 344 588
Time tickets TER	100 721	211 620	285 179	319 064	290 096	283 206	436 914
Overall TER	1 499 924	1 499 813	1 456 123	1 459 687	1 279 524	1 261 606	
RR	307 244	221 826	198 713	187 938	178 410	186 764	
Time tickets RR	78 520	114 037	114 434	101 997	94 432	96 231	
Overall RR	385 764	335 863	313 147	289 935	272 842	282 995	
Overall TER a RR	1 885 688	1 835 676	1 769 270	1 749 622	1 552 366	1 544 601	1 781 502

Source: ZSSK, a.s. (Railway Company Slovakia)

Because of tourist orientation of the region and because of the data in 2005-2010 it is evident, that the Tatra railways (TER and RR) are important supporting element for tourists transport from and to High Tatras.

Table 7 Number of transported passengers (person-kilometers)

Ticket type	2005	2006	2007	2008	2009	2010	2011 *
TER	17 480 265	16 193 732	15 192 044	15 156 339	13 248 040	13 049 165	16 134 721
Time tickets TER	1 442 180	3 083 030	4 180 360	4 666 970	4 260 890	4 158 980	5 512 278
Overall TER	18 922 445	19 276 762	19 372 404	19 823 309	17 508 930	17 208 145	
RR	1 360 780	1 037 620	938 204	899 119	839 531	891 391	
Time tickets RR	315 024	459 548	464 040	415 622	382 831	390 022	
Overall RR	1 675 804	1 497 168	1 402 244	1 314 741	1 222 362	1 281 413	
Overall TER and RR	20 598 249	20 773 930	20 774 648	21 138 049	18 731 292	18 489 558	21 646 999

Source: ZSSK, a.s. (Railway Company Slovakia)

Note: The data in 2011 are presented together for TER and RR. It is because of creating of one tariff system for tickets and time tickets from the 1st of November 2011 on.

According to preliminary results of 2011, number of transported passenger increased and returned to the level in 2009 - before global economic and financial crisis. This status does not changed only thanks to improving economic situation, but according to available information of previous years, it can be attributed to the significantly better weather conditions in the summer 2011. This season was very generous to hiking – attractive and desired activity in High Tatras.

2.3.1 Transportation of passengers | pupils

From the total 44 000 passengers in 2010, there were approximately 3,40% pupils on Tatra Electric Railway and approx. 0,52% of them on the Rack Railway. Currently there is not study of the catchment area of pupils.

Table 8 Number of transported pupils

Type of ticket	Year	
	2010	2011
TER – pupils tickets	42 753	45 284
RR – pupils tickets	1 476	2 332
Overall pupils tickets	44 229	47 616

Source: ZSSK, a.s. (Railway Company Slovakia)

These are the main forms of attracting and retaining pupils as target group of passengers (pupil's benefits):

- Lower pupils ticket price compared with adult tickets and time tickets,
- Special transportation package in cooperation with partners (for example Train and Little Train).

The train operator does not use customer advisors. The marketing department works with the public sector (schools, towns, etc.) and looks for the ways how to attract this group of customers.

2.3.2 Transportation of passengers | commuters

Tatra Electric Railways and Rack Railways carried approximately 430 000 commuters in 2011. It is less than 25% of total number of passengers. In numerical value it is same level as in 2008 – before economic crisis.

Decrease in numbers of commuters was not significant as decrease in number of tourists. Currently there is not study of the catchment area of commuters.

Table 9 Number of commuters

	2005	2006	2007	2008	2009	2010	2011 *
TER time tickets	100 721	211 620	285 179	319 064	290 096	283 206	436 914
RR time tickets	78 520	114 037	114 434	101 997	94 432	96 231	

Source: ZSSK, a.s. (Railway Company Slovakia)

Efforts which are being undertaken to attract and retain commuters as passengers on their way to work are as follows:

- Favourable tariff policy with time tickets ,
- Reliable regular transportation,
- Connectivity of Tatra railways with regional and long-distance trains,
- Communication with regional government, municipalities, employers, etc., in terms of timetable or tariff policy adjustments.

