



CITY OF BELGRADE'S ROAD SAFETY STRATEGY

2017

2020

TABLE OF CONTENTS

- EXECUTIVE SUMMARY* 1
- MESSAGE FROM THE MAYOR*..... 3
- 1. *SCOPE OF ROAD SAFETY ISSUES* 4
- 2. *COSTS OF ROAD ACCIDENT CONSEQUENCES*..... 15
- 3. *ROAD SAFETY FUNDING OPTIONS* 16
- 4. *BASIS – FRAMEWORK FOR MAKING A STRATEGY*..... 17
- 5. *DESIRED ROAD SAFETY SITUATION*..... 21
- 6. *KEY AREAS OF WORK*..... 29
- 7. *ACTIVITIES AND RESPONSIBILITIES OF LEADING STAKEHOLDERS*..... 34
- 8. *REDUCING CHILD CASUALTIES IN THE PERIOD 2017-2020*..... 41
- 8.1 *ANALYSIS OF INSTITUTIONAL CAPACITIES*..... 43
- 8.2 *ANALYSIS OF KNOWLEDGE/ATTITUDES/ BEHAVIOR* 51
- 8.3 *ANALYSIS OF THE CURRENT SITUATION BY MEANS OF INDICATORS*..... 53
- 8.4 *ANALYSIS OF THE CURRENT SITUATION BY MEANS OF ROAD ACCIDENTS*.. 54
- 8.5 *DESIRED ROAD SAFETY SITUATION*..... 56
- 8.6 *KEY AREAS OF WORK ON IMPROVING CHILD ROAD SAFETY* 58
- 9. *REDUCING MOTORCYCLIST CASUALTIES IN THE PERIOD 2017-2020*..... 63
- 9.1 *ANALYSIS OF INSTITUTIONAL CAPACITIES*..... 64
- 9.2 *ANALYSIS OF KNOWLEDGE, ATTITUDES AND BEHAVIOR*..... 70
- 9.3 *ANALYSIS OF ROAD ACCIDENTS*..... 72
- 9.4 *DESIRED ROAD SAFETY SITUATION*..... 76
- 9.5 *KEY AREAS OF WORK ON IMPROVING MOTORCYCLIST SAFETY*..... 77
- 9.6 *CONCRETE MEASURES, ACTIVITIES AND STAKEHOLDERS FOR IMPROVING MOTORCYCLIST ROAD SAFETY* 81
- 9.7 *APPENDIX 1 – ADVANTAGES AND DRAWBACKS OF THE MODE OF TRANSPORT* 83
- 9.8 *APPENDIX 2 – LEGAL PROVISIONS GOVERNING THE CIRCULATION OF MOPEDS, MOTORCYCLES, TRICYCLES AND QUADRICYCLES IN SERBIA*..... 85



EXECUTIVE SUMMARY

Road deaths and injuries are a serious **global problem** today. Road safety activities that are being undertaken around the world aim to adapt and transfer best road safety practices from the most developed countries to those under-developed and developing ones (the so-called Global Road Safety Management). In fact, the experiences of the most developed countries have shown that road safety casualties are predictable and preventable. Yet, despite the constant increase in the number of vehicles in road traffic and the growing number of road users, the most developed countries have developed appropriate "drugs" which are used to successfully reduce the level of road danger. Therefore, the most important, common denominator of all efficient road safety practices is the **strategic road safety management** that is science-based, has a clear, true and publicly declared political support. The preparation and adoption of strategic documents, i.e. road safety system development policies, strategies and action plans, is a proper way to demonstrate how to manage a road safety situation. Though science is dominant in the drafting of strategic document proposals, the official and democratically elected institutions, such as assemblies, governments, presidents, prime ministers, mayors, local self-government units, etc. are the ones that adopt them and give them political shape.

The expert working group has first prepared a (science-based!) proposal, and then the Government of the Republic of Serbia adopted "**The Road Safety Strategy 2015-2020**" (as an official and binding document!). This has laid the foundations for the strategic and coordinated road safety management in the Republic of Serbia.

Given the abovementioned and the legal obligations in terms of adopting a strategy, the City of Belgrade has recognized the significance and opportunities of strategic road safety management and commissioned a study whose aim is to prepare a draft of the City of Belgrade's Road Safety Strategy 2017-2020. The Strategy will include the roads and streets of the City of Belgrade. This proposal is in line with all the significant international documents, best practices, regulations of the Republic of Serbia and the City of Belgrade, and national strategic and planning documents. Given the significance of this document, great expectations of professionals and the widest public and complexity of coordinated implementation of measures and activities from this Strategy, the idea is to draft the Strategy on the basis of data or very extensive research studies. The research results and elements of the Strategy have been presented periodically to the representatives of the city administration, city municipalities and the most influential city institutions. The preparation of the draft Strategy has also included the review of comprehensive road safety studies conducted world-wide, as well as in Serbia and in Belgrade. The legal framework, strategic documents (global, European, Serbian and those from Belgrade) and institutional capacities have been also analyzed in detail. In addition, studies and analyses of attitudes and behavior of significance to road safety, of road safety indicators and of road accidents and their consequences have been also carried out.



MESSAGE FROM THE MAYOR

Dear Citizens of Belgrade,

Around 84000 road accidents were recorded on the roads and streets of Belgrade, in just five years (2011-2015). Road deaths and injuries occurred in nearly 18000 road crashes. It practically means that there are 10 road accidents with casualties occurring in Belgrade every day. Apart from causing inhumane social consequences, these accidents also bring about adverse economic, health, development and other problems and consequences. Families lose their breadwinners, parents and children. The post-crash care of severely injured in road accidents is a long-lasting process which harms not only family members, but also the whole society. Road crashes happen to all of us, and not only to someone else. The total number of road fatalities in Belgrade rose to 584 over the last five years, while the number of severely and slightly injured increased to 3649 and 22381 respectively. These are all our relatives, friends, neighbors, i.e. our fellow citizens. Road traffic, which is a legal activity, kills more people than all other illegal (criminal) activities together.

There is room for capacity building and better mutual co-ordination. In the upcoming period, we want to improve the capacity and integrity of all the institutions concerned, the knowledge, attitudes and awareness of how significant road safety issues are. We also want to work harder on reducing the risks of road casualties. Our activities will focus on five most important road safety pillars: road safety organization and management, safer roads, safer vehicles, safer road users and improvement of post-crash care. In order to make this strategy sustainable in the period ahead, we shall focus in particular on improving the traffic education and upbringing, as the children who are learning today the modern road safety principles from us are the ones who will be managing and improving the road safety system in our City in the future.

Given the above, the members of both the City Council and the City Assembly have recognized the great potential in the strategic road safety management and have therefore proposed to adopt the 2017-2020 City of Belgrade's Road Safety Strategy and Action Plans. Being aware of the significance of the public sector, they are ready to support the implementation of all road safety improvement measures in our City, focusing in particular on the issue of reducing the number of road casualties. I shall commit myself to implementing this Strategy to the maximum, to supervising the implementation of all the measures proposed, and shall be ready to accept responsibility and be accountable for the results thus achieved. I shall always set a good example to all the citizens, and shall respect in particular all road traffic safety regulations. I shall call upon all the office holders, and all the institutions, to commit themselves to consistently implementing all the measures and activities foreseen in this Strategy, and to set good examples in the first place to all road users and the Citizens of Belgrade.

Dr Siniša Mali, Mayor of Belgrade



1. SCOPE OF ROAD SAFETY ISSUES

Road accidents and road deaths and injuries are a major problem occurring in modern societies, or in highly developed, developing and the poorest countries. Over a long period of time, the most developed countries have been adopting road safety programs and strategies continually, and undertaking diverse measures in order to reduce road casualties. The effects of these measures are quantified and studied today, and have helped identify the best road safety practices. The most developed countries in the world have succeeded in reducing the number of road fatalities and injuries in the long run, providing at the same time the seamless development of road traffic and the society as a whole. If Serbia does not start to implement efficient counter-measures in a decisive way, each 140th citizen of Serbia will be killed in road traffic, and each 30th and 7th Serbian citizen will sustain serious and slight injuries, respectively, in road crashes across the country.

The City of Belgrade accounts for around 35% of all road accidents, 18.2% of all road fatalities (584 killed in the City of Belgrade compared to 3,204 deaths across Serbia, from 2011 to 2015), as well as for 21% of seriously injured and some 30% of slightly injured in Serbia.

The problem of road casualties is very complex and solving it will require a coordinated action of a large number of agencies and stakeholders. Road accidents and casualties are before all a **public health problem**, as much as they are a social, ethical, human and **economic problem of the community**. This is the result of the huge number of road users who get killed or injured, or maimed and disabled for the rest of their lives. Such consequences greatly damage human health, destroy families, create social and humane problems and, finally, produce huge socio-economic costs that are paid by the economy and the society as a whole. It is therefore necessary to manage road safety strategically and achieve a permanent and sustainable decline in road casualties. The following are the preconditions for achieving this:

- **Strengthening the protection system** (improving capacities and integrity of institutions and individuals, improving vertical and horizontal coordination);
- **Improving road safety-related knowledge, attitudes and awareness;**
- **Improving road safety indicators relating to road traffic behavior;**
- **Analyzing and monitoring the trends in reducing the number of road accidents and road deaths and injuries.**

STRENGTHENING THE PROTECTION SYSTEM

The existence of appropriate institutions having the capacity and integrity to plan and implement important road safety measures is the basis of the road safety management. Powerful institutions employing professionals who are committed to road safety is the most important prerequisite for the adoption of a good quality strategy and the efficient strategy implementation.

The following are the most influential institutions in the City of Belgrade having the competence to work on important road safety improvements:

- Assembly of the City of Belgrade,
- Mayor of the City of Belgrade,
- Council of the City of Belgrade,
- Road Safety Council of the City of Belgrade,
- City of Belgrade's Administration with its organizational units, among which the most important are the following ones:
 - ❖ Secretariat for Transport,
 - ❖ Secretariat for Inspection Work,
 - ❖ Secretariat for Education and Child Care,
 - ❖ Secretariat for Health Care;
- City municipalities,
- Ministry of Interior – Police Administration for the City of Belgrade – Department for Road Traffic,
- Road Safety Coordination Body,
- Communal Police,
- Office for Youth and Cooperation with Associations,
- Public Utility Companies: PUC "Beograd put" (Belgrade roads), PUC "Parking servis", and PUC "Public Lighting", PCT (Public City Transport), etc.
- Belgrade Chamber of Commerce,
- Pre-school institutions, primary and secondary schools,
- University and other high school institutions,
- Transport companies,
- Transporters within the system of public passenger's transport,
- Non-governmental organizations,
- Insurance companies,
- Public media services,
- City of Belgrade's Land Development Public Agency,
- Other institutions.

Road Safety and Information Sector with its Road Safety Department operate within the Secretariat for Transport and are in charge of road safety activities. Apart from this department, other institutions of essential importance for sustainable and safe transport and traffic include the Public Transport Agency and the Road Directorate.

All these listed institutions have adequate capacities, according to City's possibilities. However, road safety in these institutions is not given priority and very often these institutions are not committed to solving road safety problems. Horizontal coordination is more efficient when implementing the measures and activities foreseen by annual work programs of the Road Safety Council. Coordination is insufficient though and is deficient for the implementation of other activities.

When making a plan for implementation of road safety measures, it will be necessary to use the data to a great extent, as well as the results from the scientific research studies. Good recommendations given by scientific institutions should be used for the making of action plans.





Non-governmental organizations or associations of citizens are the stakeholders that are holding important potential for the implementation of minor projects at the city and city municipalities' level.

ATTITUDES ON RISKS IN ROAD TRAFFIC

Road user attitudes according to risks in road traffic have been surveyed using the interview from the recognized SARTRE 4 model. The survey included drivers of passenger vehicles, riders of powered two-wheelers (motorcyclists and moped riders) and non-motorized road users (pedestrians and bicyclists).

Around 55% of drivers of passenger vehicles, 45% of non-motorized road users and 39% of motorcyclists are of opinion that roads/streets in Belgrade are not safe. **Drivers of passenger vehicles think that the factors contributing most to the occurring road crashes include the following ones: fatigue, drinking and driving, short distance between cars (tail-gating), excessive speed and driving under the influence of tranquilizing drugs.**

Around 86% of drivers of passenger vehicles think that the fines imposed for drink-driving should be stricter, while over 80% of respondents are of opinion that the fines for excess speeding should be increased. Around 81% of motorcycle riders support the introduction of more stringent fines for not wearing safety helmets.

In the last three years, around 80% of drivers were not stopped and checked against over-speeding.

Majority of drivers of passenger vehicles reported wearing a seat belt during an average drive in an urban area (65%), while 36% of them said that they used child seats when transporting children in their vehicles.

One in seven drivers of passenger vehicles and motorcyclists (15%) think that they can use alcohol if they drive carefully.

One third of interviewed drivers of passenger vehicles and around 4% of motorcycle riders in the last year felt too tired to continue driving/riding.

Around 60% of non-motorized road users are very concerned about unemployment, and around 41% about road accidents. Over 60% of respondents think that authorities in charge are not committed to road safety enough.

Majority of respondents think that the fitting of an "alco-lock" will be likely to reduce significantly the number of drink-driving cases.

A large majority of respondents are of attitude that cameras recording excessive speed (over 85%) and passing at the red light (over 85%), as well as that provision of more sidewalks (around 83%), are likely to contribute to a great extent to improving road safety in the City of Belgrade.

SCOPE OF ROAD SAFETY ISSUES

Motorcyclists and non-motorized road users are of opinion that the least safe means of transport is motorcycle riding, while the safest way to travel is to use the public transport.

A large majority of public transport users have said that they are mostly satisfied with the frequency of public transport (76%). Some 59% of respondents are of opinion that the capillary public transport network is acceptable, 56% find the safety of public transport satisfying, while the price/service cost ratio accounts for the least rate of satisfied respondents (32%).

Around two thirds of motorcyclists think that other motorcycle riders exceed posted speed limits. Motorcyclists have expressed positive attitudes in terms of safety helmet use. The reported rates of safety helmet use by motorcyclists are as follows: over 95% on highways, 94% on the roads in rural areas and 87% on the streets in urban areas.

When it comes to the use of safety helmets and protective gear, 78% of motorcycle respondents reported wearing full-face safety helmets, 49% used motorcycle jackets, while 37% of respondents wore back protectors. Around 32% of motorcycle riders transported passengers, but only 77% of them wore a safety helmet. However, around a half of respondents would like to enjoy the ride without a safety helmet, while 43% wear safety helmets because it is prescribed by the law.

Following the attitudes of surveyed motorcycle riders, factors that are contributing most to the occurring road crashes involving motorcyclists are the following ones: excessive speed, drink-driving, short distance between two vehicles, poor road maintenance and bad weather conditions.

It can be concluded that the citizens of Belgrade are concerned about the road safety situation, as well as that they support a more stringent control of road users in terms of road safety contributory factors (alcohol, speed, seat belts and safety helmets). Yet, positive attitudes need further improving and reinforcing, while the negative ones must be eliminated.

ROAD SAFETY INDICATORS

Road safety indicators offer a quality description of a road safety situation, even without data on road accidents and their consequences. If they are selected properly and are monitored regularly, road safety indicators can describe in an excellent way the situation and issues related to road safety, and consequently indicate necessary directions of actions.

Table 1.1 shows the research results of the most significant road safety indicators in the City of Belgrade.





Table 1.1. – The City of Belgrade's road safety indicators compared to the targets set by the National Strategy

No	Name of a road safety indicator	Value for the City of Belgrade in 2016	National target for Serbia, until 2020
1	% of safety helmet use	93.2	99
2	% of drivers using a seat belt	75.4	95
3	% of seat belt use at front seats	73.8	95
4	% of seat belt use at rear seats	7.3	85
5	% of use of child restraint systems	38.1	96
6	% of passenger cars exceeding speed by 10 km/h and over in urban areas	28.6	4.9
7	% of passenger cars exceeding speed by 10 km/h and over in rural areas	27.3	4.9
8	% of passenger cars exceeding speed by 10 km/h and over on highways	12	4.9
9	% of drivers under the influence of alcohol in urban areas	1.03*	0.1
10	% of drivers under the influence of alcohol in rural areas	1.02*	0.1

* - the value refers to 2015

The comparison between the targets from the National Road Safety Strategy and the current situation in the City of Belgrade indicates that it is necessary to significantly change the road user behavior in the City of Belgrade. For example, around 28% of drivers exceed posted speed limits by over 10 km/h in the City of Belgrade, while the national target has predicted a reduction below 5%. The percentage of drink-driving cases is ten times bigger than the national target is, etc.

ROAD ACCIDENTS AND ROAD CASUALTIES

Almost 84000 road crashes were reported on the territory of the City of Belgrade, from 2011 to 2015. Of that total number, around 18000 (21%) were road crashes involving the injured, and 526 (0.6%) involving road fatalities. The largest number of road accidents was reported in the municipality of Novi Beograd (16.2%), followed by the municipality of Savski Venac (11.8%) and the municipality of Palilula (10.6). The smallest number of road accidents in the observed period happened in the municipality of Sopot (0.4%). The city municipality of Vracar accounted for the smallest number of road accidents involving road deaths (1%), while the municipality of Cukarica accounted for the largest number of road crashes involving fatalities (10.3%).



Chart 1.1. – Number of road casualties on the territory of the City of Belgrade (2011-2015)

SCOPE OF ROAD SAFETY ISSUES

Table 1.2. – Number of road casualties on the territory of the City of Belgrade (2011-2015)

	2011	2012	2013	2014	2015	Total	%
Fatalities	136	127	116	104	101	584	2.2
Seriously injured	711	777	662	712	787	3649	13.7
Slightly injured	3590	3873	4577	4752	5589	22381	84.1
Total	4437	4777	5355	5568	6477	26614	100

The number of fatalities in the observed period slightly declined. The trend of the seriously injured in road traffic varied from year to year, while the number of slightly injured was growing considerably (Table 1.2).

The most frequent road accident types (Table 1.3) include the following ones: „collision of vehicles driving in the same direction“, (30,3%), „side collision“ (20,7%) and „a vehicle hitting a stopped or parked vehicle“ (16,7%).

Table 1.3. – Most frequent road accident types in the City of Belgrade (2011-2015)

Road accident type	Year					Total	
	2011	2012	2013	2014	2015	бpoj	%
Collision of vehicles driving in the same direction	5918	5171	5326	4638	4377	25430	30,3%
Side collision	4039	3385	3426	3263	3274	17387	20,7%
Vehicle hitting a stopped or parked vehicle	3094	2989	2765	2588	2561	13997	16,7%
Collision of vehicles driving in opposite directions	1352	1313	1298	1163	1190	6316	7,5%
Hitting or running over a pedestrian	996	981	956	933	899	4765	5,7%
At least two vehicles - same direction - side collision	838	685	684	979	962	4148	4,9%
Other road accident types	1,047	1106	1068	1354	1381	5956	7,1%
Vehicle running off the road and hitting an object in the roadside area	547	476	462	529	527	2541	3,0%
Vehicle hitting an object on the road	225	231	236	258	304	1254	1,5%
Vehicle running off the road	246	247	245	201	204	1143	1,4%
Falling out – falling of a person from a moving vehicle	59	45	45	53	55	257	0,3%
Vehicle overturning on the road	74	74	94	57	61	360	0,4%
Accidents between a train and a vehicle	15	20	19	15	6	75	0,1%
Hitting or running over cattle or other animals	54	52	54	68	98	326	0,4%
Total	18504	16775	16678	16099	15899	83955	100,0%

The largest numbers of fatalities are recorded in the following road accident types: „hitting or running over a pedestrian“ (36,3% of all fatalities), „side collisions“ (13,2% of fatalities) and „collision of vehicles driving in opposite directions“ (12,5%).



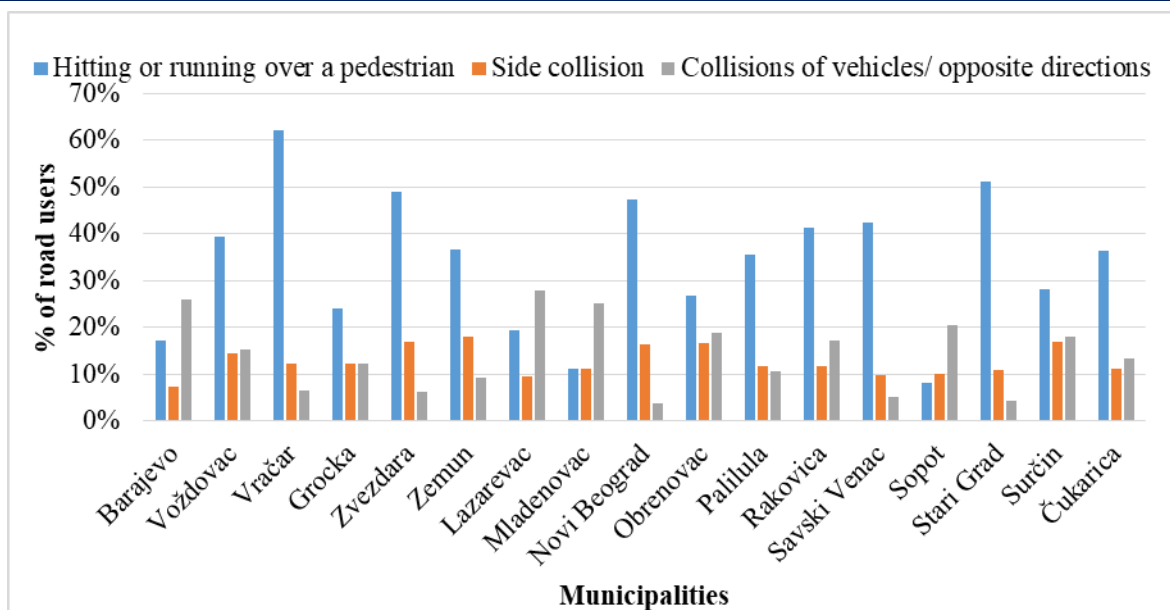


Chart 1.2. – Share of the three most frequent road accident types in the number of fatalities and seriously injured, per City of Belgrade's municipalities (2011-2015)

The largest number of casualties (fatalities and injuries) in road crashes involves drivers (44%), then passengers (37%) and pedestrians (19%).

