

**ASECAP STUDY AND INFORMATION DAYS  
COSTA NAVARINO, 29 - 31 MAY 2019**

***Naradna dialnicna spolocnost, a.s. – SLOVAK REPUBLIC  
(National Motorway Company)***

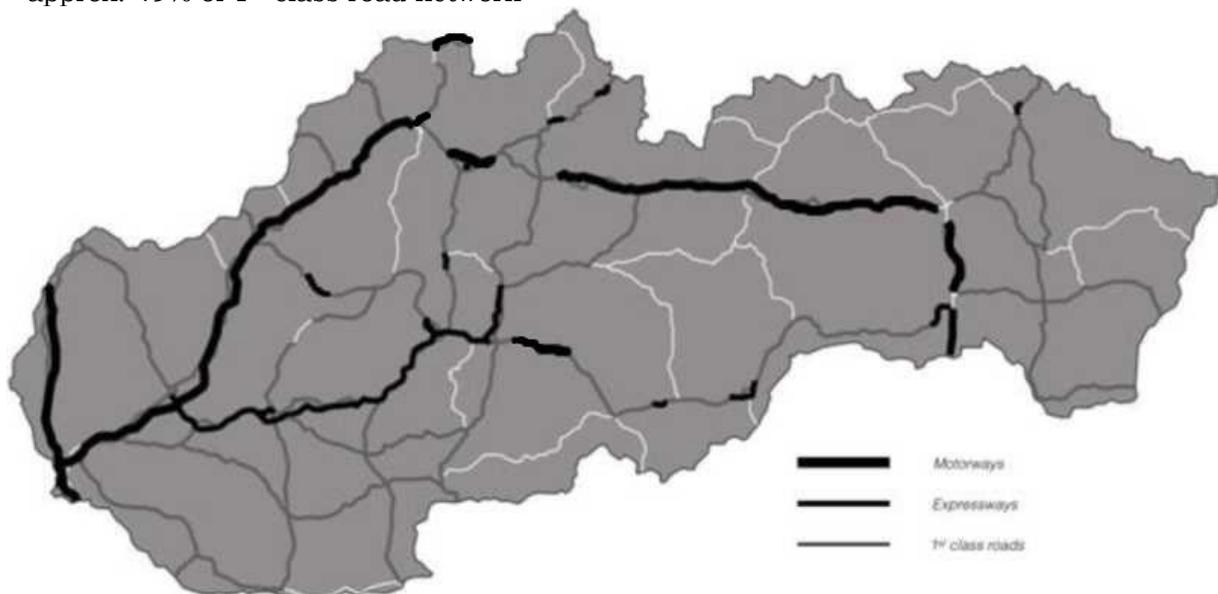
***Network length***

In January 2010, the Slovak Republic introduced a multi-lane, free flow electronic tolling system. In principle, all commercial vehicles with a maximum allowable mass extending 3.5 tons are subject to a distance based toll charge. This toll depends on the road category, the vehicle category, which is established through the number of axles and emission class of the vehicle. In residential area, toll rate is zero. Subject of charging is motorway, expressway and selected 1<sup>st</sup> class roads. From 1 January 2016, vignette system also has been changed; from the paper one to electronic. By E-vignette, there are motorways and expressways charged in Slovakia.

**Currently charged road network in the Slovak Republic**

<b>category</b>	<b>motorways</b>	<b>expressways</b>	<b>1<sup>st</sup> class roads</b>	<b>bypasses outside residential areas</b>	<b>residential areas</b>
under 3.5 t	✓	✓	x	x	x
over 3.5 t	✓	✓	✓*	✓	x