Table 10 Percentage of commuters on the total number of passengers

	2005	2006	2007	2008	2009	2010	2011 *
TER – time tickets	6,72%	14,11%	19,58%	21,86%	22,67%	22,45%	24,53%

RR – time tickets	20,35%	33,95%	36,54%	35,18%	34,61%	34,00%	
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Source: ZSSK, a.s. (Railway Company Slovakia)

The operator of the rail does not work with customer advisors for this group of passengers. The marketing strategy for commuters is mainly retaining the number of passengers, what is connected with the public character of railway transport. Tatra railways operator carries out transport services for the public interest also in this case. To attract more commuters there are particularly special offers being prepared and realized - railways operator creates benefit packages for commuter to motivate them travelling in their free time more often. These benefit offers are part of the same marketing strategy as for tourists passengers group.

2.3.3 Transportation of passengers | tourists and traveling in leisure time

This study describes that the main customers of Tatra railways are tourists and visitors of High Tatras. Tourists are the biggest group of passengers. According to questionnaires, Tatra Electric Railway and Rack Railway transported more than 1 million tourists in 2011.

Table 11 Number of tourists on the total numbers of passengers (According to questionnaires)

	2005	2006	2007	2008	2009	2010	2011
Number of tourists	1 083 328	1 054 596	1 016 446	1 005 158	891 834	887 373	1 023 473

Source: ZSSK, a.s. (Railway Company Slovakia)

Number of transported tourist is relatively stable in season 2005-2011. Significant difference between season 2009 and 2010 was caused by already mentioned factors – world economic crisis and bad weather conditions.

Weather conditions argument is based on the fact, that the High Tatras are a popular destination for tourism, summer tourism, and a wide range of winter activities. **In terms of traffic and the number of rail passengers, summer season is more significant for Tatra railways.** That's why numbers of visitors and tourists traveling by Tatra railways depends considerably on the effects of the weather during the summer months.

Currently there is no study on modal split in the catchment area for passenger group of tourists.

The train operator offers active measures to attract tourists and makes many benefit packages. The main feature, also during the year 2011, was build upon the use of various forms of preferential packages connecting transport with tourism products and services in the area. Current and past special offers were created directly by operator of Tatra railways, in collaboration with its partners:

- **Facilitation of travel:** the form of benefits associated with accommodation, catering and recreation, connection to the long distance train transport
- **Getting tourists during their stay in the region (regardless of the arrival by train or other transportation):**
 - o By the means of appropriate tariff policy
 - o Time network tickets on Tatra railway also for shorter periods

- **Getting visitors of cultural and recreational facilities:** benefits for passengers in collaboration with partners.

Tatra Electric Railways and Rack Rail tariffs have tariffs separated from the system of usual Slovak railways (country-wide network) – having own closed system. The tariff for basic tickets in this closed system is uniform.

Activities of the railways are aimed on the provision of passenger transport. The operating company **does not provide a special tourist services**. There can be found the transportation of bicycles and e-bikes in the basic service.

A significant shift was reported concerning activities in support services along with partners in the region to create various forms of benefits and combined offers – starting from discounts, up to comprehensive packages of products and services in tourism. To create packages of services and benefits operator of Tatra Railways collaborates and communicates with:

- Local and regional government
- Providers of tourism services
- Local and regional tourism associations..

The aim of collaboration is to improve the quality of passenger services, and also tourist visitors of High Tatras. A very important step in this direction there was a **discussion on modifications to the timetable** with linked transport systems of public transport (especially train) and setting the interconnections of lines.

Supplementary information:

- Near the Tatra electric railways there are no shops of more than local significance
- Railways are used by leisure travelers for the purpose of usual purchases, visits and other common activities. There are currently no special offers on supplementary services and products, which would increase interest in transport during low-traffic periods.

2.4 Organisation structure and co-operation of partners

The Railway Company of Slovakia (ZSSK) is today's operator of the Tatra Electric Railway and Rack Rail, as it is also a rail transport operator in Slovakia. It forms but only one part of the whole railway system in the country.