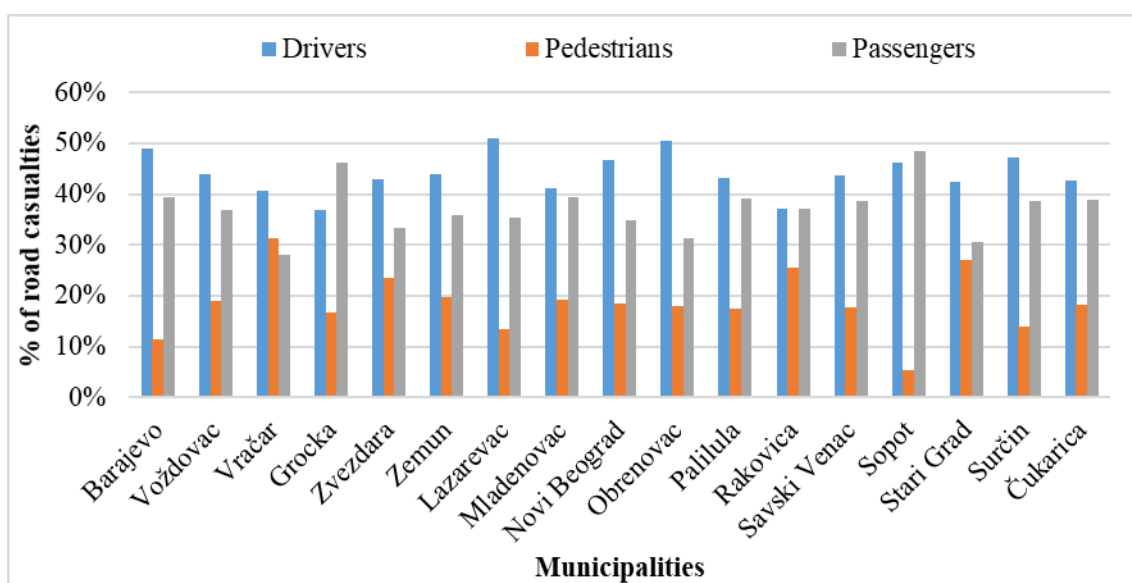


Chart 1.3. – Distribution of casualties per road user type and municipalities on the territory of the City of Belgrade (2011-2015)

The largest number of casualties falls under the age category from 36 to 45 years (16,6%), followed by the group of young road users aged from 19 to 25 years (16,2%). The number of casualties from the age category over 65 years and from 19 to 25 years is growing. However, when observing only pedestrian fatalities, the most vulnerable age category is the one over 65 years (21,9%).

SCOPE OF ROAD SAFETY ISSUES

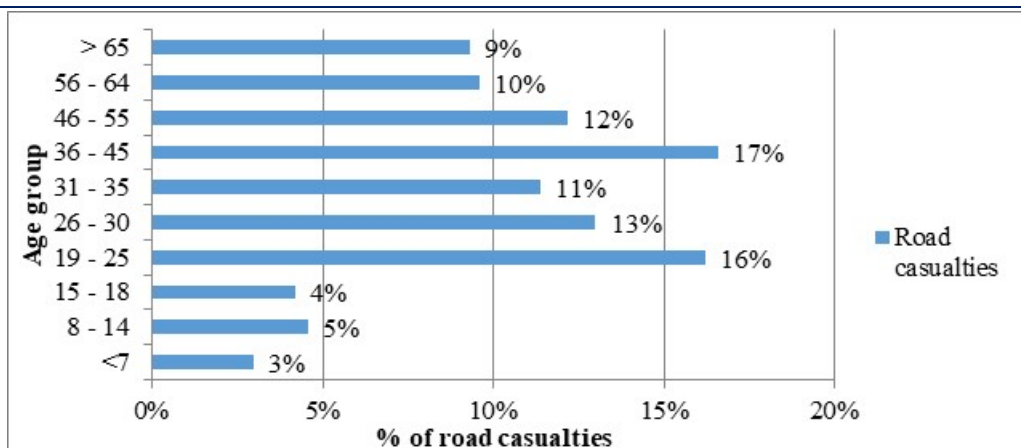


Chart 1.4. – Distribution of casualties per age group on the territory of the City of Belgrade (2011-2015)

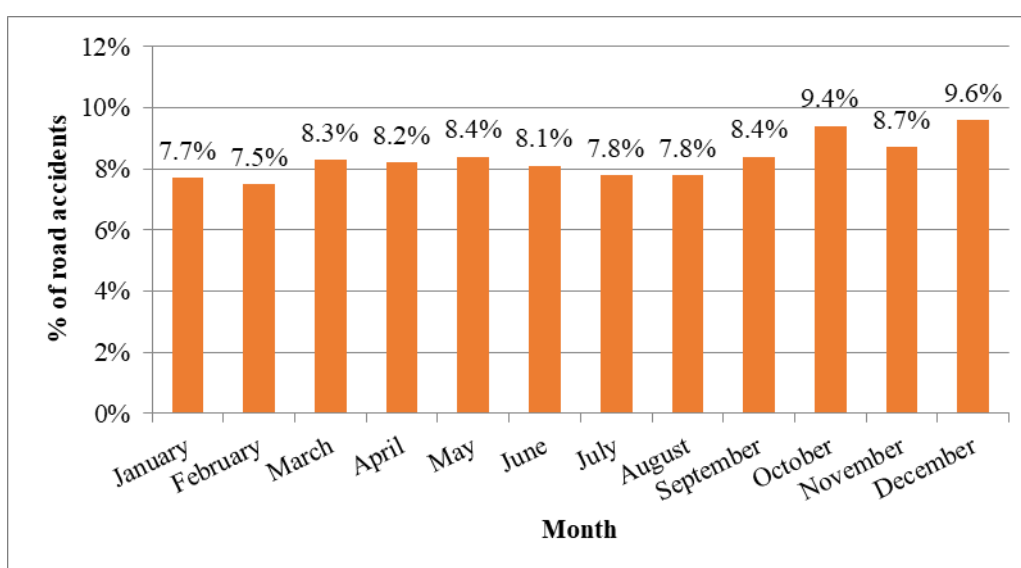


Chart 1.5. – Monthly distribution of road accidents on the territory of the City of Belgrade (2011-2015)

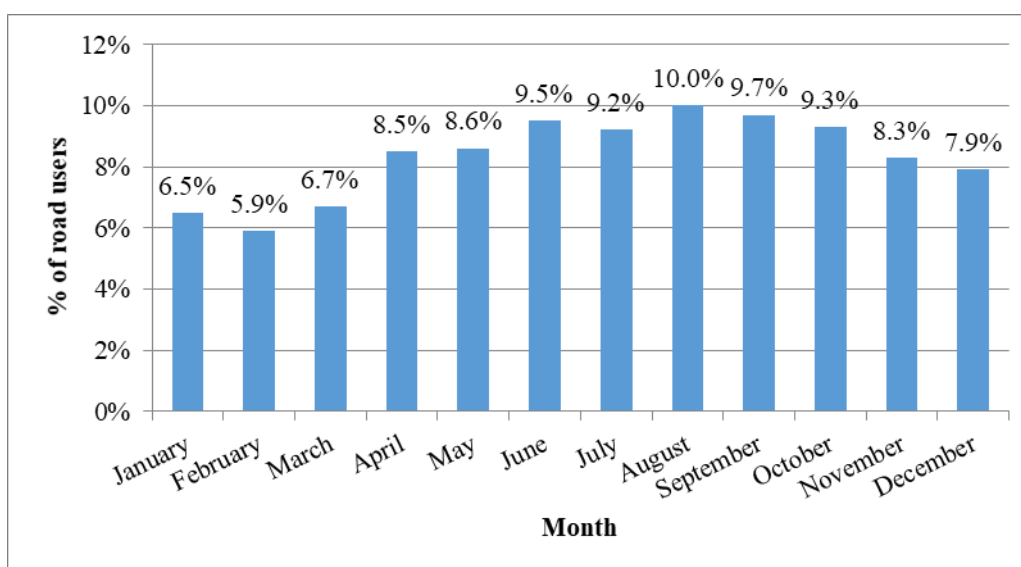


Chart 1.6. – Monthly distribution of road accidents with fatalities and seriously injured on the territory of the City of Belgrade (2011-2015)





The number of road accidents in the last three months increased, while the number of reported road crashes during the summer is traditionally smaller. However, summertime months account for the severest road accidents, as well as for the largest number of fatalities and seriously injured.

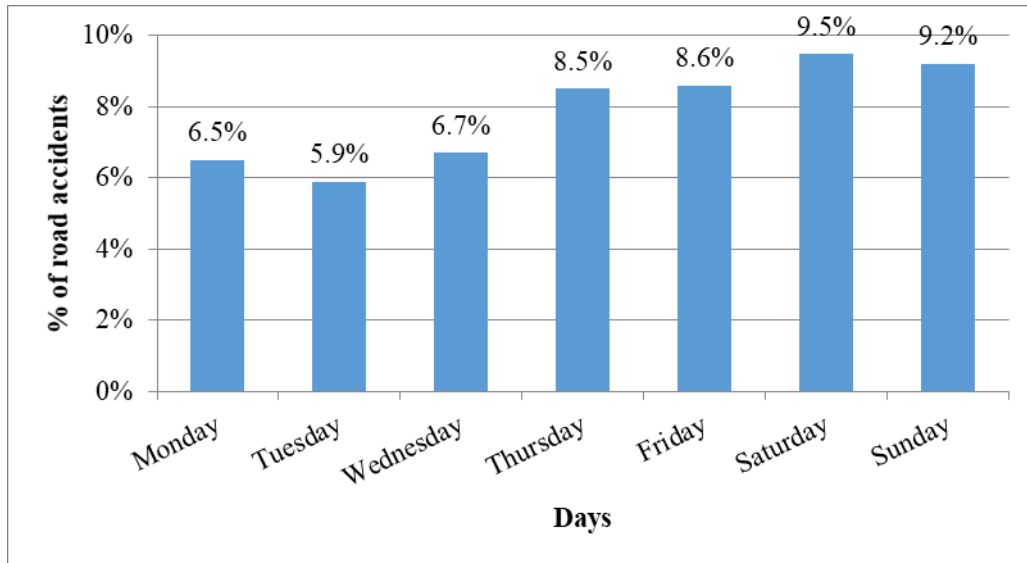


Chart 1.7. – Distribution of road accidents per days in a week in the City of Belgrade (2011-2015)

The largest number of road accidents happen on Saturdays (16,2%), while Monday accounts for the smallest number of road crashes (10,5%).

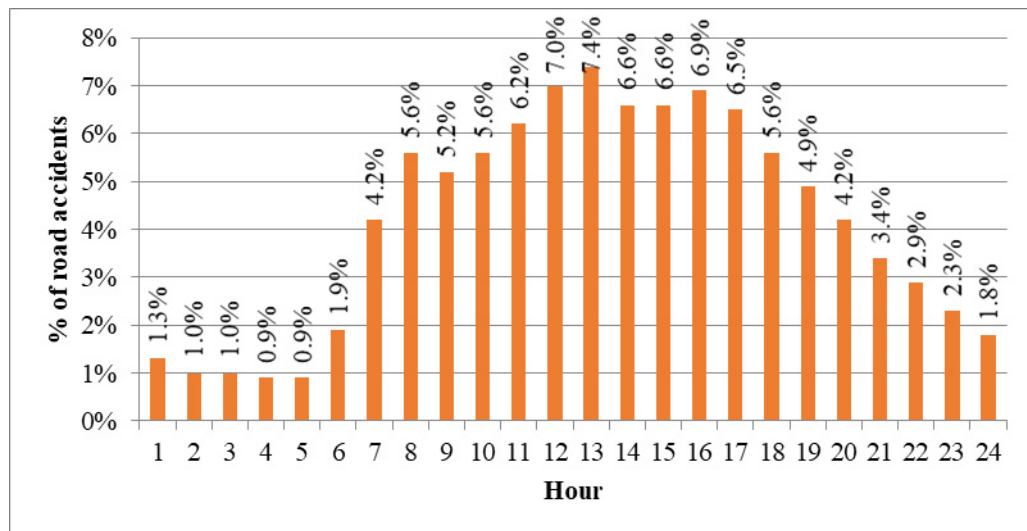


Chart 1.8. – Distribution of road accidents per hour during a day in the City of Belgrade (2011-2015)

PUBLIC AND TRAFFIC RISK

Public risk (PR) of fatalities (annual number of fatalities in road accidents per 100.000 inhabitants) measures the average risk of being killed in a road accident. Public risk is the most often used measure world-wide for quantifying the risk of casualties and is applied in cross-country and cross-city comparisons.

SCOPE OF ROAD SAFETY ISSUES

Table 1.4. – Public risk of fatalities in the City of Belgrade (2011-2015)

Year	2011	2012	2013	2014	2015
Fatalities	136	127	116	104	101
Population of the City of Belgrade	1 659 440				
Public risk	8.2	7.7	7.0	6.3	6.1

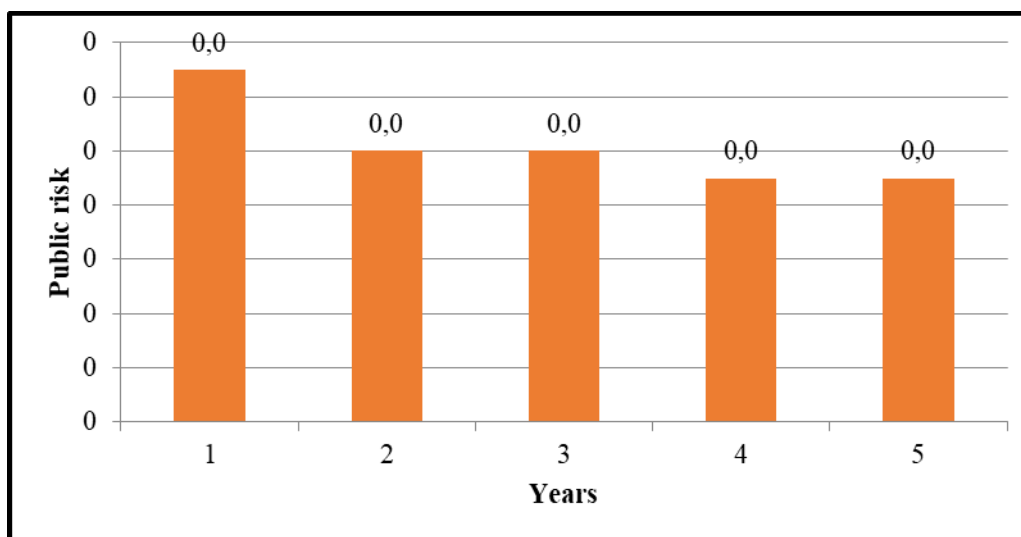


Chart 1.9. – Public risk of fatalities in road traffic in the City of Belgrade (2011-2015)

Traffic risk (annual number of fatalities in road crashes per 10.000 registered motor vehicles) is an additional parameter used to assess the level of road safety of an area (Table 1.5).

Table 1.5. – Traffic risk per year, on the territory of the City of Belgrade (2011-2015)

Year	2011	2012	2013	2014	2015
Fatalities	136	127	116	104	101
Number of registered motor vehicles on the territory of the City of Belgrade	559359	544366	564890		
Traffic risk	2,4	2,3	2,1	1,8	1,8





2. COSTS OF ROAD ACCIDENT CONSEQUENCES

There is no generally adopted methodology in Serbia for the calculation of total socio-economic costs of road crashes. Methodologies used in other states differ significantly. Depending on the assessment model, the following are the overall socio-economic costs per road casualty ranging from: **266,358** (Republic of Srpska, 2012) to **3 652 265 €/Fatality** (New Zealand, 2014), or from **10 623** to **664 098 €/Serious injury** and from **354** to **64 208 €/Slight injury**.

Costs of road casualties in New Zealand (2014): **\$3 981 700/FAT**, \$724 000/SerInj and \$70 000/SliInj¹

(<http://www.transport.govt.nz/assets/Uploads/Research/Documents/Social-Cost-of-Road-Crashes-and-Injuries-June-2014-update.pdf>, visited on 21 October, 2016)

Costs per road casualty in Great Britain: **1 783 556 GBP/FAT**, 200 422 GBP/SerInj and 15 450 GBP/SliInj²

(<https://www.gov.uk/government/publications/reported-road-casualties-great-britain-annual-report-2015>, visited on 21 October, 2016)

Costs per road casualty in Germany (2005): **1 018 064.51 €/FAT**, 105 476.98 €/SerInj and 4 304.70 €/SliInj

(http://www.ectri.org/YRS11/Documents/Final%20website/Session%202/YRS11_Session2_KranzBASt.pdf, visited on 21 October, 2016)

Costs per road casualty in the Republic of Srpska have been estimated to **266.358 €/FAT**, 10 623 €/SerInj and 354 €/SliInj (*Costs of road accidents in the Republic of Srpska*, Economic Institute, Banja Luka).

The following are the numbers of reported road casualties in the City of Belgrade, from 2011 to 2015: 584 road deaths, 3.649 seriously injured, and 22.381 slightly injured. The amount of the total socio-economic costs of road casualties in this five year period spans from **€202.3 million** (according to the methodology used for the Republic of Srpska) to **€5.9 billion** (according to the methodology used in New Zealand), and is as follows:

- Costs of **584 fatalities** – from **€155.6 million** to **€2.1 billion**,
- Costs of **3.649 seriously injured** (SerInj) – from **€38.8 million** to **€2.4 billion** and
- Costs of **22.381 slightly injured** (SliInj) – from **€7.9 million** to **€1.4 billion**.

Therefore, the **annual costs** allocated (spent) in the City of Belgrade only for **road casualties** amounted from **€40.5 million** to **€1.2 billion**, depending on the methodology applied. It should be pointed out that these costs have been calculated using the methodology that offers minimum costs. It means that real costs are far bigger. These amounts represent a huge burden to the citizens and the business environment of the City of Belgrade. Therefore, road accidents and casualties are a big economic burden to the society.

¹ USD around €0,92

² GBP around €1,12

3. ROAD SAFETY FUNDING OPTIONS

Huge socio-economic costs of road crashes are threatening to damage the quality of life of the population living in the City of Belgrade and to consequently slow its development. If the consequences from road accidents were reduced significantly, this money could be invested in the improvement of the quality of life and prosperity of the City of Belgrade. It is therefore necessary to set up a stable system of funding of road safety activities that will lead to the decline in the number of road deaths and injuries, and also to reductions in the costs of road crashes and their consequences. Investing in cost-effective measures and activities whose aim will be to reduce road casualties can be achieved through investing appropriate funds with an excellent cost-benefit ratio. In fact, the experiences of the most developed countries have shown that investing in road safety has indeed been extremely cost-effective, as one Euro invested in effective road safety measures, along with the reductions in the costs of road crashes, yielded eventually 5, 10 or more Euros.

Funds necessary for the **regular work of institutions** (construction and maintenance of objects, purchase of equipment and tools, employees' salaries, overheads, etc.) are provided by the **Republic budget** or the **City of Belgrade's budget**. **Infrastructure** construction and maintenance is financed by the City of Belgrade's **budget** (city streets and local roads), the budgets of city municipalities (non-categorized roads), or by the budget of the Republic (construction and maintenance of state roads).

Concrete **measures and activities** implemented by the City of Belgrade with the aim of improving road safety are primarily funded from the grants and the City of Belgrade's budget. **"The unsafe are funding the road safety"** concept has been implemented efficiently in the City of Belgrade. Namely, 30% of funds coming from the fines for road traffic offences collected on the territory of the City of Belgrade constitute the main part of the grants that the City of Belgrade is using for the implementation of measures from the annual road safety programs.