\* approx. 49% of 1<sup>st</sup> class road network



## Charged road network length (km) comparison 2017 to 2018

Type of road	Road specification	2017 (km in operation)	2018 (km in operation)
<b>Motorways</b>	D1	357.316	357.316
	D2	70.699	70.699
	D3	28.442	28.442
	D4	6.995	6.995
<b>Expressways</b>	R1	164.322	164.322
	R2	63.415	63.415
	R3	17.756	17.756
	R4	24.402	24.402
	R6	2.251	2.251
<b>1<sup>st</sup> class roads*</b>	I/10	19.817	19.817
	I/11	26.277	26.277
	I/12	3.057	3.057
	I/13	10.930	10.930
	I/15	34.988	34.988
	I/16	163.448	163.448
	I/17	11.348	11.348
	I/18	196.182	196.182
	I/19	55.648	55.648
	I/2	51.367	51.367
	I/20	11.919	11.919
	I/21	37.172	37.172
	I/35	8.067	8.067
	I/49	9.433	9.433
	I/51	114.316	114.316
	I/59	71.911	71.911
	I/61	119.635	119.635
	I/62	32.552	32.552
	I/63	67.109	67.109
	I/64	65.878	65.878
	I/65	99.020	99.020
	I/66	77.122	77.122
	I/69	10.923	10.923
	I/70	10.618	10.618
	I/72	31.991	31.991
	I/75	93.806	93.806
	I/76	43.381	43.381
I/79	65.673	65.673	
I/9	87.071	87.071	
<b>Total length</b>		<b>2366.257</b>	<b>2366.257</b>

\* National Motorway Company owns only motorways and expressways but is a toll collector on some 1<sup>st</sup> class roads too. Therefore later in presentation there are published only figures regarding to motorway and expressway network, but revenues contain also 1<sup>st</sup> class roads.

## **Tunnels and bridges charging policy**

In the Slovak Republic, there are not any special rates for tunnels or bridges. Both of them are charged according to rules of charging for motorways, expressways and 1<sup>st</sup> class roads. If the tunnel or bridge is a part of section charged by zero rate, they are both charged by the rate zero.

### **Tunnels and bridges which are part of motorways and expressways**

<b>Road</b>	<b>Tunnel</b>		<b>Bridge</b>	
	Number	Length (m)	Number	Length (m)
Motorways	8	12170	493	66 388
Expressways	0	0	266	23 020
Total	8	12170	759	89 408

### **Openings in 2019**

NDS is planning to open following sections in 2019:

<b>Name of the section</b>		<b>km</b>
<b>D1</b>	Hricovske Podhradie – Lietavska Lucka	11.32
	Budimir - Bidovce	15.46
<b>Total length in km</b>		<b>26.78</b>

### **Investments**

Narodna dialnicna spolocnost, a.s. (NMC) invested to new sections construction in **2018**:

**591,038,000 €**

For motorways, expressways and selected I. class roads in operation invested for reconstruction, maintenance and operation:

**88,454,000 €**

For **2019**, there is planned for new sections construction:

**667,872,000 €**

and for reconstruction, maintenance and operation:

**96,728,000 €**

### **Building sites in operation as for the 31.12.2018**

<b>Name of the section</b>		<b>km</b>
<b>D1</b>	Triblavina, intersection	1.63
	Hricovske Podhradie – Lietavska Lucka	11.32
	Lietavska Lucka – Visnove – Dubna Skala	13.51
	Hubova - Ivachnova	14.93
	Presov west – Presov south	7.87
	Budimir - Bidovce	15.46
<b>D3</b>	Cadca, Bukov - Svrčinovec	5.67
<b>Total length in km</b>		<b>70.39</b>

### **New building sites to be opened in 2019**

<b>Name of the section</b>		<b>km</b>
<b>R2</b>	Kriváň - Mýtna	9.1
	Mýtna – Lovinobaňa, Tomášovce	13.5
	Šaca – Košické Oľšany II. úsek	14.26
<b>R3</b>	Tvrdošín - Nižná	4.4
<b>R4</b>	Prešov, severný obchvat I. etapa	4.3
<b>Total length in km</b>		<b>45.56</b>

### **Financing**

NDS is funded through a multi-pillar system. It disposes of the following funding resources:

1. State Budget
2. Funds of the European Union
3. NDS loans
4. Vignettes and toll

## 5. Other (rent, services...)

The maximum part of such funds is used for the construction of motorways and expressways.