From January 1st 2002, the original system as a single unit of Slovak railways owned by the state was split into two separate entities

- Railways of the Slovak Republic (ZSR) and
- Railway Company

On the 1st of January 2005 Railway Company was further divided into:

- Railway Company Slovakia, ensuring passengers transport and
- Cargo Slovakia Railway Company, ensuring freight transport.

In terms of ownership – Slovak Republic is the founder and 100% shareholder of Railway Company Slovakia. Legal rights of the state as a shareholder are managed by The Ministry of Transport, Construction and Regional Development of Slovak Republic.

2.4.1 Co-operating partners

In the area of cooperation with partners of Tatra railways the most important are as follows:

- Tourism associations,
- Municipalities,
- Prešov region (the office of higher territorial unit),
- The operator of cable rail and operator of geothermal park,
- Railways of the Slovak Republic (administrator of transport routes, railways stops and stations).

In years 2005 - 2010 operator of Tatra railways marked as the most important of these partners tourism associations and municipalities. Regarding Tatra railways operators of cable rail and geothermal park belong to important ones. Collaboration with all partners is visible both in the form of co-operation of transport systems and also in the form of services package offered (see part *Transportation of passengers* /).

In order to develop better services and more efficient use of the Tatra railway operator intends to further develop and expand the existing cooperation, and deepen cooperation with other partners. Among the region's key partners in this respect belong especially these:

- Town of High Tatras,
- Tourism Association of High Tatras,
- Hotel and Restaurant Association of Slovakia,
- Regional Tourism Organisation - High Tatras.

2.5 Infrastructure and supplementary facilities

Infrastructure used by Tatra Railway trains (including the rack rail) is under the administration of the Slovak Railways (ZSR).

At present **management and operation of railway corridors infrastructure** - and administration of routes, stops and train stations – is outside of the direct competence of the current operator - Tatra Railway (ZSSK). All activities associated with infrastructure are addressed in the supplier-customer relationships.

In terms of cooperation of both companies we can also speak of functioning partnership. Railway Company Slovakia, as a train operator takes the initiative to communicate development issues of rail infrastructure to improve services for passengers - tourists. The problem of unrealized investments in the development of stops and stations, in order to increase their attractiveness to tourists as a starting point for hiking and cycling, has been especially financial issues. Although Slovak Railways company currently implements Slovak Railways Station revitalization projects. Railway stations Štrbske Pleso and Tatranska Lomnica are planned for 2012 among others as a subject for revitalization.



Picture 1 TER and Štrbské Pleso station

Among the activities initiated by the operator of the Tatra Railway there is also development of other infrastructure - building "parking" for bicycles, long-term parking for cars (especially at the railway station in Poprad).



Picture 2 Starý Smokovec station

2.6 Costs, finance and investment

The most important investment in the development of railways has been a fundamental change and modernization of track vehicles in 2000. In the area of Tatra railway trains operation in recent years capital expenditures were directed primarily to the maintenance and repair.

The expenditures towards improving services for passengers were assigned to installation of self-service ticket vendors as well as into the development of electronic forms of their sales (as a mobile application). The following development activities are sought primarily to improve stops and railway stations.

Financing investment in the development of rails is the responsibility area of the tracks operator - Railways of the Slovak Republic (see part *Organisation structure and co-operation* of partners

The Railway Company of Slovakia (ZSSK) is today's operator of the Tatra Electric Railway and Rack Rail, as it is also a rail transport operator in Slovakia. It forms but only one part of the whole railway system in the country.

From January 1st 2002, the original system as a single unit of Slovak railways owned by the state was split into two separate entities

- Railways of the Slovak Republic (ZSR) and
- Railway Company

On the 1st of January 2005 Railway Company was further divided into:

- Railway Company Slovakia, ensuring passengers transport and
- Cargo Slovakia Railway Company, ensuring freight transport.

In terms of ownership – Slovak Republic is the founder and 100% shareholder of Railway Company Slovakia. Legal rights of the state as a shareholder are managed by The Ministry of Transport, Construction and Regional Development of Slovak Republic.