Having in mind best practices and approaches implemented in the most developed countries, the possibility of gradually introducing the PPP concept (public-private partnership) for financing the measures and activities to improve road safety in the City of Belgrade should be examined and put in place. Donorship and sponsorship in this area should be also encouraged, in an organized and systematic way, involving in particular insurance companies to financially support road safety measures and activities.

In order to secure a stable system of finances for road safety in the City of Belgrade, the current approaches should be thoroughly reviewed, and agreement reached on a comprehensive concept of funding measures and activities for road safety improvement in the City of Belgrade. The City of Belgrade should consider the possibility of setting up a special Road Safety Fund at the city level, and define afterwards the principles of distribution of funds and methods of evaluating the effects of the implemented measures. To that end, the models that will encourage the science-and-research-based work, etc. in the area of road safety should be also defined.



4. BASIS – FRAMEWORK FOR MAKING A STRATEGY

International and national documents, as well as regulations, strategies and planning documents, have been used as a basis for this Strategy. The following are the most significant international documents:

- United Nations' Resolutions on Global Road Safety³,
- Global Road Safety Action Plan 2011-2020⁴,
- International Road Safety Strategy⁵,
- Moscow Declaration on Road Safety⁶,
- Brasilia Declaration on Road Safety⁷,
- EU Directives on Road Infrastructure Safety⁸,
- EU Road Safety Policy,

and other EU strategic road safety documents and plans⁹, etc.



Figure 4.1. – The national strategy document adopted and published

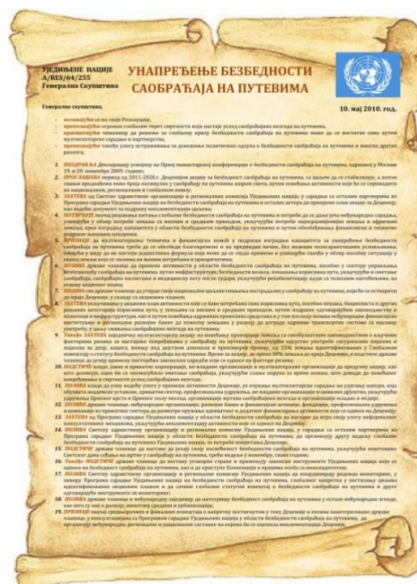


Figure 4.2. – UN Resolution on Decade of Action for Road Safety 2011-2020

³Resolutions on improving global road safety, adopted by the General Assembly: 57/309 of 22 May 2003, 58/9 of 5 November 2003, 58/289 of 14 April 2004, 60/5 of 26 October 2005, 62/244 of 31 March 2008, 64/255 of 2 March 2010 and 66/260 of 19 April 2012, 68/269 of April 2014.

⁴Global Plan for the Decade of Action for Road Safety 2011-2020, WHO and UN Road Safety Collaboration

⁵International Road Safety Strategy, PRI, 2000.

⁶Moscow Declaration, First Global Ministerial Conference on Road Safety: Time for Action, Moscow, 19-20 November 2009.

⁷Brasilia Declaration, Second Global High-level Conference on Road Safety: Time for Results, Brasilia, 18-19 November 2015

⁸Directive 2008/96/EC of the European Parliament and of the Council of 19 November 2008 on road infrastructure safety management, OJ L 319, 29.11.2008, p. 59–67,

<http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32008L0096:EN:NOT> (visited on 24 October, 2016)

⁹http://ec.europa.eu/transport/road_safety/specialist/policy_en (visited on 13 November, 2016)

The most important national documents include the **Law on Road Safety** and the **Road Safety Strategy of the Republic of Serbia 2015-2020**.

The Law has prescribed mandatory passing of road safety strategies and action plans, at the level of state and local levels (Figure 4.3). A strategy defines national road safety targets which represent the starting point, i.e. guidelines for defining local road safety targets.

The Law on Road Safety is the most important document – a piece of legislation as it has set out the process and elements of road safety management, highlighting in particular: the setting up and competences of the National Road Safety Coordination Body, the Road Traffic Safety Agency, local road safety bodies, as well as the passing of the national¹⁰ and local road safety strategies and action plans¹¹, road safety monitoring, road safety funding, etc.

Article 11

"... The Government shall pass the National Road Safety Strategy (hereinafter referred to as: the National Strategy).

The National Strategy shall contain the most important features of the current road safety situation, long- and short-term objectives, guidelines, key areas of work, and time scales for adoption of an adequate National Plan.

The National Strategy shall be proposed by the Coordination Body, for a five-year period at the least, until the end of June in the last year of validity of the previous National Strategy.

Article 12

The Government shall pass the National Road Safety Plan (hereinafter referred to as: the National Plan), for a one-year period at the least, at the proposal of the Coordination Body and in accordance with the National Strategy.

The National Plan shall primarily consist of the following: tasks, priority measures, responsible entities, timescales and financial assets for the key areas of work.

Article 13

The assemblies of the territorial autonomy units and of local self-government units shall pass their road safety strategies and annual road safety plans for their respective units, in accordance with the National Strategy and the National Plan ..."

*The Law on Road Safety,
„Official Gazette of the Republic of Serbia”,
No 41/09, 53/10, 101/11, 32/13, 55/14*

Figure 4.3. – Excerpt from the Law on Road Safety

¹⁰Article 11, Law on Road Safety, "Official Gazette of the Republic of Serbia", No 41/09, 53/10, 101/11,32/13,55/14.

¹¹Article 13, Law on Road Safety





The Road Safety Strategy of the Republic of Serbia 2015–2020 has defined the following basic elements for the making of local road safety strategies:

AMBITION

Reducing road deaths and risks of serious injuries to the level of the best performing countries of the European Union.

MISSION

Sustainable and effective road traffic safety management system.

VISION

Road traffic without road deaths, with significantly reduced number of road injuries and significantly reduced costs of road accidents.

Beside the background elements, such as ambition, mission and vision, other targets have been defined as well to ensure the creation of a sustainable and effective road safety management system until 2020, so that, in terms of consequences of road accidents, the following targets shall apply:

- **No child road fatalities from 2020;**
- **Number of seriously injured children in 2020 shall be reduced by 50%,** compared to the number of seriously injured children in 2011;
- **Number of road fatalities in 2020 shall be reduced by 50%,** compared to the number of road fatalities in 2011;
- **Number of seriously injured in 2020 shall be reduced by 50%,** compared to the number of seriously injured in 2011;
- **Total annual socio-economic costs of road crashes in 2020 shall be reduced by 50%,** compared to 2011.

The National Strategy has set the targets in terms of road safety indicators, in the following way:

- **% of drivers using seat belts, as well as the % of seat belt use at front seats in 2020 shall be 95%;**
- **% of seat belt use at rear seats in 2020 shall be 85%;**
- **% of use of child restraint systems in 2020 shall be 96%;**
- **% of safety helmets used by motorcycle and moped riders in 2020 shall be 99%;**
- **% of passenger cars exceeding speed limits by 10 km/h and over, compared to the posted speed, in urban and rural areas and on highways, in 2020, shall be up to 4,9%;**
- **% of drivers under the influence of alcohol, both in urban and rural areas, in 2020, shall be up to 0,1%.**





5. DESIRED ROAD SAFETY SITUATION

Defining and coordinating well the attitudes on what you want and what you can achieve in road safety is a very sensitive issue when making a road safety strategy. Desired situation is one of the three elements of a road safety management system in the City of Belgrade (current situation, desired situation, managerial measures) and is defined using the Ambition, Mission, Vision and Objectives.

AMBITION

Setting up a road traffic system in the City of Belgrade that will help reduce the risk of road deaths and injuries to the level of the safest cities of the European Union.

MISSION

The City of Belgrade – a safe city with a durable and effective road safety system.

VISION

Minimum costs of road accidents, without road deaths and serious road injuries.

OBJECTIVES

The general objective is to strengthen the protection system by reinforcing the capacities and integrities of all road safety agencies and stakeholders and by improving their mutual communication, cooperation and coordination.

In order to strengthen the protection system in the City of Belgrade, it will be necessary to continually improve until 2020 the structure and authority of the Road Safety Council of the City of Belgrade. The Road Safety Council of the City of Belgrade must have a political, professional, scientific, administrative and media support that will allow for planning and implementation of all measures and activities incurring from this Strategy. It will be also important to introduce a systematic professional development of nurses, teachers, journalists, road traffic police staff, employees at the city administration and other stakeholders in charge of road safety activities.

DESIRED ROAD SAFETY SITUATION

Even if they possess knowledge about road safety, the members of the Road Safety Council of the City of Belgrade will continue to advance their knowledge at seminars and conferences organized in order to provide further understanding of the issue. The University must continue with the transfer of road safety knowledge, primarily by spreading the knowledge and experience of best performing countries in the area of road safety.

Wider application of automatic control systems will strengthen the capacity and integrity of the road traffic police which will be reflected in the increase of subjective risk of road users and better observance of road traffic regulations.

Significant progress in recording data on road traffic and road accidents achieved by means of the CADAS protocol will be continued. This will consequently provide a better quality monitoring of the road safety situation, of attitudes and road safety indicators, and will also see more concrete and planned measures for reducing road hazards.

Civil society organizations dealing with the improvement of road safety will have to be supported in the future in order to create a system of those who will be able to unburden public services and contribute to a larger number of implemented road safety projects.

Regular monitoring of the Road Safety Strategy's implementation and its evaluation will represent a very important step in the process of adjusting the activities whose aim is to achieve the targets set.

Coordination, cooperation and communication must be set up among all the stakeholders of significance for the implementation of road safety activities, including in the first place: the ministries (Ministry of Construction, Transport and Infrastructure, Ministry of Education, Science and Technological Development, Ministry of Interior, Ministry of Justice, Ministry of Health, etc.), Road Traffic Safety Agency, Secretariat for Transport, Road Safety Council of the City of Belgrade and public enterprises. The top management system will be lead by the Mayor and the City Assembly.

Raising awareness of the importance of a safe participation and behavior in road traffic based on the advanced level of knowledge, as well as on developed and grounded positive attitudes on road safety.

Among other things, and taking the above into account, until 2020, the following will have to be done in the City of Belgrade:

- Raising the level of knowledge of pre-school and school children in terms of safe participation in road traffic;
- Reducing the percentage of citizens who are of opinion that the institutions are not interested in road safety, from 60% to 30% and under;
- Reducing the percentage of drivers who find the roads and streets in the City of Belgrade unsafe for travelling, to 20% and under;
- Reducing the percentage of drivers of passenger cars and motorcyclists who are of opinion that they can have alcohol even if they drive carefully, from 15% to 8% and under;
- Increasing the subjective risk of speed control to 85% and over;
- Increasing the subjective risk of control of the proper use of protection equipment to 85% and over.





Improving permanently the level of road safety indicators relating to the road traffic behavior, by monitoring and advancing the situation continually, on an annual level.

Road safety indicators and the use of protection systems in particular, strongly correlate with the consequences of road crashes, especially with the number of road deaths. For these reasons, the most developed countries have determined their strategic targets both in relation to consequences (number of road fatalities, number of road injuries, number of road accidents) and in relation to indicators concerning the use of protective equipment in road traffic, speed related indicators, indicators relating to drink-driving, etc.

Road safety indicator targets have been defined on the basis of national targets, and are shown in Table 5.1.

Table 5.1. – Road safety indicator targets for the City of Belgrade

No	Name of a road safety indicator	Value for the City of Belgrade in 2016	Target for the City of Belgrade in 2020	National target for Serbia in 2020
1	% of safety helmet use	93.2	99	99
2	% of drivers using a seat belt	75.4	95	95
3	% of seat belt use at front seats	73.8	95	95
4	% of seat belt use at rear seats	7.3	85	85
5	% of use of child restraint systems	38.1	96	96
6	% of passenger cars exceeding speed by 10 km/h and over in urban areas	28.6	4.9	4.9
7	% of passenger cars exceeding speed by 10 km/h and over in rural areas	27.3	4.9	4.9
8	% of passenger cars exceeding speed by 10 km/h and over on highways	12	4.9	4.9
9	% of drivers under the influence of alcohol in urban areas	1.03*	0.05	0.10
10	% of drivers under the influence of alcohol in rural areas	1.02*	0.05	0.10

* - the value refers to 2015

In order to monitor the implementation of defined Strategy's targets, it will be necessary to periodically, and at least once a year, analyze if the targets set have been achieved.

The so called interim targets, or the ways in which to achieve the final targets for 2020, have been set to that end and are shown in the charts below.

DESIRED ROAD SAFETY SITUATION

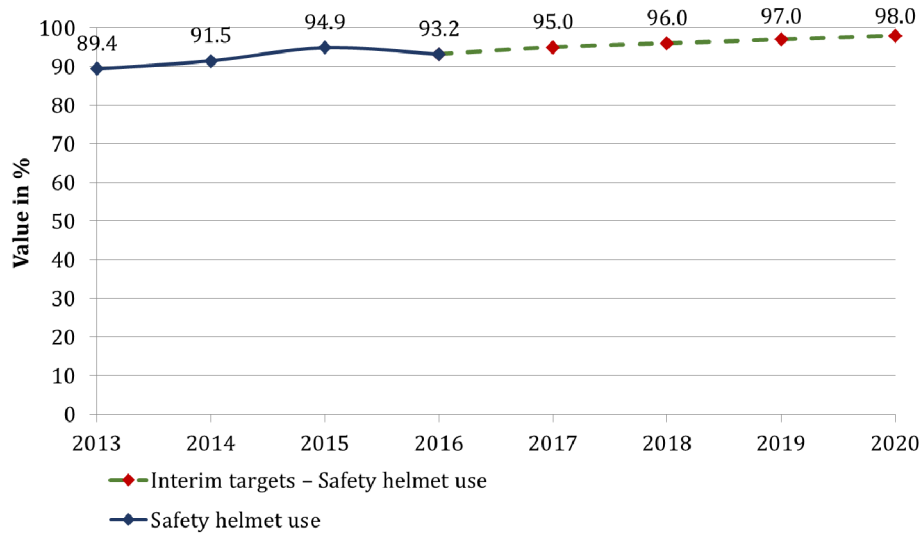


Chart 5.1. – Interim targets for the use of safety helmets

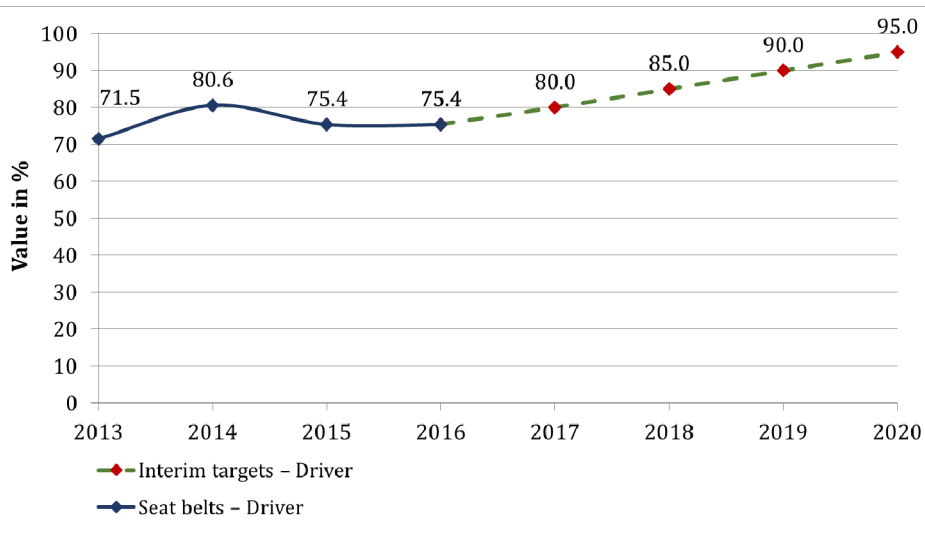


Chart 5.2. – Interim targets for the use of seat belts by drivers

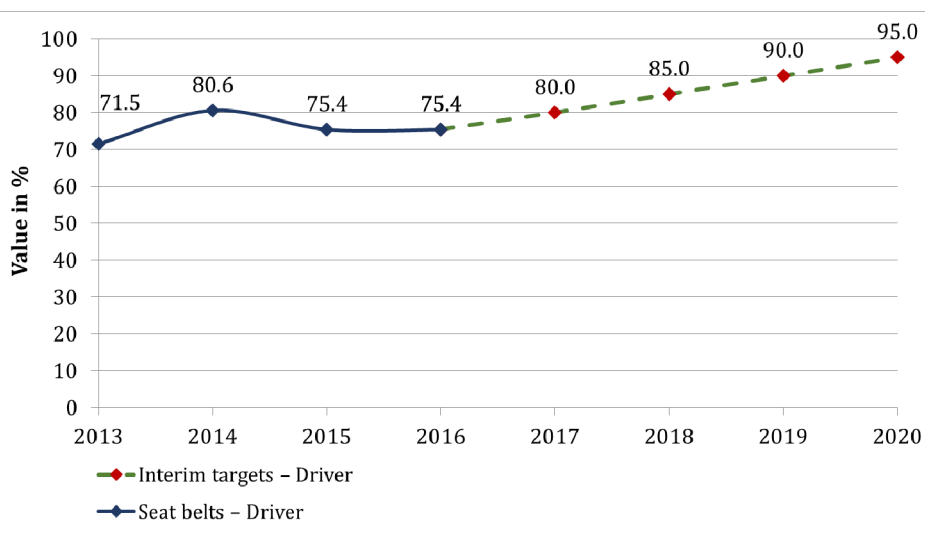


Chart 5.3. – Interim targets for the use of seat belts at front seats



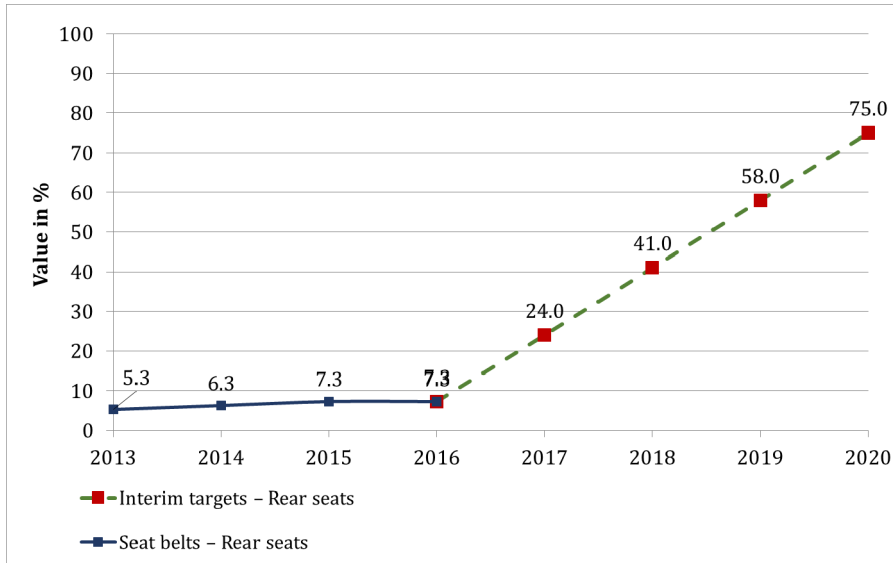


Chart 5.4. – Interim targets for the use of seat belts at rear seats

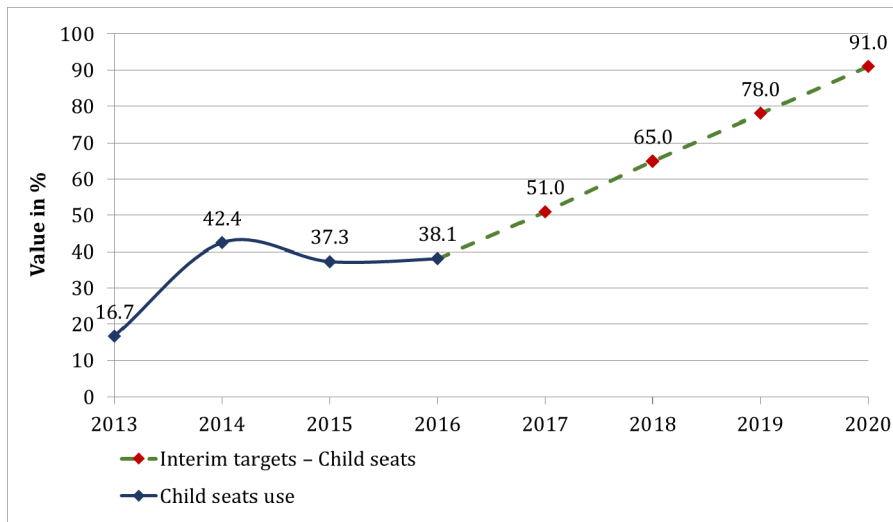


Chart 5.5. – Interim targets for the use of child restraint systems (child seats)