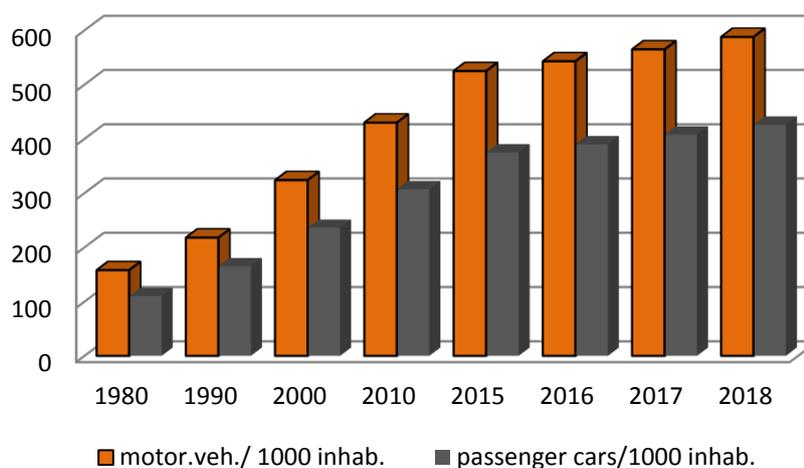
### Traffic

Year/GDP	I. quarter (mil. €)	II. quarter (mil. €)	III. quarter (mil. €)	IV. quarter (mil. €)
<b>2018*</b>	20 424,7	22 653,4	23 798,9	

\* as of 30.09.2018

### Motorization level

Year	no. of inhabitants (thous.)	no. of vehicles (thous.)	no. of light vehicles (thous)	motor.veh./ 1000 inhab.	Passenger cars/ 1000 inhab.
<b>1980</b>	4,996	790	552	158	110
<b>1990</b>	5,311	1,156	876	218	165
<b>2000</b>	5,403	1,752	1274	324	236
<b>2010</b>	5,435	2,339	1669	430	307
<b>2015</b>	5,424	2,844	2035	525	375
<b>2016</b>	5,434	2,949	2121	543	390
<b>2017</b>	5,443	3,077	2223	565	408
<b>2018</b>	5,450	3,203	2,321	588	426



Traffic volume especially on motorways has a rapid increasing trend caused by growing of number of vehicles on road network but also thanks to acceleration of new motorway sections construction in the Slovak Republic.

### ***Tolling system and tolling technologies used***

In 2018, vehicles were divided into 2 groups according to weight of vehicle:

1. below 3.5 t (E-vignette system)
2. over 3.5 t (Electronic toll collection system)

#### 1. Vignette system

In 2016 the Slovak Republic commissioned the electronic system of vignette payment collection and records for the use of the specified sections of motorways and expressways. Switching the system of vignette payment collection and records into electronic form meant a change in the vignette form - the physical motorway stickers were replaced by vignettes in electronic form.

Types of vignettes for the year 2018 were:

1. Year vignette
2. Month vignette
3. 10 days vignette

All types of vignettes are both for motor vehicles (category M1, N1, M1G and N1G) and trailed vehicles (category O1, O2). Vignette for trailed vehicle is necessary when total weight of motor vehicle and trailed vehicle exceed 3.5 t.

The electronic vignette system is based on entering vehicles or trailed vehicles that are subject to electronic vignette payment in the records of electronic vignette payments, which among other things include data of the specific vehicle and the type and the validity of the paid electronic vignette.

A customer can pay for the electronic vignette through electronic business channels – the web portal and the mobile application for mobile devices or within the points of sale network (most often

petrol stations) or through self-serve devices located especially at border crossings. Payment for an electronic vignette can be carried out using a bank payment card (paying at points of sale, by the web portal, the mobile application and the self-serve devices) or in cash (in case of payment through points of sale).