2.6.1 Co-operating partners

In the area of cooperation with partners of Tatra railways the most important are as follows:

- Tourism associations,
- Municipalities,
- Prešov region (the office of higher territorial unit),
- The operator of cable rail and operator of geothermal park,
- Railways of the Slovak Republic (administrator of transport routes, railways stops and stations).

In years 2005 - 2010 operator of Tatra railways marked as the most important of these partners tourism associations and municipalities. Regarding Tatra railways operators of cable rail and geothermal park belong to important ones. Collaboration with all partners is visible both in the form of co-operation of transport systems and also in the form of services package offered (see part *Transportation of passengers* /).

In order to develop better services and more efficient use of the Tatra railway operator intends to further develop and expand the existing cooperation, and deepen cooperation with other partners. Among the region's key partners in this respect belong especially these:

- Town of High Tatras,
- Tourism Association of High Tatras,
- Hotel and Restaurant Association of Slovakia,
- Regional Tourism Organisation - High Tatras.

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2.7 Marketing and information

Tatra railway operator has not set a marketing budget specifically for Tatra electric railway or rack railway, but only onto the whole rail network across the country.

Marketing activities for the Tatra railways past 6 years made significant progress and the train operator is already very close to modern methods of approach to customers - travelers and tourists to the High Tatras.

The most important steps in marketing can be summarized as follows:

- **In the area of product**

An important aspect of marketing activities is already mentioned cooperation with partners in the region who are part of creating a package of products and services - in the form of combined tickets for sports and cultural events.

- **The distribution**

- Increasing the availability of ticket sales through the self-dispatch system,
- Network of partner sites to sell personal tickets (kiosks, hotels, and others)
- Efforts to reduce the operating costs by personal tickets sale and moving to self-service electronic forms - which are closer to the customer.

- **In terms of pricing policy**

- TER and OZ are closed tariff system from the nationwide network. To address the transportation needs of rail customers using two main pricing tools:
- **The network travel pass** - serves to discount travel on the lines of Tatra electric railways and rack railway. It is possible to buy a ticket for a whole network for time period, which is available for unlimited trips on selected lines, or their combinations. Network time ticket is recognized in the periods of validity of 1, 3, 7 days and monthly.
- **The monthly subscription ticket** - The operator of railways in the High Tatras offers the opportunity to travel cheaper using forms of a monthly ticket on the network. This allows passengers to travel on these lines any number of ways for one month.
- Both of these tariff instruments are available to commuters, as well as a tourists group of passengers and leisure travelers.

- **The promotion and information activities**

- The use of standard promotional tools, including website development and use of modern forms (social networks, mobile phones),
- Informing regular customers through the newsletter,
- Information line on provided services - not only for Tatra Railway, but also for the entire passenger rail network in Slovakia,

- On a smaller scale - participation in conferences - currently the last international conference in New Smokovec in collaboration with Transport Research Institute of Žilina to publicize the High Tatras, Tatra electric railway and rack rail.

In addition to these there are new marketing arrangements planned in the near future, such as:

- Tatra room and rail,
- Publishing booklets of High Tatras,
- Installation of maps of the High Tatras on the table of Tatra electric railway,
- Virtual map of network tickets outlets.

2.8 Particular questions

For comparison purposes of different transport systems and railways there were selected the following questions.

2.8.1 Experience in managing traffic peaks

Traffic peaks occur in the Tatras railways as well as in each seasonal tourist-dependent region, from the time of the current season and weather conditions. In the case of railways prevail as stronger summer season over the winter, but both can be described as crucial seasons in terms of tourist flows. During the traffic peaks especially in strong summer periods Tatra electric train (also called tram) are cable to carry 400 passengers from the starting station following long-distance corridors - Poprad - Tatry into various villages and holiday resorts in the High Tatras area in the 60 minute cycle.

Traffic peak management is realized by strengthening the range of transport trains (referred to as shortening of time period from 1 hour to 30 minutes) - and adding more trains on the routes. Other transport means are not used, nor it is used any special pricing.

2.8.2 Bicycle transport and carrying luggage

It is possible to use bicycles and electronic bicycles on routes of Tatra electric railways and rack rail, subject to traffic conditions. Bicycle transport is charged a separate fare, but is uniform without the use of special offers.