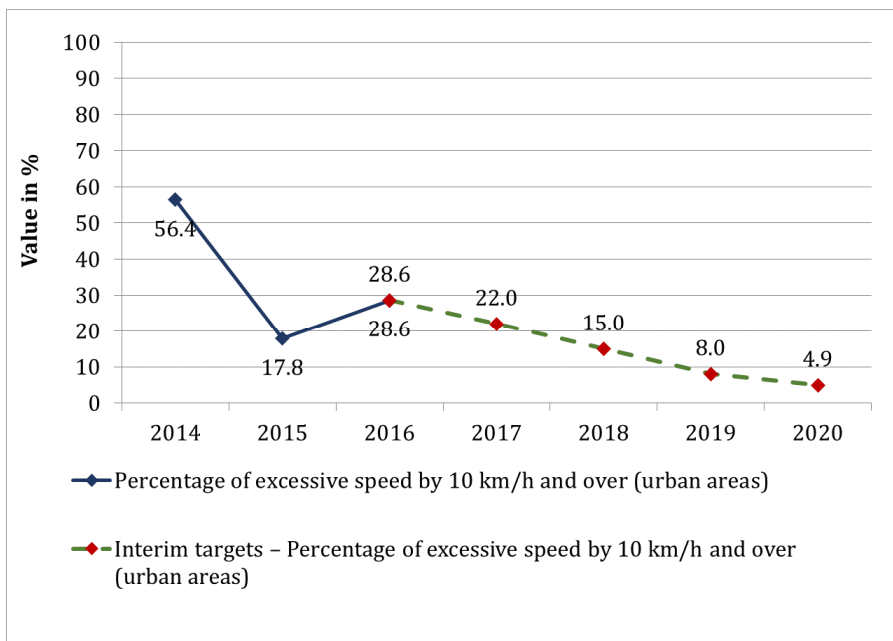


Chart 5.6. – Interim targets for excessive speed by 10 km/h and over (urban areas)

DESIRED ROAD SAFETY SITUATION

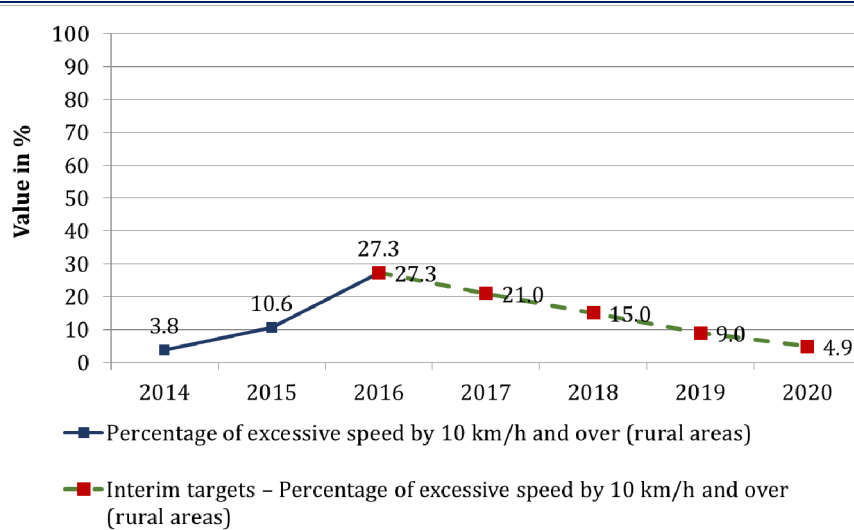


Chart 5.7. – Interim targets for excessive speed by 10 km/h and over (rural areas)

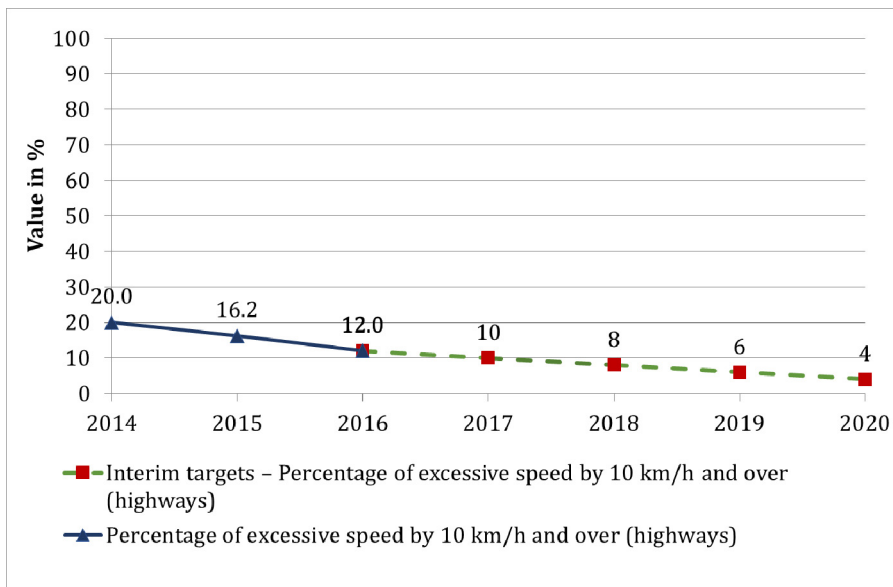


Chart 5.8. – Interim targets for excessive speed by 10 km/h and over (highways)

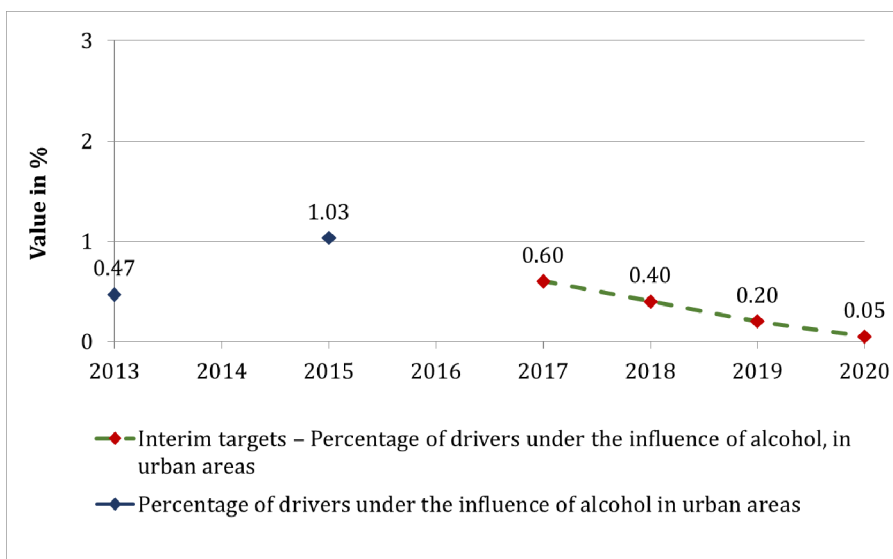


Chart 5.9. – Interim targets for drivers under the influence of alcohol (urban areas)



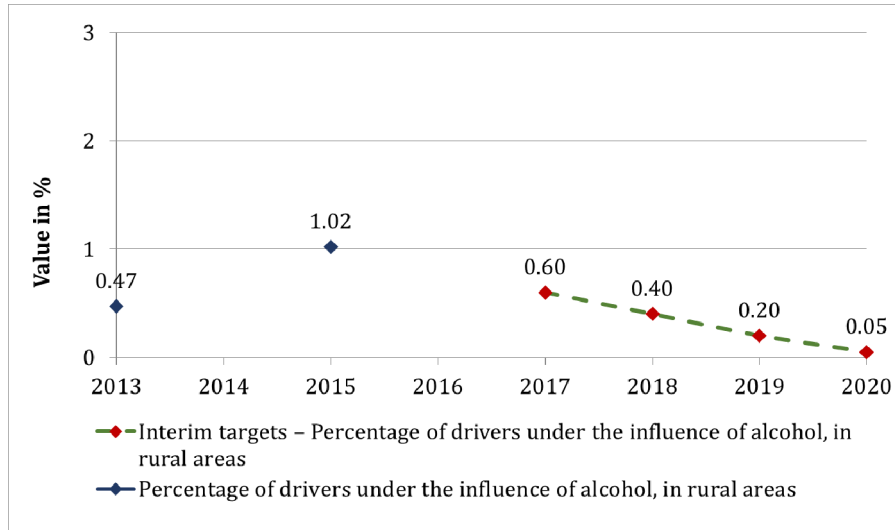


Chart 5.10. – Interim targets for drivers under the influence of alcohol (rural areas)

Achieving those previously defined targets will help set a continuous trend in reducing the number of accidents, deaths and injuries in road traffic.

Reductions in road casualties and their consequences, i.e. fatalities, seriously and slightly injured, is an indicator showing in the most obvious way the efficiency of the created road safety protection system. Having that in mind, the following should be achieved in the City of Belgrade until 2020:

- Decreasing the number of road deaths so that the **number of fatalities is halved – i.e. 68** in 2020, compared to 2011 (136). Some **95 lives** would be saved in that way, which corresponds to material cost saving of at least **25.3 million EUR**, compared to the 2015 situation.

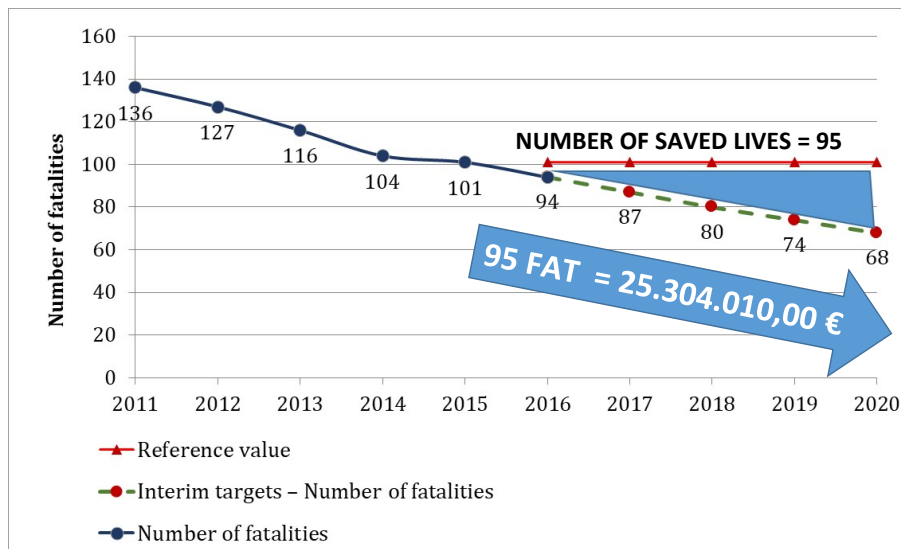


Chart 5.11. – Interim road death reduction targets

- Reducing the number of serious road injuries so that the number of **seriously injured in 2020 is 356**, which is 50% less when compared to 711 seriously injured in 2011. This will help **prevent 1.208 serious injuries** and save the material costs in the amount of **12.8 million EUR**, compared to the 2015 situation.

DESIRED ROAD SAFETY SITUATION

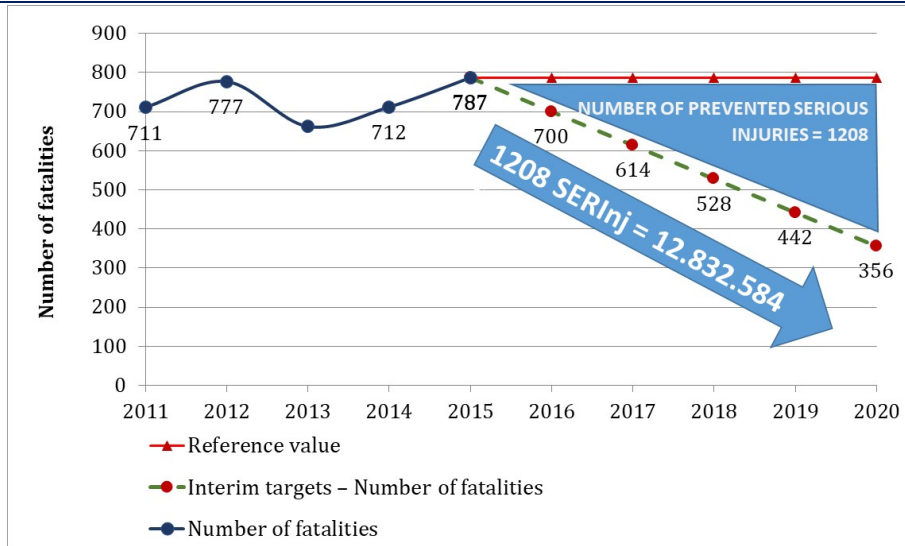


Chart 5.12. – Interim serious road injury reduction targets

- Reducing the number of slightly injured so that the number of **slight road injuries in 2020 declines by 50% (1795)**, compared to 2011 (3590). The number of slightly injured would be reduced in that way by around 11.5 thousand and the amount of material costs saved would amount to at least **4.1 million EUR**, compared to the 2015 situation.

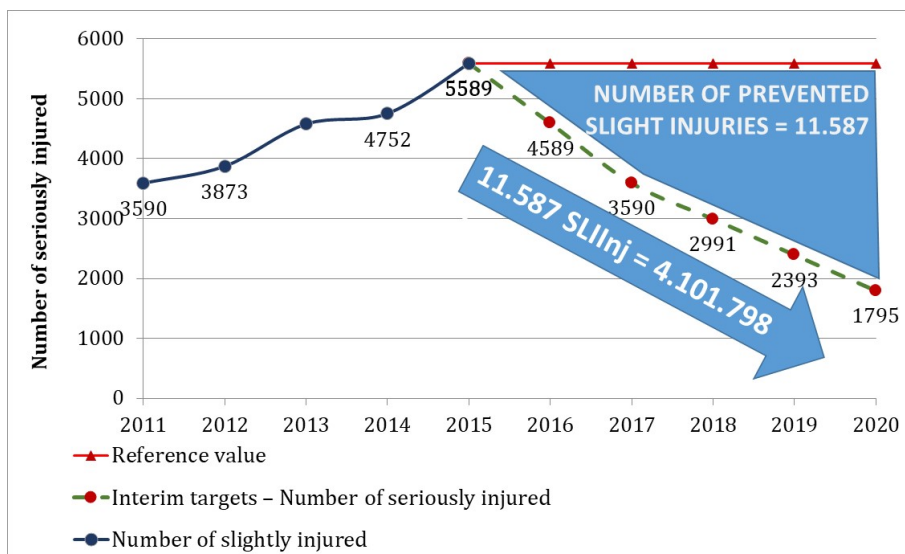


Chart 5.13. –Interim slight road injury reduction targets

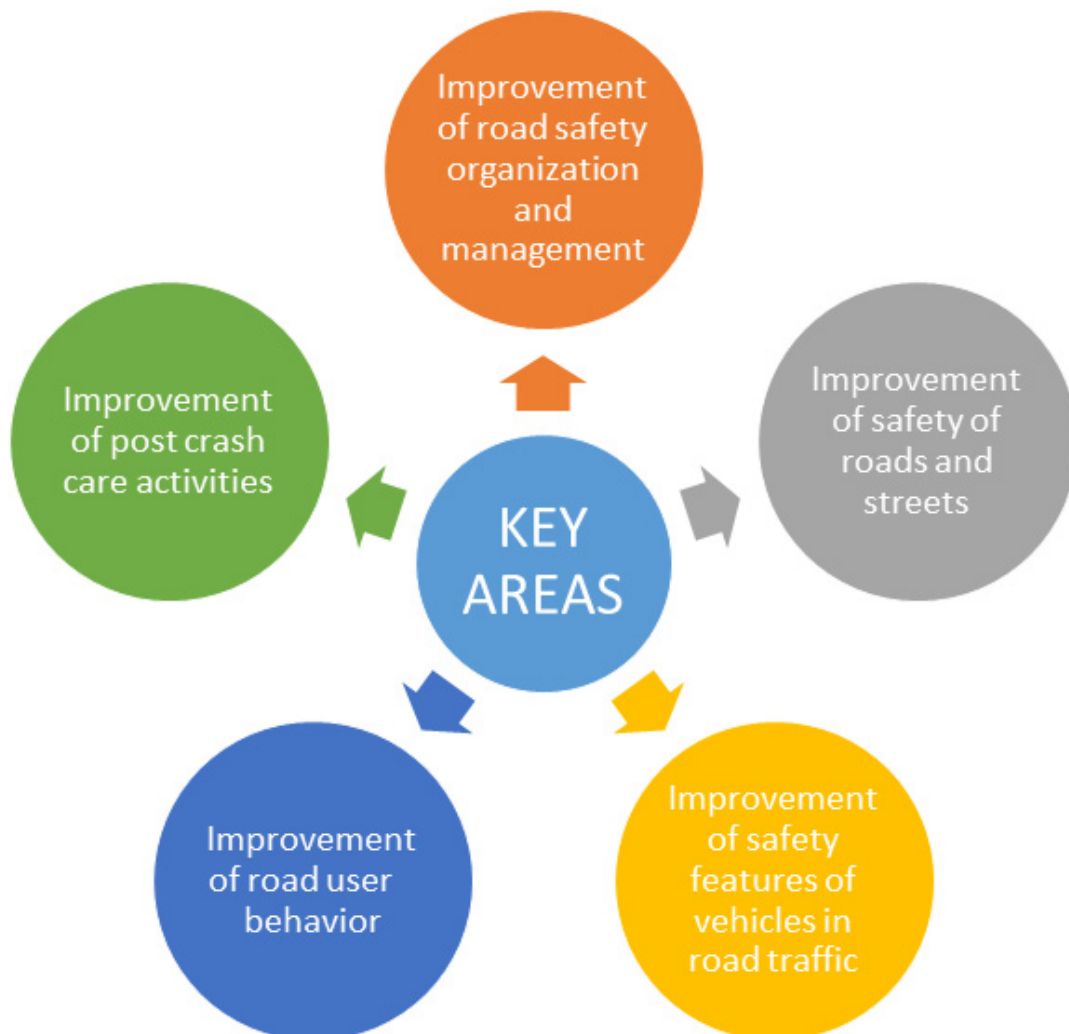
Taking into account previously defined road casualty reduction targets in the City of Belgrade, the total amount of material costs saved would be at least **42.2 million EUR**. Thus the unspent funds would be invested in the further road safety improvements, which would in turn yield new savings. The remaining of these funds (savings) could be invested in road traffic and other sectors, which would additionally improve the quality of life in the City of Belgrade.



6. KEY AREAS OF WORK

Having in mind the targets of the National Road Safety Strategy, as well as the fact that the City of Belgrade participates to a great extent in the process of achieving these targets, the ultimate targets (defined for the year 2020), but also the so called interim targets (annual targets, from 2017 to 2020) will be achieved by implementing the measures and activities in key areas of work that have been systematized according to the pillars of the Global Plan of the Decade of Action for Road Safety 2011-2020:

1. Improvement of road safety organization and management,
2. Improvement of safety of roads and streets,
3. Improvement of safety features of vehicles in road traffic,
4. Improvement of road user behavior, and
5. Improvement of post crash care activities



IMPROVEMENT OF ROAD SAFETY ORGANIZATION AND MANAGEMENT

In order to meet the Strategy's targets, the City of Belgrade will in the first place work on **building and reinforcing the capacities and integrity of all institutions** of significance for road safety. It will be of particular importance to improve the level of **commitment** to road safety. Related activities will be launched by the City Assembly and the Road Safety Council. **Institutional benchmarking** will be also applied for the purpose of observing the so called "weak points" in the road safety management system. Thus the building of capacity and integrity of both individuals and institutions of importance for road safety will be conducted through adequately prepared and implemented **program for strengthening institutional capacities**. All the institutions will intensify the **professional development of employees** and will be also working on **enhancing the motivation** and commitment of institutions and individuals that are able to contribute to improving the road safety.

Building of and strengthening the ties among institutions of importance for road safety will be achieved by improving the horizontal and vertical **coordination, communication and cooperation**. Joint work of all institutions on advancing road safety will be done using **professionally designed and harmonized annual activity plans and work programs** that will **rely on data** and be **based on science and best practices**. Implementation of measures and activities and effects achieved will be analyzed by professionals and published in public. A **stable source of funding** will be secured for the implementation of activities aiming at improving road safety organization and management, while **spending of funds will be purposeful, according to defined priorities**.

IMPROVEMENT OF SAFETY OF ROADS AND STREETS

The City of Belgrade will implement the projects aimed at improving the safety of roads and streets not only through **preparing, implementing and monitoring the activities whose aim is to do the maintenance work of the existing infrastructure facilities falling under the City's jurisdiction**, but also through **preparing the proposals for improvement and monitoring of implementation of measures for upgrading the road infrastructure facilities that are falling under the jurisdiction of the Republic of Serbia**.

In order to ensure efficient and safe running and management of road traffic, a series of **transport and traffic engineering studies and research projects** will be conducted, which will eventually provide the analyses of various aspects of a road traffic system (road safety, public passenger's transport, road traffic regulation, parking, biking, walking, requirements concerning goods and transport, terminals, user's demands and needs, etc.).

By setting up a cadastre of road traffic signs and signals, which will be regularly updated, conditions will be provided for efficient management of road traffic regimes. **Successful management of road traffic flows will be secured by the state-of-the art ITS systems** at the main City of Belgrade's entry-exit road directions, and particularly on state road sections passing through the City. This will also allow for reductions in environmental impact.