### **E-vignettes for 2018**

<b>One – year vignettes</b>		
1	Motor vehicles up to 3.5 t	50 €
2	Trailed vehicle	50 €
<b>Month vignettes</b>		
1	Motor vehicles up to 3.5 t	14 €
2	Trailed vehicle	14 €
<b>10-days vignettes</b>		
1	Motor vehicles up to 3.5 t	10 €
2	Trailed vehicle	10 €

## 2. Electronic toll collection system:

The Slovak Electronic Toll Collection System (ETC system) uses technologically innovative “hybrid” OBUs integrating three technologies:

- satellite GPS technology for determining the position – collection of data about the use of Specified Road Sections,
- GSM/GPRS technology for the communication within mobile networks – serving for the transmission of data among the OBU and other information subsystems within the Electronic Toll System,
- microwave DSRC technology for short-distance communication – serving for the control of toll payers within the toll collection control process.

## Tolled road network

In 2018, ETC system continues to operate more than 17,000 km of roads, integrated in the system since 2014.

## Toll rates

Since 2014, ETC system continues using specified tolling strategy – favouring higher emission class vehicles, as well as reducing avoidance primary road network through parallel 1<sup>st</sup> class roads (by equalization of toll rates on 1<sup>st</sup> class roads parallel with motorways and expressways with toll rates on motorways and expressways), and also providing discounts for every vehicle depending on driven km.

Toll rates on road network covered only with traffic monitoring (part of the 1<sup>st</sup> class road network, total 2<sup>nd</sup> and 3<sup>rd</sup> class road network) equals zero for all vehicles.

### **Toll rates for the use of specified sections of motorways and expressways**

	Vehicle category		Emission class		
			EURO 0 – II	EURO III, IV	EURO V, VI, EEV
<b>Heavy vehicles</b>	3.5 t – to 12 t		0.105 €	0.095 €	0.082 €
	12 t and more	2 axles	0.224 €	0.203 €	0.176 €
		3 axles	0.237 €	0.214 €	0.185 €
		4 axles	0.246 €	0.222 €	0.192 €
		5 axles	0.237 €	0.214 €	0.185 €
<b>Busses</b>	3.5 t – to 12 t		0.062 €	0.051 €	0.031 €
	12 t and more		0.112 €	0.102 €	0.062 €

### **Toll rates for the use of specified sections of the 1<sup>st</sup> class roads parallel with motorways and expressways**

	Vehicle category		Emission class		
			EURO 0 – II	EURO III, IV	EURO V, VI, EEV
<b>Heavy vehicles</b>	3.5 t – to 12 t		0.105 €	0.095 €	0.082 €
	12 t and more	2 axles	0.224 €	0.203 €	0.176 €
		3 axles	0.237 €	0.214 €	0.185 €
		4 axles	0.246 €	0.222 €	0.192 €
		5 axles	0.237 €	0.214 €	0.185 €
<b>Busses</b>	3.5 t – to 12 t		0.041 €	0.031 €	0.021 €
	12 t and more		0.082 €	0.072 €	0.041 €

**Toll rates for the use of specified sections of the 1<sup>st</sup> class roads not parallel with motorways and expressways**

	Vehicle category	Emission class			
		EURO 0 – II	EURO III, IV	EURO V, VI, EEV	
<b>Heavy vehicles</b>	3.5 t – to 12 t	0.082 €	0.074 €	0.064 €	
	12 t and more	2 axles	0.176 €	0.159 €	0.136 €
		3 axles	0.185 €	0.167 €	0.143 €
		4 axles	0.189 €	0.171 €	0.146 €
		5 axles	0.185 €	0.167 €	0.143 €
<b>Busses</b>	3.5 t – to 12 t	0.041 €	0.031 €	0.021 €	
	12 t and more	0.082 €	0.072 €	0.041 €	

**Revenues**

Vignette	2017	2018	% growth
Yearly	43 661 562	46 468 158	6.43%
Monthly	6 633 676	6 982 156	5.26%
10 days	22 334 112	22 851 742	2.32 %
<b>Total</b>	<b>72 629 351</b>	<b>76 302 056</b>	<b>5.06%</b>