Rail operator currently does not implement any form of bicycles rental and focuses only on their transport. The luggage can be kept by the standard luggage rooms. It is also possible to use the luggage storage oversize dimensions.

2.8.3 Transport information

The issue of providing information to passengers, operator of Tatra railways undertook important and customers-attractive actions. In addition to the existence of today's telephone information line, we can also include the installation of new scoreboards at selected stations, expansion of SMS services (network-wide – monitoring the movement of trains).

2.9 Conclusion on Tatra electric railway

According to the information and assumptions defined, the most important strengths of successful or less successful development measures for the Tatra electric railways and rack rail consider the following:

- Good set up of transport capacity and well-functioning tact traffic
- Strong domain in issues of ecology and careful behavior to the environment of High Tatras
- An internationally significant tourist region with high attractiveness for tourists
- Modern trains
- Modernization of ticket sales and better approach to customers through electronic systems and media.

Within areas with potential for improvement and more efficient approach can be included:

- working with tourism organizations
- improving coordination of train and bus connections
- development of tourism in the region

Weaknesses and deficiencies can be identified in two areas:

- high dependence on the number of passengers from weather conditions during the season (despite the season, flow of visitors into region can be reduced substantially in case of long-lasting bad weather conditions - rainy in summer, or lack of snow in the winter).
- financing of development activities in the infrastructure - but also the importance to develop the infrastructure of tracks and stations, which is managed by another company - the Railways of the Slovak Republic.

3 CHILDREN'S RAILWAY

Children's railway **does not belong to regional railways**. But on the other hand, concerning its 1000 mm narrow gauge, this 4 kilometers long track and operated vehicles undoubtedly belong to regional and Slovak uniques. From this point of view there are several brief information interesting.



Picture 3 Children's railway

Significance of this little railway is based on its local dimension as tourist attraction in the city of Košice – metropolis of Košice self-governing region. Railway operates currently only in summer seasons and consists of historical vehicles – steam engine and carts for passengers (signed on the Central list of “historical monuments” of the Slovak republic). Tracks still at this time consist of historical rails and crossovers.

There are 3 stops on the whole track Čermeľ (Čermeľ - Baránok) - Vpred (Čermeľ - Vodárka) - Pionier (Alpinka)., none of them occupied by personnel. The first stop means starting point in the city of Košice connected directly to city public transport. The last stop finishes in the recreation area called Alpinka. This area is surrounded by forests and has several free time facilities, mainly for the summer season: biking and hiking tracks, restaurants, playgrounds, golf, artificial climbing wall, and more. Main target group are the kids, usually with their parents.

Railway is operated on the basis of partnership – between Railways company of Slovak republic, Slovak railways company, city of Kosice (financial issues) and since last year “Children's railway” association as well (providing a marketing aims – creating special events for children, and also promotion of the railway through theme activities).

Project Partners

Lead partner

U-AT - Environment Agency Austria, AT

ERDF partner

bmvit - Federal Ministry of Transport, Innovation and Technology, AT

ERDF partner

Gesäuse - National Park Gesäuse, AT

ERDF partner

Mostviertel - Mostviertel-Tourism Ltd., AT

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Miskolc Holding - Miskolc Holding Local Government Asset Management Corporation, HUN

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UNICAM - University of Camerino, IT

ERDF partner

EURAC research – European Academy of Bozen/Bolzano, IT

ERDF partner

CJIT Maramures - County Center for Tourism Information, RO

ERDF partner

ARR-KE - Agency for the Support of Regional Development Kosice, SK

20% ERDF partner

RARR-PL - Rzeszow Regional Development Agency, PL

10% partner

TIMOK -Timok Club, RS

10% partner

CFUA - Carpathian Foundation Ukraine, UA

The project enjoys widespread support at transnational, national and regional level: the Permanent Secretariat of the Alpine Convention, Focal Points of the Carpathian Convention, European Federation of Museum and Tourist Railways, Ministries of Environment (AT, IT), Ministries of Transport (SI, PL) and other observers at the regional level of the project partners.

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