The highest road safety level will be provided by applying the state-of-the-art tools for road safety improvement during the whole life cycle of a road. **Black spot management program** will help make the ranking of hazardous locations and identification of "black spots". Programs intended for the repair of "black spots" and their implementation in the field will eliminate or reduce the risks of participating in road traffic. **Road safety audits** should be constituent parts of each new road traffic infrastructure facility project. Road authorities falling under the jurisdiction of the City of Belgrade will first prepare a science-based plan and **program of implementation of Road safety inspections** on existing roads and streets in the jurisdiction of the City of Belgrade, and then commission and conduct those Inspections. Based on the results obtained, the work on improving the existing road traffic infrastructure facilities will be done according to defined priorities and criteria. Road authorities will continue to analyze in detail all road accidents involving at least one fatality. To that end, they will use **in-depth analyses of road accidents (independent assessment of road's impact on road crashes with fatalities)** and will apply appropriate measures, according to their competences, in order to remove hazards from roads and streets.

The City will design the "master" plan of sustainable mobility development which will **prioritize pedestrian and bicycle traffic, as well as circulation of clean eco friendly vehicles**. This will help **provide a sufficient number of bicycle lanes and paths, zones with slow traffic, pedestrian footpaths and sidewalks**. The City will pay special attention to the design and marking of **school zones and safe routes to schools**.

The City will also make a **detailed analysis to see if it is justifiable to introduce various transport systems that are reducing the use of motor vehicles** (primarily in the central parts of the City), and, as a result, are decreasing air-pollution and road traffic jams. Those various transport systems or modal shifts will include the following: Bike-sharing, Car-sharing, Car-pooling, Park-and-ride, etc. Based on results from the pilot project and justification study, a justified system will be introduced and **appropriate infrastructure built** (parking lots for bicycles, parking areas at the City's outskirts and entry points to the central parts of the City). The City will additionally motivate the use of **environmentally friendly means of transport** by introducing appropriate **tariff policies**. The work on research and implementation of various speed management measures will be continued, including as well the application of the concept of **forgiving and self-explaining roads**.

IMPROVEMENT OF SAFETY FEATURES OF VEHICLES IN ROAD TRAFFIC

In order to improve the safety features of vehicles in road traffic, the City of Belgrade will establish a regular **field research of safety and other properties of vehicles in road traffic**, analyze the situation, inform the public about the results and implement **campaigns** whose aim will be to improve safety features of vehicles participating in road traffic (campaigns targeted at technical regularity of vehicles, mandatory equipment, especially in winter conditions, etc.). Annual road safety programs of the City of Belgrade will set out **support to the owners of agricultural vehicles** that are running on public roads, by providing them with appropriate rotation lights and campaigns tailored to meet their needs.

In order to provide **better vision and conspicuity of bicyclists**, the City of Belgrade will encourage the use of appropriate light systems and retro-reflecting materials for bicycles. Powered two-wheelers will be approached by suitable campaigns, in order to improve the conspicuity and good working order of these vehicles.

IMPROVEMENT OF ROAD USER BEHAVIOR

The City of Belgrade will introduce regular **research into road user behavior** by monitoring road safety indicators, per City municipalities and aggregately for the City of Belgrade. The following **key road safety indicators** will be monitored according to the developed methodology and identified needs: the use of seat belts, safety helmets and child protection equipment, as well as vehicle driving speed, drink-driving, observance of light and other signals, behavior of pedestrians and bicyclists, etc. The results thus obtained will be regularly analyzed and compared with other parts of Serbia, but also with the cities across the European Union.

The research into the attitudes and behavior in road traffic will be the basis for the monitoring of effects of implemented road safety programs. Attention will be paid to **coordinated campaign activities** intended for road safety improvement and **traffic-police enforcement** which will raise the level of road users' knowledge, behavior, **respect** and **adoption** of regulations.

Appropriate campaigns will be launched for the users of powered two-wheelers in order to increase the **safety helmet** wearing rate, ensure better observance of **speed** limits, improve **conspicuity**, reduce the number of **drink-driving** cases, etc.

Regular research into the state of child road safety, primarily in school zones, will help define a suitable **set of measures intended for child protection at hazardous locations and in school zones**. A special set of measures will be prepared for **traffic education and training** of children which will not allow for comprehensive knowledge needed for their safe participation in road traffic, but will also help them acquire correct attitudes and finally behave safely in everyday road traffic situations.

By applying appropriate measures, the "errors" that are occurring in the system and are contributing to the increased level of endangerment of elderly people participating in road traffic will be eliminated. Firstly, by **making the road traffic environment safe for walking** (sidewalks and pedestrian footpaths without obstacles) and for road crossing (appropriate duration of green light for pedestrians, construction of medians – refuges, that would allow for a safe two-phase road crossing, use of speed bumpers in zones with distractions, etc.), and secondly, by **well-planned and coordinated prevention- and promotion-related measures** that will affect the change in elderly people's awareness of and behavior in road traffic.

The City of Belgrade will strictly ensure the **implementation of standards for road infrastructure design, especially from the point of view of children, elderly people and disabled persons**. Before usage permits for new road infrastructure have been issued, an inspection will be carried out to check if all the requirements from the road design standards have been met, having in mind the needs of children, elderly people and disabled persons, and requiring a strict observance of design standards.





As for the **existing roads**, the City of Belgrade will, on the basis of available, implemented research studies, put in place appropriate measures in order to **improve accessibility** of road traffic infrastructure, enhance safety of disabled persons, especially in school zones, zones with medical health institutions, administrative units and post offices. When selecting a public transporter for passenger transport, the City of Belgrade will require from the operators to have in their fleets **sufficient number of vehicles adjusted to persons with specific needs**. Also, when making their time-tables, these operators will provide an even distribution (presence) of vehicles in their time-tables that are adjusted to the needs of persons with disabilities.

IMPROVEMENT OF POST CRASH CARE ACTIVITIES

The City of Belgrade will increase the awareness of road safety issues and possibilities for reducing the consequences of road accidents by **informing** the public on the road safety situation, by organizing first aid **trainings** and by a **better coordination** of emergency services that are the first ones to arrive at the site of a road accident. The City of Belgrade will support joint exercises and other types of professional training and **improvement of coordinated work of emergency services** (emergency medical assistance, road traffic police, sector for emergency situations, etc.). The Road Safety Council will, at least once a year (for example, on the occasion of the World Day of Remembrance for Road Traffic Victims), initiate and support **joint exercises** that will be prepared by experts and implemented in due coordination, and also given adequate media support. In order to further improve the work of emergency services, the City of Belgrade will support **other types of professional training** of intervention units, as well as provision of their **equipment**.

The City of Belgrade will conduct additional studies to include the **research into the life change** suffered by the injured, or families of those injured and killed in road accidents. These studies will help **to better and more efficiently plan the related campaigns** and review the possibilities of supporting the mentioned categories of citizens. Apart from that, the City of Belgrade will also support activities and projects of **civil organizations** gathering together the victims of road accidents, and primarily carrying out activities that are reducing the suffering of the injured and their families. In addition, the City of Belgrade will be encouraging the **media** into giving more focus on the issues the victims of road crashes are facing, etc.

7. ACTIVITIES AND RESPONSIBILITIES OF LEADING STAKEHOLDERS

Activities from the key areas of work have been implemented according to the competences and responsibilities that are defined by relevant normative acts. The following are the most important stakeholders and agencies dealing with activities whose aim is to improve the road safety system of the City of Belgrade:

- Assembly of the City of Belgrade;
- Mayor of the City of Belgrade;
- Council of the City of Belgrade;
- City of Belgrade Administration Unit, with its organizational units among which the following are the most important ones:
 - ❖ Secretariat for Transport,
 - ❖ Secretariat for Education and Child Care with the pre-school institutions, primary and secondary schools,
 - ❖ Secretariat for Health Care,
 - ❖ Communal Police,
 - ❖ Secretariat for Inspections,
- Office for Youth and Cooperation with associations,
- Public Utility Companies: PUC “Road Directorate”, PUC “Parking Service”, PUC “Public Lighting Company”,
- Road Safety Council of the City of Belgrade,
- Ministry of Interior – Road Traffic Police Administration,
- Chamber of Commerce of the City of Belgrade,
- High Schools,
- Transport companies,
- Transporters from the system of public passengers’ transport,
- Non-governmental organizations,
- Insurance companies,
- City municipalities,
- Municipal road safety coordination bodies,
- Public media services,
- Other institutions.

ASSEMBLY OF THE CITY OF BELGRADE

The Assembly of the City of Belgrade plays an important role in the road safety system as it adopts all strategic documents governing road traffic issues in the City of Belgrade, including the road safety management.

On the other hand, the Assembly monitors the road safety situation on a regular basis, i.e. at least twice a year, and discusses the road safety situation in the City of Belgrade, as well as the implementation of this Strategy.





MAYOR OF THE CITY OF BELGRADE

The Mayor performs all the tasks entrusted to him by the law and other regulations. He is responsible for appointing professional members of the Road Safety Council, defining their obligations and responsibilities, and creating conditions for the efficient operation of the Council. He makes sure that sufficient funds and other resources have been provided for the successful implementation of the Strategy and the Action Plan. The Mayor will request and analyze regularly the reports on measures and actions foreseen for the improvement of road safety, as well as the reports on achieved results and problems faced while implementing certain activities. In situations where he notices that certain measures from the Strategy have not been implemented at all or have not been implemented according to the Strategy and the Action Plan, the Mayor will take measures within his competences in order to solve the problems in question and provide conditions for the consistent implementation of the Strategy. He will prepare the reports on the road safety situation and issues, and on implementation of this Strategy in general, on a regular basis, twice a year, and will present them to the City Council and the City Assembly.

COUNCIL OF THE CITY OF BELGRADE

The City Council will, in accordance with its legal powers, monitor and support the implementation of the Strategy. The state of road safety and the implementation of the Strategy will be analyzed by the Council at its sessions. Based on continuous monitoring of the situation and difficulties in the implementation of the Strategy, the City Council will, twice a year, discuss the report and forward it to the City Assembly. All the members of the City Council will, within their respective competences, be committed to implementing this Strategy, supporting the work of the Road Safety Council, encouraging other stakeholders to get involved and working on improving the horizontal and vertical coordination.

MUNICIPALITY PRESIDENTS

The President of a municipality will set up a municipal coordination body (Commission, Council, etc.) and appoint the members of that body, in order to harmonize the work on safety of roads that are falling under the jurisdiction of the city municipality. The President makes sure that funds needed for the improvement of road safety within municipal jurisdiction have been provided. The President will also request the report on the road safety situation and monitor the implementation of the Strategy, Action Plan and activities planned at the municipal level. In case of possible problems with the Strategy implementation, the President will undertake measures within his/her competences to eliminate such problems. The President will also prepare a report on Strategy implementation and the road safety situation, for submission to the Municipal Council, at least twice a year.

COUNCIL OF CITY MUNICIPALITIES

The Council of City Municipalities will monitor the implementation of the Strategy, in accordance with its competences, and in particular of the parts of the Strategy falling under the jurisdiction of a particular municipality. All the members of the Council of City Municipalities will support and will be committed to implementing the Strategy, and will, at least twice a year, prepare a report for the City Council on the implementation and possible problems with the implementation of the Strategy and

ACTIVITIES AND RESPONSIBILITIES OF LEADING STAKEHOLDERS

the Action Plan. All the members of the Council of City Municipalities will support the work of the local road safety coordination body and also encourage other stakeholders to get involved in improving road safety.

SECRETARIAT FOR TRANSPORT

The Secretariat for Transport plays a key role in the road traffic and road safety management systems in the City of Belgrade. The main task in the road safety sector is monitoring of the road safety system and response needed to eliminate system deficiencies. In addition, the Secretariat organizes and implements preventive-promotional measures in the field of road safety. Together with the Secretariat for Education, it is responsible for the implementation of traffic education and training in order to improve road traffic environment in school zones and in other zones accounting for the increased participation of vulnerable road users, as well as to enhance road user behavior in these zones.

The Secretariat for Transport is in charge of giving consent for the organization of sports or other events on the road, for traffic projects concerning the setting up of temporary traffic signs and signals, etc. The Secretariat organizes the counting of vehicles on roads and other measurements intended for traffic on public roads, performs technical regulation of road traffic on municipal roads and streets in urban areas. The Secretariat also defines the traffic-technical conditions for planning documents and issues certificates of a project's conformity with the planning documents. It carries out the maintenance work of public parking spaces and their use, and also organizes regular public transport. The Secretariat is also responsible for the reconstruction, maintenance, protection, use and management of municipal roads and streets in urban areas, as well as of state roads (with the exception of highways).

SECRETARIAT FOR EDUCATION AND CHILD CARE

The Secretariat for Education and Child Care is responsible for the implementation of measures of road traffic education and upbringing for the purpose of acquiring knowledge, skills and habits necessary for safe participation in road traffic, improvement and strengthening of positive attitudes and behavior of importance for safe participation in road traffic, as well as for ensuring and implementing the needs from the field of road traffic education and training, in compliance with relevant laws, for encouraging the implementation of work programs and models for pre-school children, in accordance with the law, and the implementation of calls to civil society and non-governmental organizations from the field of child safeguarding, etc. The Secretariat also carries out other tasks and assignments in accordance with the law, the Statutes of the City of Belgrade and other regulations.

SECRETARIAT FOR HEALTH CARE

With its five Institutes, the Secretariat for Health Care ensures and implements health protection of interest to the citizens on the territory of the City of Belgrade, at the primary health care level.





The Secretariat is in charge of cross-sectoral cooperation, coordination, encouragement, organization and guidance related to the implementation of tasks and assignments in the field of public health on the territory of the City of Belgrade, as well as in charge of promotion of health and implementation of measures for the preservation and improvement of health, prevention and suppression of illnesses and risk factors.

SECRETARIAT FOR SPORTS AND YOUTH

The Secretariat for Sports and Youth is in charge of monitoring the activities and cooperation with associations of public importance for the work with young people, associations, youth organizations and organizations for young people, as well as for the creation of conditions for active and quality consumption of free time of young population, by cherishing healthy and safety life styles.

COMMUNAL POLICE

The Communal Police is taking care of surveillance of the public transport, both in the City and suburban transport and other local transports, according to the law and regulations of the City of Belgrade. The Communal Police also takes care of the environmental protection, cultural goods, local roads and streets and other public facilities of importance for the City of Belgrade, maintaining at the same time the communal order.

SECTOR FOR INSPECTION AND SUPERVISION OF ROAD TRAFFIC

This sector carries out inspection and supervision work over local transport, i.e. over the transport of passengers in urban traffic, encompassing the transport of passengers in the City of Belgrade, as well as between built-up areas within city limits, by trams, trolleybuses and buses. It also supervises occasional passengers' transport, regular and occasional goods transport, transport of persons and goods on own account, and transport by taxi. In addition, it carries out inspection and supervision over the maintenance and protection of municipal and state roads within the jurisdiction of the City of Belgrade. It performs administrative-legal affairs in the field of communal and road traffic inspection control. It also produces requests for filing a misdemeanor proceedings, application for corporate offenses, criminal charges, reports to the Court of Honor, appeals against the decisions of the Misdemeanor Court, responses to lawsuits, and also considers appeals against decisions taken by inspectors in the first instance procedures and offers instructions to the body of the first instance to act on appeals in question.

OFFICE FOR YOUTH AND COOPERATION WITH ASSOCIATIONS

The Office for Youth and cooperation with associations provides conditions for active and quality use of free time of young people, by cherishing healthy and safe life styles, for implementation of socially responsible campaigns from the field of ecology, safety, solidarity and health of young population.

ACTIVITIES AND RESPONSIBILITIES OF LEADING STAKEHOLDERS

INSTITUTIONS OPERATING PUBLIC PASSENGERS' TRANSPORT IN THE CITY OF BELGRADE

The public passengers' transport in the City of Belgrade is carried out by the City Transport Company "Belgrade", Transport Company "Lasta", Railroad Transport Company „Belgrade", City railroad "Beovoz" and private bus transporters.

Given the importance of the public transport in the overall transport system of the City of Belgrade, it is of extreme importance for the entities providing public transport of passengers to give priority to road safety in their business policies and procedures.

ROAD SAFETY COUNCIL OF THE CITY OF BELGRADE

The main task of the Road Safety Council of the City of Belgrade is to put up, or create a draft program for the City of Belgrade governing the use of funds for road safety improvement. In addition, this Council monitors the implementation of measures and their effects and reports to the Mayor and the City Council on this. It also monitors the implementation of Strategy defined targets. Cooperation and coordination with municipal road safety coordination bodies is of particular importance. The Road Safety Council will, if needed, include in its work the professionals and other individuals who will be able to assist in bettering the Council work and improving the road safety. With its work and dedication, the Council will be continually enhancing the coordination of activities in the field of road safety.

MUNICIPAL ROAD SAFETY COORDINATION BODIES

The task of a municipal road safety coordination body (Council, Commission, etc.) is to prepare the draft program governing the use of funds for road safety improvement at the municipal level. In addition, this body monitors the road safety situation and implementation of proposed measures by means of which it identifies the effects thereof. It cooperates with the Road Safety Council of the City of Belgrade.

MINISTRY OF INTERIOR – TRAFFIC POLICE ADMINISTRATION

The traffic police will carry out immediate control and regulation of road traffic, secure the respect of road safety regulations, and work on identifying, recording and sanctioning all the road traffic offences. It will also perform administrative-legal and inspection-technical tasks and assignments from its jurisdiction, investigations of road accidents, recording of road crashes, etc. Apart from that, it will inform the public, and particularly the Road Safety Council of the City of Belgrade and the Mayor, on the current road safety situation and related issues.

CHAMBER OF COMMERCE OF THE CITY OF BELGRADE

The Chamber of Commerce of the City of Belgrade is an independent, business, professional, profit making organization of corporate societies, entrepreneurs and other organizational forms that are performing corporate activities (agriculture, economy, construction, trade, transport and traffic, catering, etc.) and are linked by the common corporate interest on the territory of the City of Belgrade.





Within its tasks and assignments, the Chamber defines the strategy of corporate development of the City of Belgrade, monitors the issues in certain sectors, deals with the professional development of its members, and organizes presentations of new normative acts of interest to the economy and other businesses, including road safety, among other things. It also participates in the work of the Road Safety Council of the City of Belgrade.

HIGH SCHOOLS

Responsibility of high schools is in offering education for high-level professionals and experts. They are also responsible for the implementation of the latest scientific achievements, transfer of knowledge and technologies, implementation of professional and scientific studies and projects and promotion of results of these research studies. Representatives of high school institutions that are studying the subject of transport and traffic engineering will be included in the road safety coordination bodies at the municipal level and in the Road Safety Council of the City of Belgrade.

TRANSPORT COMPANIES

Transport companies are responsible for their vehicle fleets and staff for which they must ensure a high level of road safety. This understands vehicles in good working order, a transport organized in accordance with the professional regulations and normative acts, highly trained and dedicated professional drivers, etc.

NON-GOVERNMENTAL ORGANIZATIONS

Non-governmental organizations and associations are responsible for the identification, critical approach and highlighting of irregularities in the road safety system. In addition, their responsibility lies in conscientious and committed execution of entrusted tasks and assignments.

INSURANCE COMPANIES

Insurance companies are directly affected by the payment of damages incurred in road accidents. The interest of insurance companies is to invest in road safety so that they could earn more profit by providing a higher level of safety and consequently higher amount of total premiums, and also a smaller number of claims to be settled. Apart from the legally prescribed fee for road safety (for example, setting up of cameras), the insurance companies will allocate to that end additional sums from premiums for the purpose of funding road safety campaigns, financing science-research projects for road safety improvement, and for safety of vehicles in the first place, etc.

PUBLIC MEDIA SERVICES

Public information services or media are in charge of informing the citizens on the safe participation in road traffic and on the consequences if they behave in an unsafely manner. Media outlets also have an extremely important role in changing the awareness and behavior of road users and in creating the public opinion. Given their widespread appearance and availability, they enable the implementation of prevention-propaganda measures intended for the widest population.

OTHER INSTITUTIONS

The Road Safety Council of the City of Belgrade will analyze the capacity and work of all stakeholders of importance for road safety and will encourage their dedication and efforts put in improving road safety, primarily in improving the road traffic education and training in pre-school institutions and elementary schools.





8. REDUCING CHILD CASUALTIES IN THE PERIOD 2017-2020

Pursuant to the provisions of the Constitution of the Republic of Serbia, the right to life is inviolable and a child has the right to special protection. Hence the safety of children in road traffic comes as priority, and the obligation of the State to prioritize child safety and protection is a must. The Law on Basic Provisions of the System of Education and Upbringing ("Official Gazette of the Republic of Serbia" No. 72/09, 52/11, 55/13 and 35/15) governs the basic principles of the system of pre-school, primary and secondary education. The regulations should provide the basis for the introduction and implementation of transport-related education and upbringing of children and young people through teaching and other activities, at the quality and quantity level, which will enable the next generations to acquire attitudes and knowledge necessary for a safe and responsible participation in road traffic, as defined in the "Road Safety Strategy of the Republic of Serbia, 2015-2020".