Toll collection	2017	2018	% growth	
Heavy vehicles	3.5 t – 12 t	13 110 224	12 858 890	-1.92%
	over 12 t	182 969 083	195 484 478	6.84%
Busses	3.5 t – 12 t	284 756	300 489	5.53%
	over 12 t	4 780 269	4 736 328	-0.92%
<b>Total</b>	<b>201 144 333</b>	<b>213 380 186</b>	<b>6.08%</b>	

There is a total rise in revenues of vignettes 5.06 % and rise in revenues of toll 6.08 % comparing years 2017 and 2018. Revenues only from motorways and expressways are **67.87%** of whole toll revenue.

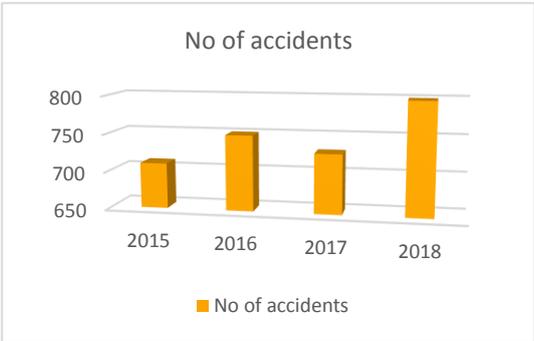
**Safety**

Table below shows number of all accidents (fatal, seriously and slightly injured), on road network in the Slovak Republic. Significant reduction in number of accident was caused by a change of legislation in 2009. Since 2009 legislation increased the minimum amount of damage, when police forces have to be called

and accidents were divided into casualty (accidents with a little damage which are not solved by police forces but through insurance company directly) and accidents (when the police forces are called). Until 2011, there was not any difference between accidents on motorways and expressways mainly because of small amount of expressways network. Since 2011, the table shows only accidents on motorways and expressways. Data are registered statistically and shown in tables. Chart below shows only data since 2015 due to above mentioned. Increasing of number of accidents can be caused by increasing of expressway network.

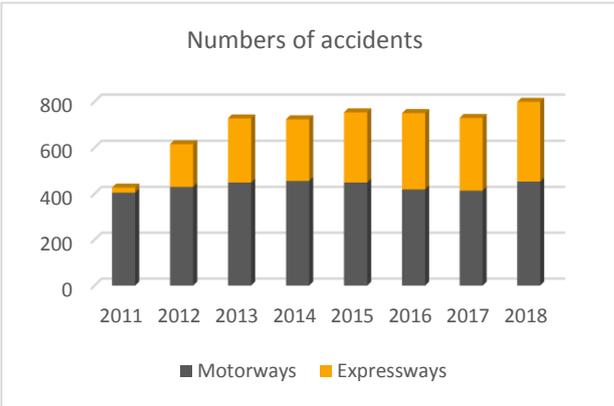
### Number of accidents

Year	No. of accidents	Fatal injury	Seriously injured	Slightly injured
2000	50932	628	2204	7890
2005	59991	560	1974	8516
2010	4270	135	367	1695
2015	710	19	61	212
2016	750	14	38	206
2017	729	24	37	212
2018	799	20	63	252



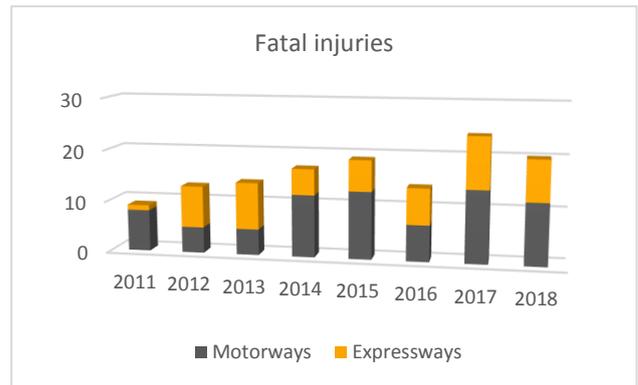
### Number of accidents separately on motorways and expressways

Year	No. of accidents	
	Motorways	Expressways
2011	405	22
2012	430	185
2013	449	278
2014	456	267
2015	449	304
2016	419	331
2017	414	315
2018	453	346



## Number of fatal injuries

Year	No. of fatal injuries	
	Motorways	Expressways
2011	8	1
2012	5	8
2013	5	9
2014	12	5
2015	13	6
2016	7	7
2017	14	10
2018	12	8



	<b>Definition and method of calculation</b>	<b>In number for one billion kilometres travelled in 2015*</b>	<b>2017</b>	<b>2018</b>	<b>Variation in % in 2017/2018</b>
<b>Personal injury rate</b>	People that have received any injury except for one time treatment that do not require specialist's examination or sick absence	<b>x</b>	<b>244</b>	<b>315</b>	<b>+29 %</b>
<b>Fatal accident rate</b>	Number of people that have received very serious injuries leading to their death at the moment of the accident or within 24 hours subsequent to the accident	<b>x</b>	<b>24</b>	<b>20</b>	<b>-20%</b>
<b>Rate of dead*</b>	No measuring of this figure	<b>x</b>	<b>x</b>	<b>x</b>	<b>x</b>

\* this figure is not measured in the Slovak Republic. Kilometres travelled are counted at the basis of heavy vehicles (vehicles over 3.5 t) and injuries include also injuries caused by personal vehicles (vehicles under 3.5 t)

### MAIN ASECAP KEY FIGURES

<b>Country: Slovak Republic</b>	<b>Indicate below how you calculate each figure provided in the “2018” column</b>	<b>2018 Figure</b>
Network length (Km).....	Figure include total number of kilometres of motorways and expressways, both paid and unpaid sections	765 km
Number of km in construction	Summary of lengths of each building site in operation	70.39 km
Forecasts of opening motorways section	Summary of lengths of each section planned to be opened in 2019	45.56 km
Annual toll revenues* (in millions of Euros)	Summary of all revenues from vignettes and ETC	289,68 mil. €
Annual ETC revenues from motorways and expressways* (in millions of Euros)	Summary of revenues from ETC for motorways and expressways only	144,82 mil. €
VAT % (Indicate the VAT % percentage to the toll revenues)	VAT rate in the Slovak Republic	20%
Permanent staff	Number of permanent staff without any agreement based contracts	1 698
Average daily traffic (light vehicles)	Average of measured data between individual intersections	21 060
Average daily traffic (heavy vehicles)		6 477

Average daily traffic (total = light + heavy vehicles)		27 537
Total number of accidents	Total number of accidents when the police forces were called	799
Number of personal injury accidents	People that have received any injury except for one time treatment that do not require specialist's examination or sick absence	315
Number of dead	Number of people that have received very serious injuries leading to their death at the moment of the accident or within 24 hours subsequent to the accident	20
Fatality rate		x
Kilometres travelled		1 798 mil.
Number of toll transactions (Total) Number of toll transactions (light vehicles): Number of toll transactions (heavy vehicles):	Number of transactions in ETC for vehicles over 3.5. t including busses	682 mil.
Number of toll stations		x
Number of toll lanes		x
Number of ETC lanes		x

Number of ETC subscribers (Total): Number of ETC subscribers (light vehicles): Number of ETC subscribers (heavy vehicles):	Number of OBUs in ETC for vehicles over 3.5. t including busses (average daily number of active OBUs)	270 328
Number of service areas (equipped with petrol stations)	Number of service areas on both sides of motorways and expressways	28
Number of rest areas	Number of all rest areas on both sides of motorways and expressways with or without any services	65
Number of restaurants	Number of restaurants on both sides of motorways and expressways (only separate restaurants, no those included in petrol station building)	20
Number of hotels	Number of hotels on both sides of motorways and expressways	3

\*please provide the figure VAT and other taxes excluded.