The most common circumstances of child casualties in road traffic include the following ones: ignorance, unpreparedness, inexperience, little life and road traffic experience, psychophysical characteristics, poor child abilities, etc. Because of their fragile physical structure, children are more easily hurt, but scarcely sustain deaths in road traffic. The family is the one that suffers the biggest consequences of child casualties in road traffic. However, the society is also burdened by huge socio-economic consequences of child casualties in road traffic. According to available data¹², children from the City of Belgrade most often get killed or injured as passengers in a vehicle, where the main cause of such casualties is, in most cases, the failure of children or their parents to comply with legal regulations. Children pedestrians are the second largest road user type in terms of frequency of deaths or injuries, and the road from home to school is the most critical section where road accidents occur. Therefore, it will be necessary to focus the required measures and activities on children traffic education and upbringing in order to improve their behavior in road traffic. On the other hand, it will be necessary to systematically work on adapting the environment (infrastructure) to the needs and abilities of children. Finally, it will be necessary to continuously implement measures and activities towards drivers, in order to improve their behavior, especially in order to strengthen their correct habits and proper attitudes towards children in road traffic.

Endangerment of children in the City of Belgrade is of different nature, depending on their age. Also, depending on the school location and place of residence, the infrastructure adapted to children, as well as on the attitudes of parents on risks in road traffic, children under the age of 8, 9 or 10 most often participate in road traffic in the company of adults (parents, custodians, other family member, etc).¹³ After they turn 10, children participate in road traffic on their own, mainly as pedestrians, and rarely as bicyclists.

¹²<http://serbia.gdi.net/azbs>

¹³"The macro-research of child casualties in road traffic 2002-2006", Faculty of Transport and Traffic Engineering, 2009

REDUCING CHILD CASUALTIES IN THE PERIOD 2017-2020

As a result of increased mobility, and opposed to their little road traffic experience, children are more likely to be exposed to risks of road crashes at that age. Understanding child behavior in road traffic is a necessary precondition for defining the key factors of dangerous road traffic situations involving children.

Child behavior is very often unpredictable and depends on a number of factors, including the following ones: limited abilities of children, physical growth/height of children, little life and road traffic experience, proneness to risk and self-assertion, lack of understanding of and underestimate of road traffic risks, poor processing of information and coordination of movements in relation to information, poor estimate of vehicle speed and its distance, overestimate of children's possibilities, hyperactivity, etc. Detrimental self-assertion and competition among children (for example, running faster across the road in front of a vehicle, etc.) is quite present. Likewise, children often make mistakes in estimating the time needed to cross the street, in which case their behavior is influenced by many different characteristics.

Physical characteristics of children attending elementary schools, such as: body constitution, low height and the length of a step, along with behavioral characteristics, are specific features leading very often to a sudden and unexpected appearance of a child on a carriageway, in which cases drivers are not technically able to respond promptly and avoid suddenly created dangerous situations. Child safety in road traffic depends to a large extent on other road users, especially on those who are their role-models.

The abovementioned facts indicate that the modern concept of child protection in road traffic must include the concept of adjusting the traffic environment to the needs of children. Based on the experience of implementing the measures of developed countries, the main directions of action in the field of child protection in road traffic are directed to: road traffic- and construction-related organization of school zones and other facilities that are attractive to children; improvement of traffic education and upbringing that starts in a family, as early as possible, and ends with real road traffic conditions; more austere penalties for offenses endangering children; implementation of measures that are promoting the use of child seats in vehicles and helmets for children-cyclists; implementation of various campaigns targeted at parents, children and drivers, etc.

Road accidents are among five most frequent causes of death of children in the world. The Government of the Republic of Serbia has adopted the "Road Safety Strategy of the Republic of Serbia 2015-2020"¹⁴. This document stipulates national targets, including the following one: "there will be no child deaths in road traffic by 2020 ... and the number of seriously injured children in road traffic by 2020 will be halved, compared to 2011"¹⁵.

¹⁴Official Gazette, 05 No 344-1721/2015-1 of 2 June, 2015

¹⁵Road Safety Strategy of the Republic of Serbia 2015-2020, p. 36





In the last five years (2011-2015), the following 13 children were killed in road crashes in the City of Belgrade: 1 as a rider (at the age of 8), 5 as pedestrians (aged 8, 10, 11, 12 and 14 years) and 7 as passengers (aged 3, 4, 5, 6, 9, 12 and 13 years), while 2.002¹⁶ children were injured at the same period. In order to achieve these very ambitious goals, it will be necessary for the City of Belgrade to strengthen the system of road safety.

8.1 ANALYSIS OF INSTITUTIONAL CAPACITIES

There are many institutions/stakeholders on the territory of the City of Belgrade whose obligations are, according to the Law, the Statutes of the City of Belgrade and other regulations, to deal with and improve safety of children in road traffic. Existing capacities have been analyzed in order to define the desired situation, or room for improvement and measures that will be implemented with the aim to turn the current situation into desired one.

In order to implement adequate and most effective measures it will be necessary to consider which institutional capacities are available in the City of Belgrade and which capacities may be used for advancing the level of child safety in road traffic. The following are the most significant City agencies and stakeholders responsible for child road safety, and particularly for traffic education and upbringing:

- Assembly of the City of Belgrade;
- Mayor of the City of Belgrade;
- City of Belgrade Administration Unit, with its organizational units among which the following are the most important ones for child safety in road traffic:
 - ❖ Secretariat for Transport,
 - ❖ Secretariat for Education and Child Protection with the pre-school institutions, primary and secondary schools and
 - ❖ Office for Youth and Cooperation with associations
- City municipalities,
- Road Safety Council of the City of Belgrade,
- Ministry of Interior – Road Traffic Police Administration,
- Public media services, etc.

It is important to say that the Road Safety and Information Sector are operating within the Secretariat for Transport (SfT), along with the Road Safety Department functioning within this sector.

The abovementioned institutions have a range of legally prescribed competences which, directly or indirectly, help improve the safety of children in road traffic.

The Assembly of the City of Belgrade's competences have been prescribed by the Statutes of the City of Belgrade. According to Article 31 of the Statutes, the Assembly is made of 110 councilors.

¹⁶Road Traffic Safety Agency - <http://serbia.gdi.net/azbs/>

The following are the competences of the Assembly of the City of Belgrade that are determined by laws, the Statutes of the City of Belgrade and other legal acts, and have a direct or indirect relationship with the child road safety:

- Making of the **City's development program** and program of individual activities,
- Making of the strategy of regional development and **strategic plans and programs** according to the law, in the areas falling under City's jurisdictions,
- Making of the regional spatial plan for the City's area, the spatial plan for the parts of the City's administrative areas beyond the general plan, or the general urban development plan, with the elements of the spatial plan intended for local self-government units, and the program of implementation of the regional spatial plan,
- Making of regulations and other general and individual legal acts,
- Founding the bodies, services, public enterprises, institutions, organizations and other legal entities determined by the Statutes, and supervizing their work,
- Appointing and dissolving the management and supervisory boards of institutions, organizations and services founded by the Assembly; appointing and dissolving directors of institutions, organizations and services founded by the Assembly, giving approval to their statutes and executing other rights of a founder, according to the law, with the exception of the rights falling under the jurisdiction of other bodies, as set by the Statutes;
- Appointing and dissolving the management boards and directors of public enterprises founded by the Assembly; approving of their statutes, annual business plans, financial reports, decisions on indebtedness of public enterprises, decisions on capital investments, decisions on statutory changes in status and establishment of other legal entities, decisions on profit distribution, or the method of covering the losses, as well as of other decisions in accordance with the law governing the execution of activities of general interest, with the Statutes, as well as with the Articles of Association;
- Determining the criteria and scales for budgetary resources intended for city municipalities ...

Each of these competences has an impact on the safety of children participating in road traffic. By carrying out the tasks within its competence, the City Assembly creates an environment with the well planned and purposeful space, where schools and pre-school institutions are built, traffic education and upbringing is well organized, the work of the bodies, services, public enterprises and other organizations in the City is also performing well. The Assembly also defines the distribution of the City budget, makes the most important strategic and planning documents of the City, including the Road Safety Strategy. The City Assembly reviews the road safety situation in the City and the implementation of the Road Safety Strategy, at least twice a year. By enhancing its functions and increasing its commitment to road safety issues, the City Assembly can make significant improvements of the environment and overall conditions, and consequently contribute to developing and improving road safety.

The Mayor of Belgrade's competences are provided for in the Statutes of the City of Belgrade (Article 52 of the City Statutes). The following are the competences of the Mayor of Belgrade that are offering possibilities for direct and indirect increase in child road safety on the territory of the City of Belgrade:





- Executing directly and taking care of the execution of decisions and other legal acts of the City Assembly;
- Proposing the way in which to solve the issues on which decisions are taken by the City Assembly;
- Giving orders for the execution of the budget-related issues;
- Setting up a budgetary fund and determining the schedule of use of budgetary resources, according to the law;
- Guiding and harmonizing the work of the City Administration;
- Deciding on the acquisition and disposal of items that are public property of the City of Belgrade, according to the law and the Statutes;
- Concluding agreements on acquisition and disposal of items that are public property of the City of Belgrade, according to the law and the Statutes;
- Deciding on the organization and implementation of public works;
- Setting up of professional bodies ...

If the Assembly is creating the environment, then the Mayor is having the greatest possibilities for providing a consistent execution of the designed system of city management, including the road safety management.

Provision of the budget and purposeful use of funds for road safety, political support, media support, etc. depend most on the Mayor. Since there are many other responsibilities the Mayor is entrusted with, it is hard to expect that he will pay more attention to the safety of children participating in road traffic.

Competences of the City Administration are stipulated in Article 62 of the Statutes of the City of Belgrade:

- Preparing the regulations and other legal acts taken by the City Assembly, the Mayor and the City Council;
- Addressing the rights and obligations of citizens, enterprises, institutions, and other organizations in administrative matters within City's jurisdiction, in the administrative procedure in the first instance;
- Performing the work of administrative supervision over the execution of regulations and other general acts of the City Assembly;
- Enforcing laws and other regulations whose execution is entrusted to the City.

The City Administration, at least twice a year, submits to the City Assembly, the Mayor and the City Council, the report on the execution of work within the City jurisdiction and of entrusted tasks. Internal organizations performing similar work are created within the City Administration. Such an organization of the City Administration is set in Article 65 of the Statutes of the City of Belgrade. The following are the organizational units within the City Administration:

Secretariats (*Decision on the City of Belgrade administration, Article 55*):

- Secretariat for finance
- Secretariat for urban planning and construction
- Secretariat for legalization of facilities
- Secretariat for utilities and housing services

- Secretariat for energy
- Secretariat for property and legal affairs
- **Secretariat for transport**
- Secretariat for environmental protection
- Secretariat for economy
- Secretariat for culture
- **Secretariat for education and child care**
- **Secretariat for sports and youth**
- **Secretariat for health care**
- Secretariat for social welfare
- Secretariat for inspections
- Secretariat for administration

Special administration units and departments have been formed for the purpose of implementing certain tasks within the scope of secretariats' work.

Special organizations (*Decision on the City of Belgrade administration, Article 72*):

- Agency for investments and housing matters
- **Office for youth and cooperation with associations**
- Communal Police
- **Professional services** (*Decision on the City of Belgrade administration, Article 72*)
- Office for Assembly affairs and regulations
- **Information service**
- Office for communication and coordination of relations with citizens
- Office for general affairs
- Office of the Head of the City Administration
- **Mayor's office**
- Office of the President of the City Assembly
- **Office of the City Manager**

Road Safety Council of the City of Belgrade is the body created by the Mayor which, according to the law, has vital functions of coordinating road safety tasks. The Council should initiate and systematically monitor all the activities aimed at improving road safety, assist and support all the stakeholders in putting their efforts in improving road safety. It is of particular importance for the Road Safety Council of the City of Belgrade to professionally prepare the proposal for the Schedule of use of funds intended for road safety, to regularly discuss the road safety situation and related issues at its meetings, to review the implementation of measures and activities from the Road Safety Strategy and performances of undertaken measures, to propose the advancement or correction of measures, or partial corrections of the Strategy. The City Council should initiate and monitor the creation of road safety bodies at the municipality level, supervise and support the work of municipality assemblies and provide vertical coordination with the City and the Republic. The Council is responsible for the provision of horizontal coordination of all City stakeholders.





Secretariat for transport performs a series of tasks related to the improvement of the overall road safety on the territory of the City of Belgrade. However, the following activities related to safety of children in road traffic will be highlighted in this part:

- Road traffic regime, technical regulation and organization;
- Reconstruction, maintenance, use and management of municipality roads and streets in urban areas, as well as of state roads (with the exception of highways);
- Public procurement in the field of road traffic and other tasks according to the law, the Statutes of the City and other regulations;
- The Secretariat executes the traffic related work of the State Administration that is entrusted by the Republic to the City of Belgrade.

The tasks relating to reconstruction, maintenance, protection, use and management of municipality roads and streets in urban areas, as well as of state roads (with the exception of highways), arrangement and provision of special conditions for putting the billboards and making of an appropriate registry thereof are carried out by the **Road Directorate**. The Secretariat for transport implements directly or is taking care of implementation of very important road safety management measures and activities in the City of Belgrade, including the measures and activities that are directly or indirectly aiming at road safety improvement. As a rule, the Secretary for transport is the Chairman of the Road Safety Council of the City of Belgrade and therefore has an extremely important role in urging all stakeholders into implementing measures from their jurisdictions and in coordinating their work.

Secretariat for education and child care executes the following tasks in the education sector:

- Securing and implementing the needs from the field of education and upbringing, according to the law;
- Planning and putting in place the construction of new school facilities, reconstructing and maintaining existing school facilities, in terms of investment;
- Monitoring the program of educational and pedagogy work and elective subjects;
- Implementing public procurement procedures within the Secretariat's jurisdiction;
- Organizing professional training of school employees;
- Monitoring the state of protection and safety of children in schools;
- Implementing projects of importance for education and upbringing, public calls for providing scholarships/tuitions for talented secondary school pupils and students, and secondary school pupils and students with disabilities;
- Cooperating with other competent institutions and organizations;
- Coordinating the work of inter-departmental commissions for the assessment of needs for offering additional educational, health or social support to children and pupils and executing other tasks according to the law, the City Statutes and other regulations;

In the field of education, the Secretariat also carries out entrusted inspection and supervision tasks of educational and pedagogy work of institutions, as well as other tasks of the state administration that are entrusted by the Republic to the City of Belgrade.

In the field of child care, the Secretariat for education and child care performs the tasks relating to the following matters:

- Monitoring of family needs, planning the constructions of new facilities, reconstructions and investment-related maintenance of existing pre-school institutions;
- Financing the construction, reconstruction, investment-related maintenance and equipment of existing pre-school institutions;
- Organizing and financing the work in separated classrooms within elementary schools and in other premises that have met the conditions for the organization of work on pre-school education and upbringing; making of the network of pre-school institutions on the territory of the City of Belgrade;
- Executing public procurement work from the Secretariat's jurisdiction; activities related to the appointment of management boards of pre-school institutions and institutions for the recreational activities of children;
- Encouraging the fulfillment of programs and forms of work with pre-school children, according to the law;
- Implementing the projects submitted by civil society and non-governmental organizations in the field of child care and executing other tasks and activities, according to the law, the Statutes of the City of Belgrade and other regulations.

Since the work of pre-school institutions and elementary schools falls under the jurisdiction of the Secretariat for education and child care, it is clear that this Secretariat should strengthen its capacities and take full responsibility for the improvement of traffic education and upbringing. It is therefore necessary to have senior officers and employees in this Secretariat whose terms of reference will include the tasks of monitoring and improving the process of traffic education and upbringing.

Taking responsibility, organizing or enabling and encouraging professional training on traffic education and upbringing of nurses, male/female teachers, professors, pedagogues and other employees, is of vital importance for this Secretariat.

Belgrade school system

There are 17 pre-school institutions on the territory of the City of Belgrade, the founder of which is the Assembly of the City of Belgrade.

There are 203 elementary and 87 secondary schools on the territory of 17 city municipalities.

Elementary schools – 203¹⁷:

- Regular - 168
- Special educational needs and disabilities - 15
- Musical - 14
- Ballet - 1
- Schools for elementary education of adults - 5

¹⁷Official Journal of the City of Belgrade, No 6/2012, 23/2012, 37/2013, 57/2013, 61/2014, 66/2014, 38/2015 and 61/2016





Secondary schools – 87¹⁸:

- General grammar schools - 21
- Vocational - 51
- Musical - 9
- Artistic - 1
- Special educational needs and disabilities - 5

Junior colleges¹⁹ - 16

Universities²⁰ - 11

- University of Belgrade
- University of Arts
- Other universities - 9

Directors of pre-school institutions, elementary and secondary schools, as well as all employees involved in the educational-pedagogy work process should integrate the contents of traffic education and upbringing into the process of education, create technical-technological preconditions for efficient work and constantly improve the traffic education and upbringing.

Secretariat for sports and youth carries out the following work:

- Participating in the implementation of pre-school and school competitions at the level of city municipalities;
- Organizing and holding sports competitions and events of importance for the City;
- Implementing the program for children and youth during the summer and winter school breaks;
- Monitoring activities and cooperating with associations of public importance for the work with young people, associations, youth organizations and organizations for young people;
- Encouraging and monitoring the programs of associations, youth organizations and organizations for young people that are multidisciplinary by their contents and diverse by the type of work, whose objective is the implementation of the City Action Plan for young people;
- Making the conditions for active and quality leisure time of young people, by cherishing healthy and safe life styles;
- Providing conditions for seminars, professional conferences and other gatherings of experts organized by institutions or organizations, having the international character and being a part of the program activity of youth associations and associations for young people, as a member of appropriate European-International Student's Association.

The Secretariat carries out other tasks and assignments in these fields, according to the law, the City Statues and other regulations.

¹⁸<http://www.beograd.rs/cir/zivot-u-beogradu/1006-obrazovanje-i-nauka/>

¹⁹<http://www.beograd.rs/lat/zivot-u-beogradu/1530-visoke-skole/>

²⁰<http://www.beograd.rs/eng/zivot-u-beogradu/1534-univerziteti/>

Office for youth and cooperation with associations

The Office has been set up within the process of implementation of the National Youth Strategy of the Republic of Serbia, as well as the Strategy supporting the development of civil society on the territory of the City of Belgrade.

The Office for youth and cooperation with associations performs the following tasks:

- Cooperating and implementing the programs of interest for young people, together with its local branch offices, on the territory of the City of Belgrade;
- Cooperating with institutions through which the public interest is achieved in the fields of youth sector, these institutions being founded by the City, and with institutions that are working systematically with gifted and talented young people;
- Providing conditions for active and quality leisure time of young people, by cherishing healthy and safe life styles;
- Providing co-financing of young people – pupils and students, for their professional training, participation at international competitions and congresses, or other professional gatherings abroad;
- Providing conditions for the organization of seminars, professional conferences and other professional gatherings by institutions or organizations, having the international character and being a part of the program activity of youth associations and associations for young people, as a member of appropriate European-International Student's Association.
- Ensuring equal position of young people in society;
- Encouraging and evaluating the achievements of young people in different fields;
- Improving the possibilities for the organization of quality leisure time of young people;
- Implementing socially responsible campaigns in the fields of ecology, security, solidarity, youth health.

The Office performs the work on securing conditions for the work of associations, establishes partnerships with associations for the purpose of taking part in the preparation of projects, participates in the creation of the social ambience which is encouraging to the civil society, offers support to the civil sector in establishing a dialog and strengthening the partnerships with the local self-government bodies, initiates and implements developmental projects in cooperation with associations, as well as other work in accordance with the law, the City Statutes and other regulations. The Office carries out other tasks and assignments in these fields, in accordance with the law, the City Statutes and other regulations.

The Office has a large and significant potential, but this potential has not been used sufficiently enough to initiate, encourage and implement road safety activities. It will be important for the Office to recognize the activities from its program that will directly or indirectly, alone or in cooperation with other stakeholders, contribute to improving child road safety in a systematic way. It is of particular importance for the Office to establish good communication with the Road Safety Council of the City of Belgrade, with civil associations whose programs contain activities on road safety improvement, and to support them in their work. In order to achieve this, the Office will have to provide trainings or otherwise engage road safety professionals and experts.





8.2 ANALYSIS OF KNOWLEDGE/ATTITUDES/ BEHAVIOR

Road user attitudes and knowledge have a significant impact on road safety. If the attitudes are wrong or incorrect and the knowledge is insufficient or inaccurate, road user behavior will be inadequate, or unsafe. It is important to make regular surveys on attitudes, knowledge and behavior of all road user types, especially of children and parents. It is necessary to pay special attention to children, monitor the way in which they turn into safe road users and instill correct attitudes on road safety to them, making sure that children possess the minimum required knowledge for being safe in road traffic. Child behavior needs to be monitored, and parents, teacher and children need be made aware of the errors they make in road traffic. It is necessary to monitor the attitudes, knowledge and behavior of parents who are role-models to their children and transfer their behavior models to them. The attitudes, knowledge and behavior of children and their parents need to be surveyed at the city level, but also individually at the level of all city municipalities. It is necessary to compare the results of the surveys with the results at the national level to see how each school, city municipality, and finally the City of Belgrade are performing in terms of attitudes, knowledge and behavior of children and parents.

In order to adequately examine the attitudes, knowledge and behavior of children and parents on the territory of the City of Belgrade, several research studies have been conducted. In fact, a part of the research concerns the examination of the knowledge, attitudes and behavior of pre-school and elementary school children, while the second part of the study concerns the examination of the knowledge, attitudes and behavior of parents of pre-school and elementary school children.

Pre-school children belong to one of the most vulnerable road user types. Namely, this category of road users is characterized by the lack of *life* and traffic experience, lack of basic knowledge necessary for safe participation in road traffic and sudden increase in traffic exposure. Based on the conducted research studies²¹, it can be concluded that, generally speaking, children of this age possess a satisfactory level of knowledge (skills) for an adequate solution of simple road traffic situations. The results have shown that children do not differ from one another in the determined level of knowledge, when observing their gender identity. This determined level of knowledge is similar in urban and rural areas, and it can be therefore concluded that, at this age, sufficient attention is paid in all communities to the process of nurturing appropriate educational models for which all the credits go to the parents, i.e. the family. The research study has also revealed that children at this age (more than a half of respondents) had difficulties in establishing spatial relations (front-back, up-down, on, in, between, left and right, back-forth, etc.). On the other hand, differences in child knowledge have been identified in all areas: there are children with excellent knowledge and understanding identified, but there are also children who are lagging behind, not knowing well the rules of moving safely on the road.

Already at this age, there is an increasing difference among children who regularly attend the kindergartens and nurseries, in relation to children who do not go at all or attend these institutions only occasionally.

²¹Analysis of educational needs of pre-school and younger school age and the making of the educational material, Road Traffic Safety Agency, Faculty of Transport and Traffic Engineering, Belgrade, 2015.

Parents' role is dominant in the learning process. As a consequence, there are differences between children whose parents work systematically with them, and children whose parents ignore traffic education and upbringing. There is not enough practical training in the learning process, especially no exercises in conditions that are simulating the real traffic.

A significant part of parents is trying to "protect their children completely", allowing no autonomy in road traffic to them. On the other hand, some parents overestimate the abilities of children and allow them to be independent in road traffic situations they are not up to. Also, it is necessary to help children at their early age to master the knowledge and build up right attitudes on moving safely as pedestrians in road traffic. Special importance should be given to getting to know, understanding and practicing the crossing of a street, in different conditions.

Lower-grade children in primary schools represent the population that is made up of pupils of the first, second, third and fourth grade. Pupils attending the first grade are the most sensitive road user group, as this category of students will have to acquire necessary knowledge, attitudes and skills for a safe participation in road traffic. By analyzing the results obtained in the research study²² it can be concluded that the respondents of all the grades possess a satisfactory level of knowledge and attitudes. The greatest peak in terms of acquired knowledge was recorded in the population of children attending the second grade. Girls have shown better knowledge of traffic regulations and rules for a proper behavior in road traffic, when compared to boys. However, a significant number of pupils had difficulties in answering the questions related to the following issues: proper crossing of a street and safe forms of behavior that this action actually implies, corresponding facilities for road users, wearing of a safety helmet when cycling, etc. It is therefore necessary to pay special attention to these issues.

Lower-grade pupils do not show very often the expected level of *competences* for proper solutions of situations involving pedestrian crossings. Such data are a kind of warning as repetition of already acquired knowledge must find its place in the teaching materials.

The analysis of data collected from the parents' surveys has shown that the largest number of respondents is from the group of families with an average or just above average monthly salary. According to the age, respondents are usually grouped into the age group from 30 to 40 years, while their youngest child is between the ages of 1 to 5 years.

Majority of surveyed parents possess child seats and "booster" seats, that are mainly bought, and to a smaller extent borrowed. More than a half of parents said that they used child seats to transport their youngest child. The primary reason for the use of protective systems is the concern for the safety of their children.

Regarding the child age, a bit more significant percentage of parents state that they do not use protective systems for older children (who should be transported using only the seat belts).

²² Analysis of educational needs of pre-school and younger school age and the making of the educational material, Road Traffic Safety Agency, Faculty of Transport and Traffic Engineering, Belgrade, 2015.





Such data support the fact that parents of younger children are more cautious and aware of the importance of a safe transport of children. Based on the analysis in question, it can be concluded that the largest number of parents is aware of the importance of the appropriate use of protective systems.

8.3 ANALYSIS OF THE CURRENT SITUATION BY MEANS OF INDICATORS

Road safety performance indicators represent any measure that is causally linked to road crashes and the consequences of these road crashes.²³ Road safety indicators are a significant step forward in road safety science and serve to assess and monitor the road safety situation²⁴.

The monitoring of road safety indicators in the Republic of Serbia started in 2013 and the indicators have been continuously monitored ever since. The results of the research studies from 2016 have shown that at the City level, the use of protection systems for children aged 3 years and under accounted for 40,2%, while the goal for 2020 is set to 96%. The percentage of use of protection systems for children between the ages of 4 to 12 years is 17,2%. However, one should bear in mind that in certain municipalities, the percentage of use of child protection systems is extremely small. Given the large share of children passengers among road casualties, it will be necessary to undertake systemic measures and activities in order to increase the rate of using protection systems for children travelling as passengers in vehicles, by doing the following: planning and implementing comprehensive campaigns, organizing exchange of child seats, improving immediate control on the road, etc.

Though the indicators relating to inappropriate movement of children in road traffic are not measured systematically, pilot projects have found that a very large percentage of children move inappropriately in road traffic, especially in situations when: crossing the street at points that are not provided for crossing (out of signalized/marked pedestrian crossings), crossing the road without previously observing the traffic in the movement zone, crossing the street by running across and without stopping at the edge of the carriageway, crossing the road at sharp angles, moving inappropriately along the carriageway (jaywalking), moving inappropriately on the sidewalk, and especially by negotiating the obstacles on the sidewalk in an inappropriate way.

In order to correct these errors, it will be necessary to undertake systematic and very extensive work on improving the traffic education and upbringing. Also, in order to improve the knowledge, attitudes and behavior of children participating in road traffic, it will be necessary to start early with the traffic education and upbringing, to introduce more knowledge and skills important for the safe movement of children pedestrians in concrete road traffic conditions, to add practical in-the-field exercises

²³European Transport Safety Council (ETSC) 2001. Transport Safety Performance Indicators. Brussels.

²⁴Pesic, D., Antic, B., 2012, "The importance and possibilities of applying road safety indicators in local communities", 7th International conference "Road safety in local community", Donji Milanovac, pp. 111-116.

on top of lessons given in the classroom, as well as to practice exercises in real traffic situations, etc.

To this end, it will be an optimum to make a detailed analysis of a situation in concrete conditions, to design the Road Safety Study and the Traffic Education and Upbringing Study for each elementary school. These documents would hold detailed reviews of the road safety situations and related issues, the situation and problems of traffic education and upbringing, and, based on the research results (i.e. based on data), would offer recommendations for systemic improvement.

When it comes to driver behavior in zones with signalized pedestrian crossings, significant progress has been made over the last years (after the Law on Road Safety was passed). There is a lot to be done in this field though.

It will be necessary to improve the police control methods by using more video surveillance and to also implement appropriate campaigns, especially when it comes to relationships with children.

It will be also necessary to do a very comprehensive work on improving all the school zones, following the results of concrete surveys and road traffic-related projects. Traffic-related projects will have to be made for each elementary school, on the basis of the Road Safety Study and accompanying research studies. This would secure action in the following three directions:

- Improving the area in order to make the infrastructure friendly for the children,
- Improving the knowledge, attitudes and behavior of children in order to adapt them to the infrastructure,
- Improving behavior of parents and other drivers in order to make them respect children better and take into account the needs and abilities of children pedestrians and children passengers.

8.4 ANALYSIS OF THE CURRENT SITUATION BY MEANS OF ROAD ACCIDENTS

There were 17.839 road accidents reported on the territory of 17 municipalities of the City of Belgrade, from 2011 to 2015, involving the injured, and 526 road accidents with fatalities. In the same period, 26.035 were injured in road crashes, of which 584 sustained fatal injuries. The municipality with the largest number of injured from 2011 to 2015 is Novi Beograd, accounting for 3.594 injured, while the biggest number of fatalities in road crashes – even 57 fatalities in the observed period was reported on the territory of the municipality of Cukarica.

There were 1.770 road accidents reported on the territory of the City of Belgrade in the same period – from 2011 to 2015, involving children casualties (injured or killed children) aged 14 years and under. Fatal injuries were reported in even 28 road crashes involving children, on the territory of the City of Belgrade.

There were 13 children killed, and 2.002 injured in these road accidents²⁵. The number of injured children accounts for around 8% of the total number of injured in road accidents.

²⁵The number of road accidents involving fatalities and (killed or injured) children (28) is bigger than the number of killed children (13). Namely, in 15 road crashes with fatalities (28-13=15), children were only





The largest number of road accidents with injured aged 14 years and under, on the territory of the City of Belgrade, was recorded in 2014 (369 injured), or around 10% more when compared to 2013 and 2015. The biggest number of road accidents with fatalities and involving children (who were not necessarily injured or killed) was recorded in 2013, while most children got killed in 2012 (5 children fatalities). The largest number of road accidents with children casualties was recorded on the territory of the municipality of Palilula (204 casualties), a bit smaller number in municipalities of Novi Beograd (199 casualties) and Cukarica (180 casualties), while the smallest number was recorded in the municipality of Sopot (9 casualties).

The number of road accidents with fatalities, and involving children, in the period from 2011 to 2015, is nearly the same on the territory of all municipalities in the City of Belgrade. There were no reported children fatalities in the mentioned period in the areas close to the city downtown, i.e. municipalities of Vracar, Savski Venac and Stari Grad. The largest number of children injured in road accidents was recorded on the territories of the municipalities of Palilula (201 injured) and Novi Beograd (198 injured), while the territories of municipalities of Sopot and Barajevo accounted for the least number of road accidents with injured children, i.e. 7 and 29 respectively.

The number of road accidents with casualties aged 14 years and under on the territories of the municipalities of Novi Beograd, Obrenovac and Surcin dropped in the observed period, from 2011 to 2015. A slight increase is nevertheless recorded in the territory of the municipalities of Vozdovac, Zvezdara and Zemun. The municipality of Zvezdara had an increase in the number of road accidents with children casualties in 2015, compared to 2014. Nearly the same number of road crashes involving children casualties was recorded in other Belgrade municipalities, in the same time period (2011-2015).

There were 2015 casualties in total aged 14 years and under on the territory of the City of Belgrade (all 17 municipalities), in the observed period (2011-2015). Of this number, 13 children were killed. While in 2011 there were 422 casualties aged 14 years and under, of which 2 sustained fatal injuries, in 2012 and 2013 there was a drop in the number of children casualties in road crashes (397 in 2012, and 402 in 2013). A slight increase in the number of children casualties in road crashes was recorded in 2014, while 2015 saw a more significant decrease (from 412 in 2014 to 380 in 2015).

The largest number of children casualties is recorded in following Belgrade municipalities: Palilula (234), Novi Beograd (233) and Cukarica (200). The municipality of Vracar, Zemun, Obrenovac, Rakovica, Savski Venac, Stari Grad, Surcin and Cukarica reported **no children fatalities in road traffic** in the observed period (2011-2015).

Children casualties reported in Belgrade in the observed period most often included children travelling as passengers in a vehicle (53%), and then as pedestrians (39%). Safety of children passengers in a vehicle is directly dependent on other road users/parents or other older passengers in a vehicle.

injured, but the other participant in that road accident got killed. For example, a child travelling in a vehicle as passenger was injured, but the driver or some other adult passenger (over 14 years) got killed.

REDUCING CHILD CASUALTIES IN THE PERIOD 2017-2020

There were 100 children casualties in February, and even 209 in May, on the territory of the City of Belgrade, in the observed period (2011-2015).

The highest number of child casualties occurred at 5 p.m. (175 casualties). After 5 p.m., the number of child casualties in road traffic decreased up until 2 a.m., after which the number of child casualties grew again.

The following are the most important facts about the child road safety on the territory of the City of Belgrade, in the period 2011-2015:

- A total of 1.770 road accidents involving child casualties aged 14 years and under were reported. Of these road accidents, 28 resulted in at least one fatality, while 1.742 resulted in injured children of this age;
- There were 2.015 child casualties between the ages of 0 to 14 years reported. Of these casualties, 13 children were killed, and 2.002 children were injured in the reported road crashes;
- A decreasing trend in the number of casualties has been secured;
- The following are the figures for child road casualties: 1.066 (53%) children passengers in a vehicle, of which 7 were killed; 796 (39%) children pedestrians, of which 5 were killed; 153 (8%) children riders, of which 1 was killed;
- The highest number of child road fatalities is recorded in the months of February and September.
- The highest number of child road injuries is recorded in the months of May and October.
- The highest number of road crashes occurs in the period from 4 p.m. to 5 p.m.;
- The highest number of child casualties aged 14 years and under is reported in the municipalities of Novi Beograd, Rakovica, Cukarica and Vozdovac;
- The highest number of child fatalities aged 14 years and under is reported in the municipalities of Grocka, Barajevo, Sopot and Palilula.

8.5 DESIRED ROAD SAFETY SITUATION

Adoption of the Strategy should allow for the creation of a sustainable and efficient road safety system until 2020, which will ensure the following:

- No killed children in road traffic until 2020,
- Halving the number of seriously injured children as compared to the number in 2011,
- Increasing the percentage of child seat use by children aged 3 years and under, to 96%,
- Increasing the percentage of use of child protection systems by children between the ages of 4 to 12 years, to 96%,
- Interim targets or the ways in which to achieve the final goals and objectives have been shown in the charts below.





CITY OF BELGRADE'S ROAD SAFETY STRATEGY 2017-2020

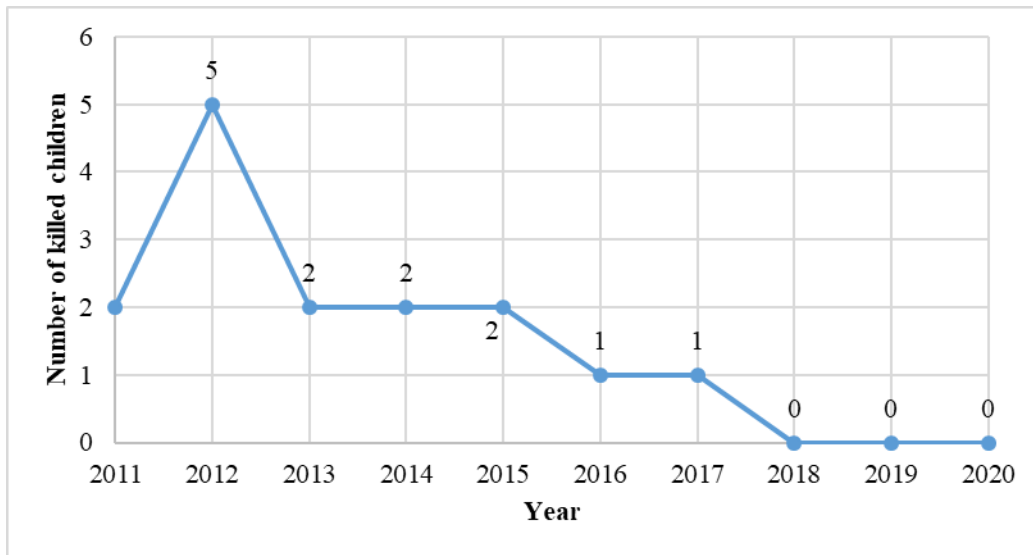


Chart 8.1. Targets set until 2020 in terms of the number of killed children

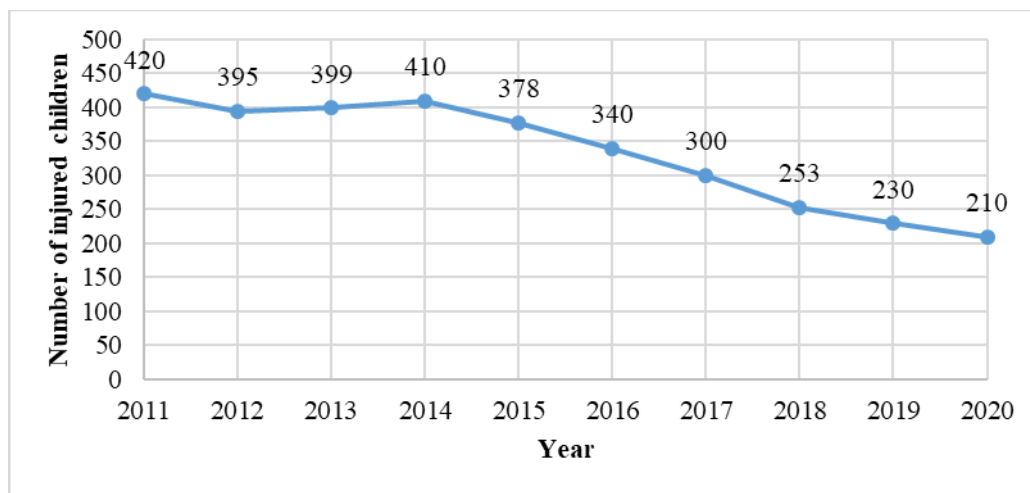


Chart 8.2. Targets set until 2020 in terms of the number of injured children

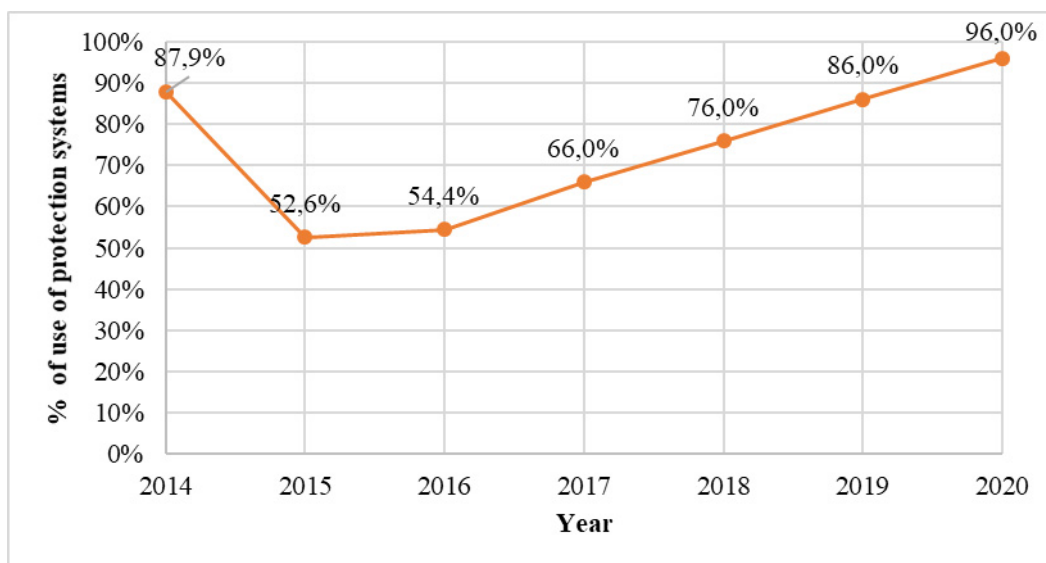


Chart 8.3. Targets set until 2020 in terms of percentage of use of protection systems by children aged 3 years and under

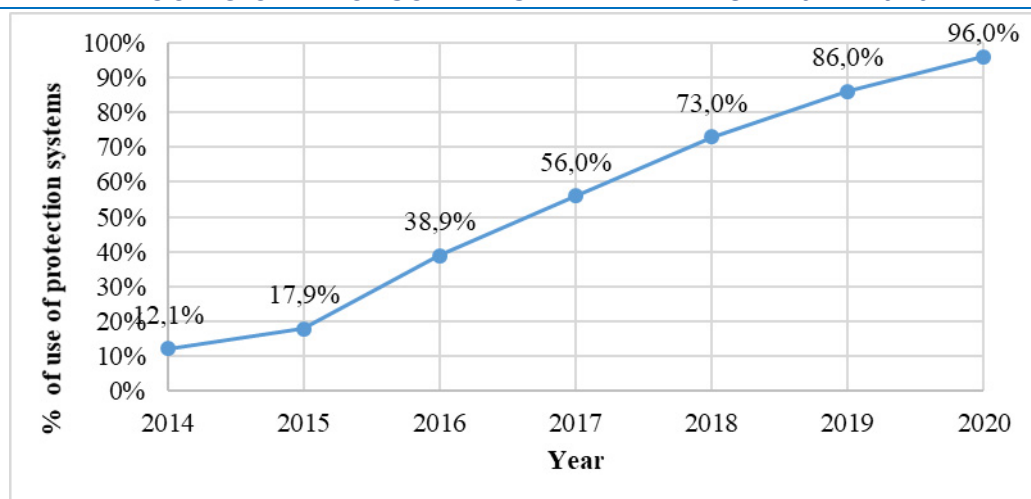


Chart 8.4. Targets set until 2020 in terms of percentage of use of protection systems by children between the ages of 4 to 12 years

8.6 KEY AREAS OF WORK ON IMPROVING CHILD ROAD SAFETY

In order to improve the safety of children in road traffic, it will be necessary to carry out actions targeted not only on children, but also on parents/custodians, nurses/teachers/professors and local communities.

MEASURES TARGETED TOWARDS IMPROVING CHILD BEHAVIOR IN ROAD TRAFFIC

Children should undergo an organized and well designed process of traffic education and upbringing (TEU), beginning from the pre-school age, until the end of secondary school. Immediate stakeholders in this process include the parents, nurses, teachers, professors and school pedagogues.

The TEU program intended for **pre-school children** should include the following lessons:

- Knowing the relations LEFT-RIGHT, BACK-FORTH.
- WHAT BELONGS TO WHOM (Getting to know the TERMS) – explain where pedestrians, bicyclists and vehicles are moving.
- HOW DO WE USE THE SIDEWALK – teach them to walk as far from the edge of the sidewalk as possible, i.e. never to use the edge of the sidewalk for walking, to walk normally and look in front of them.
- CROSSING THE STREET AT AN UNSIGNALIZED PEDESTRIAN CROSSING – looking left-right-left and only when they are sure there are no vehicles (or the vehicles have stopped) can they cross the street. The street is crossed exclusively at marked pedestrian crossings.





- **CROSSING THE STREET AT A SIGNALIZED PEDESTRIAN CROSSING** – explain the use of traffic lights, which color means “stop”, and which one means “go”, what they do if the light is changed while they are in the middle of the roadway, etc.
- **HOW DO WE TRAVEL in a passenger car?** Explain the importance of the **APPROPRIATE** use of child seats.

The TEU program intended for pupils in the **1st and 2nd grade** should include the following lessons:

- **WHERE** are the safe places for playing games? Or, show in a descriptive way what kind of dangers are threatening them if they are playing near the street, on the sidewalk or on the roadway.
- **HOW DO WE USE THE SIDEWALK AND NEGOTIATE AN OBSTACLE THEREON** - teach them to walk as far from the edge of the sidewalk as possible, i.e. never to use the edge of the sidewalk for walking, to walk normally and look in front of them.
- **HOW DO WE MOVE ON THE ROAD WITHOUT A SIDEWALK?** Why should we move in the direction of oncoming vehicles, and not in the direction of ongoing vehicles?
- **CROSSING THE STREET AT AN UNSIGNALIZED PEDESTRIAN CROSSING** – looking left-right-left and only when they are sure there are no vehicles (or the vehicles have stopped) can they cross the street.
- **CROSSING THE STREET AT A SIGNALIZED PEDESTRIAN CROSSING** – explain the use of traffic lights, which color means “stop”, and which one means “go”. Explain what they do if the light is changed while they are in the middle of the roadway, etc.
- **HOW DO WE TRAVEL in a passenger car?** Explain the importance of the **APPROPRIATE** use of child seats.
- **How do we move in PUBLIC TRANSPORT?** Explain the children how to wait for the public transport, how to get on a public transport vehicle, how to behave in a public transport vehicle and how to get off a public transport means.

The TEU program intended for pupils in the **3rd and 4th grade** should include the following lessons:

- **HOW TO NEGOTIATE AN OBSTACLE ON THE SIDEWALK?** How to negotiate an obstacle on the sidewalk? What if one must step down on a roadway? Why is it dangerous to step down on the roadway in a fast and careless way?
- What is a **GRADE SEPARATED** pedestrian crossing/**FOOTBRIDGE** and what is a **PEDESTRIAN TUNNEL**? How to use them properly? Why?
- How to cross the street at a **SIGNALIZED** intersection? Why some vehicles are allowed to pass at the same time as the pedestrians are crossing the street?
- Where to **RIDE A BICYCLE**? How to **CROSS THE STREET USING A BICYCLE**? What is a safety helmet? Why must it be used?
- **Mobile phones are NOT USED ON THE STREET.** What if you put on your earphones and make the music louder?

The TEU program intended for pupils in the **5th to 8th grade** should include the following lessons:

- Mobile phones are NOT USED ON THE STREET. What if you put on your earphones and make the music louder?
- Driving as a PASSENGER AT THE FRONT SEAT. Seat belt use. Distracted drivers.
- Riding a BICYCLE on public roads. Use of PROTECTION EQUIPMENT. Road traffic rules.
- Riding a MOPED. Use of PROTECTION EQUIPMENT. Road traffic rules.

MEASURES TARGETED AT IMPROVING PARENTS' INTEREST FOR THE ISSUE

Learning from a model is characteristic for children and for that reason parents should be made aware that it is not only sufficient to tell the children how to behave in road traffic, but to use their examples to teach them.

In order to improve the relationship of parents towards traffic education and upbringing, the Secretariat for Education and Child Care, in cooperation with the Secretariat for Transport and the Traffic Police Administration will implement professional training of parents (through seminars, panels, printing of brochures, campaigns, etc.). Education of parents should include the following subjects/lessons:

- Parent as a model of road traffic behavior,
- Children as passengers in a vehicle. Use of child seats. Seat belt use. Where to park. Child's getting in-getting out of a vehicle.
- Children as pedestrians. Moving along the sidewalk. Moving on the road without a sidewalk. Crossing the street.
- Children as passengers in public transport. Where do they wait for the transport? How do they get on-get off? How do they behave in a vehicle?
- Riding a bicycle. Why is protection equipment important?
- Children as moped riders. Why is protection equipment important?
- When is it time to participate alone in road traffic?

In addition to parental education, it will be necessary to organize training on the appropriate use of child seats where the professionals will explain to parents why it is important to use child seats correctly, how to choose appropriate child seats and how to fix them properly.

MEASURES TARGETED AT NURSES/TEACHERS/PROFESSORS

In order to improve children traffic education and upbringing, the Secretariat for Education and Child Care, in cooperation with the Secretariat for Transport and the Traffic Police Administration will implement professional training of nurses/teachers/professors in the field of road safety and traffic education and upbringing methodology. This education should include the following subjects/lessons:

- How do children most often get killed or injured in road traffic?





- Children as passengers in a vehicle. Use of child seats. Seat belt use. Where and how to park a vehicle in a pre-school or school zone? Which side of a vehicle do children get in-get out?
- Children as pedestrians in road traffic. Moving along the sidewalk. Moving on the road without a sidewalk. Crossing the street.
- Children as passengers in public transport. Where do they wait for the transport? How do they get on-get off? How do they behave in a vehicle?
- Riding a bicycle. Importance of using protection equipment.
- Children as moped riders. Importance of using protection equipment.
- The path from the total safety and dependence to independence – When and how should children participate alone in road traffic? Check-lists for examining children ability to participate in road traffic safely, all alone.

MEASURES TARGETED AT CHANGES IN DRIVER BEHAVIOR

The Secretariat for Traffic will work on improving the relationship of drivers towards children, and in particular on improving driver behavior in the zones of pre-school institutions and primary schools, towards children participating in road traffic as pedestrians, cyclists and passengers. A comprehensive system of measures to be coordinated by the Road Safety Council of the City of Belgrade will promote correct attitudes of drivers towards children pedestrians and protection of children passengers in vehicles. Moreover, comprehensive surveys, campaigns and traffic police enforcement relying on modern technical devices and video recording will be also put in place.

The following are the most important measures to be implemented:

- The Secretariat for Traffic will provide a study that will define a methodology for measuring indicators in terms of knowledge, attitudes and behavior of children in road traffic and in relation to the attitude of drivers towards children. In fact, the most significant road safety indicators are currently recorded, at the state level. However, these indicators do not include significant performance of the system that would concern the child road safety. For example, it will be necessary to add the indicators to refer to the knowledge, attitudes and behavior of children in road traffic, attitudes of parents on the risks of participation of children in road traffic, child routes from home to school, etc.
- The Secretariat for Transport will provide regular recording of road safety indicators of significance for child road safety.
- The Secretariat for Transport will provide regular monitoring and professional analyses of all road accidents involving children casualties, and will present the results obtained to the Road Safety Council of the City of Belgrade.
- The Secretariat for Transport will launch **periodical campaigns** with the aim to improve the relationships of drivers towards children in road traffic.
- Traffic Police will support the campaigns, improve the methods for identifying and documenting driver's offences relating to endangerment of child road safety, prepare and implement the plan of immediate control of these offences which will increase significantly the subjective risk of punishment.

OTHER MEASURES

The City of Belgrade and city municipalities have an important role in improving child road safety. The following are the most important measures to be implemented:

- The Road Safety Council of the City of Belgrade will improve the work based on data and the vertical and horizontal coordination in the process of implementation of measures aimed at improving the child road safety²⁶,
- The Secretariat for Education and Child Care will, together with the Road Safety Council of the City of Belgrade, initiate and support children traffic education competitions at different levels (school/municipality/city),
- The Road Safety Council of the City of Belgrade will launch and implement campaigns, panels, theater performances, etc. with the subject of child road safety,
- The Road Safety Council of the City of Belgrade will make regular surveys into the knowledge/attitudes/behavior of children and parents,
- The Secretariat for Transport will, with the support of the Road Safety Council of the City of Belgrade, ensure making of the Road Safety Study for each elementary school,
- The Secretariat for Education and Child Care will, with the support of the Road Safety Council of the City of Belgrade, ensure making of the Traffic Education Study for each elementary school,
- The Secretariat for Transport will, with the support of the Road Safety Council of the City of Belgrade, ensure making of a traffic project for each elementary school ("School Zone" projects).

²⁶ In fact, the Secretariat for Transport implemented in the previous period a series of significant research studies and surveys that all contributed to an increasing need for quantifying the measures and their effects, on the basis of relevant data. Nevertheless, this process should be continued and reinforced.





9. REDUCING MOTORCYCLIST CASUALTIES IN THE PERIOD 2017-2020

The Republic of Serbia has prescribed a legal obligation to adopt and implement a road safety strategy, both at the national and local level, in accordance with the best practice in road safety improvement. Having that in mind, in June 2015, the Government of the Republic of Serbia adopted the "Road Safety Strategy of the Republic of Serbia, 2015-2020". According to this obligation, the City of Belgrade has made the City of Belgrade's Road Safety Strategy, 2017-2020.

The reason for including the motorcyclist safety as a separate part of the strategy lies in the fact that risk of motorcyclist casualties is rather high. This high risk is on the other hand associated with the growing number of motorcycles. Unprepared and inadequate road safety system, lack of strategic management, special knowledge and professionals, inappropriate road safety assessment, observing the motorcyclists as a single group without more detailed divisions within the group, inadequate education and training, unsuitable road infrastructure, etc., are just some of key issues of increased vulnerability of motorcyclists. In the past decade, motorcyclists accounted for around 11% to 15% of the total number of road traffic deaths and around 15% to 23% of the total number of seriously injured in road accidents in Serbia and the City of Belgrade. Also, an extremely high percentage in the growth of the number of powered two-wheelers in the territory of Serbia and in the area of the City of Belgrade was also recorded in that period. This trend of the increasing number of motorcycles has assigned certain significance to the motorized two-wheelers, given the advantages this type of transport have, such as mobility, economy, ecology, social character, etc.

The possibilities of integrating the powered two-wheelers into the transport system of the City of Belgrade and in the sustainable development can be achieved by: offering support to the promotion of this mode of transport by the widest professional public, the City of Belgrade's authorities and authorities at the local level, and by the widest general public, using the benefits of this means of transport, offering education, learning and training by experts from this field within the system of educational institutions (elementary schools, secondary schools, etc.) by highlighting the importance of safe participation and safe riding of powered two-wheelers in road traffic, as well as by professionals' taking part at international and domestic conferences, seminars, etc., in order to offer education in this area, create space for the achievement of economic benefits from the users of this means of transport (through registration fees, tolls, etc.).

In addition to the above listed possibilities and a positive trend in the growth of the number of registered powered two-wheelers, there are also major challenges in terms of road safety. The issue of motorcyclist safety in the City of Belgrade is particularly highlighted due to the city size and the number of population, as well as due to the rapid popularization of this type of transport. Riding a motorcycle is up to 10 times more dangerous per kilometer travelled than driving a passenger car, and the risk of a road accident involving a motorcyclist is up to 50 times higher compared to a driver of a passenger vehicle.

Motorcyclists are a specific road user type, and key factors contributing to road accidents involving motorcyclists and differing from factors related to other road users are a relatively small size of a motorcycle, often accompanied by a powerful engine, the lack of adequate rider's safety equipment and frequent need for complex maneuvers while riding. In addition, motorcycles differ significantly in style, size, weight and performance.

Previous experiences in the Republic of Serbia and the city of Belgrade have shown the level of implemented activities which is insufficient for the improvement of motorcyclist road safety. The Secretariat for Transport carried out the "Study of Powered Two-Wheeler's (Motorcyclists') Safety in the City of Belgrade", which offers a detailed analysis of road accidents involving powered two-wheelers, of undertaken prevention measures, etc. Mapping of road crashes involving powered two-wheeler fatalities, in the period from 2009 to 2013, has been also made. These studies were good, but not sufficient enough to be the basis for defining adequate measures for the solution of motorcyclist road safety issues in the forthcoming period.

The project "Parking lots for motorcycles with a proposal for their design and the making of the project of micro-locations for the selected type of parking lots at 10 locations in the City of Belgrade" has helped define the conditions necessary for the provision of parking lots for motorcyclists in the City of Belgrade. A part of these parking lots has been already put in place. It will be important in the forthcoming period to continue designing and providing a larger number of parking space for powered two-wheelers in order to enable the achievement of goals and objectives related to the growing number of registered powered two-wheelers and their increasing presence in the City. In fact, well-defined measures should encourage in the forthcoming period the use of powered two-wheelers with less engine power, as well as the reduction of sports motorcycles in road traffic in the City of Belgrade.

The Secretariat for Transport also submitted a proposal with amendments to the Law on Road Safety, i.e. in the part concerning the safety of motorcycles, mopeds, tricycles and quadricycles. Attached to the document are summarized proposals that should be implemented with the next changes of the Law on Road Safety, as they are of crucial importance for the fulfillment of goals and objectives of the City of Belgrade's Road Safety Strategy 2017-2020. In order to achieve these very ambitious goals, the City of Belgrade must reinforce its road safety system.

9.1 ANALYSIS OF INSTITUTIONAL CAPACITIES

There is no institution on the territory of the City of Belgrade dealing decisively and exclusively with the safety of motorcyclists in road traffic. However, the Law on Road Safety, the Statutes of the City of Belgrade and other regulations have recognized the institutions or stakeholders that are involved in road safety improvement, and consequently in motorcyclist road safety. In order to implement adequate and most effective measures, it will be necessary to have in mind the institutional capacities available in the City of Belgrade, as well as the capacities that can be used to improve motorcyclist road safety.





Current institutional capacities have been analyzed in order to define the desired situation and the space for improvement and measures that will be implemented to turn the existing into desired state of road safety.

The following are the most important stakeholders in the City of Belgrade (a more detailed review is shown in a separate chapter) responsible for road safety, which include the motorcyclist road safety, too :

- Assembly of the City of Belgrade;
- Mayor of the City of Belgrade;
- City of Belgrade Administration Unit, with its organizational units;
- Secretariat for Transport;
- Road Safety Council of the City of Belgrade;
- Ministry of Interior – Road Traffic Police Administration;
- Public media services; etc.

A special Road Safety and Information sector is working within the Secretariat for Transport (SfT), with its Road Safety Department dealing with particular requests of vulnerable road users, including motorcyclists.

The above institutions have a series of competences by means of which to improve motorcyclist road safety, in a direct or indirect way.

Competences of the Assembly of the City of Belgrade have been prescribed by the Statutes of the City of Belgrade. According to Article 31 of the Statutes, the Assembly is made of 110 councilors.

The following are the competences of the Assembly of the City of Belgrade that are having direct or indirect relationships with the safety of motorcyclists in road traffic:

- Making of the **City's development program** and program of individual activities,
- Making of the strategy of regional development and **strategic plans and programs** according to the law, in the areas falling under City's jurisdictions,
- Making of the regional spatial plan for the City's area, the spatial plan for the parts of the City's administrative areas beyond the general plan, or the general urban development plan, with the elements of the spatial plan intended for local self-government units, and the program of implementation of the regional spatial plan,
- Making of regulations and other general and individual legal acts,
- Founding the bodies, services, public enterprises, institutions, organizations and other legal entities determined by the Statutes, and supervizing their work,
- Appointing and dismissing the management and supervisory boards of institutions, organizations and services founded by the Assembly;

REDUCING MOTORCYCLIST CASUALTIES IN THE PERIOD 2017-2020

- Appointing and dismissing directors of institutions, organizations and services founded by the Assembly, giving approval to their statutes and executing other rights of a founder, according to the law, with the exception of the rights falling under jurisdiction of other bodies, as set by the Statutes;
- Appointing and dismissing the management boards and directors of public enterprises founded by the Assembly; approving of their statutes, annual business programs, financial reports, decisions on indebtedness of public enterprises, decisions on capital investments, decisions on statutory changes and establishment of other legal entities, decisions on profit distribution, or the method of covering the losses, as well as of other decisions in accordance with the law regulating the performance of activities of general interest, with this Statutes, as well as with the Articles of Association;
- Determining the criteria and scales for budgetary resources for city municipalities.

Each of these competences has a direct or indirect impact on road safety, including the safety of motorcyclists participating in road traffic. By carrying out the tasks within its competence, the City Assembly creates an environment with the well planned purpose of space, where the work of the bodies, services, public enterprises and other organizations in the City is well guided. The Assembly also defines the distribution of the City budget, makes the most important strategic and planning documents of the City, including the Road Safety Strategy. This understands provision of purposeful funds for the solution of issues related to motorcyclist road safety. The City Assembly reviews the road safety situation in the City and the implementation of the Road Safety Strategy, at least twice a year. By enhancing its functions and increasing its commitment to road safety issues, the City Assembly can make significant improvements of the environment and overall conditions, and thus contribute to developing and improving the road safety. Following the examples of European cities that are performing the management of the motorcyclist road safety well, it will be important for decision makers and for the political circles in particular, to support the organized motorcycle events and motorcycle campaigns. This support should be always conditioned by the promotion of road safety and desired road traffic behavior.

Competences of the Mayor are provided in the Statutes of the City of Belgrade (Article 52 of the City Statutes). The following are the competences of the Mayor of Belgrade that are offering possibilities for direct and indirect increase in safety of motorcyclists in road traffic on the territory of the City of Belgrade:

- Executing directly and taking care of the execution of decisions and other legal acts of the City Assembly;
- Proposing the way in which to solve the issues on which decisions are taken by the City Assembly;
- Giving orders for the execution of the budget-related issues;
- Setting up a budgetary fund and determining the schedule of use of budgetary resources, according to the law;
- Guiding and harmonizing the work of the City Administration;





- Deciding on the acquisition and disposal of items that are public property of the City of Belgrade, according to the law and the Statutes;
- Concluding agreements on acquisition and disposal of items that are public property of the City of Belgrade, according to the law and the Statutes;
- Deciding on the organization and implementation of public works;
- Setting up of professional bodies ...

The Mayor has the greatest possibilities for providing efficient City management, including road safety management and finally, the safety of motorcyclists in road traffic. Therefore, implementation of strategic documents in the field of road safety depends most on the Mayor. Providing the budget and purposeful use of funds for road safety, political support, media support, etc. also depend most on the Mayor.

Competences of the City Administration are stipulated in Article 62 of the City Statutes:

- Preparing the regulations and other legal acts taken by the City Assembly, the Mayor and the City Council;
- Resolving the rights and obligations of citizens, enterprises, institutions, and other organizations in administrative matters within City's jurisdiction, in the administrative procedure in the first instance;
- Performing the work of administrative supervision over the execution of regulations and other general acts of the City Assembly;
- Enforcing the laws and other regulations whose execution is entrusted to the City.

The City Administration, at least twice a year, submits to the City Assembly, the Mayor and the City Council, the report on the execution of work within the City jurisdiction and of entrusted tasks. Internal organizations performing similar work are created within the City Administration. Such an organization of the City Administration is set in Article 65 of the Statutes of the City of Belgrade. The following are the organizational units within the City Administration:

Secretariats (*Decision on the City of Belgrade administration, Article 55*):

- Secretariat for finance
- Secretariat for urban planning and construction
- Secretariat for legalization of facilities
- Secretariat for utilities and housing services
- Secretariat for energy
- Secretariat for property and legal affairs
- Secretariat for transport
- Secretariat for environmental protection
- Secretariat for economy
- Secretariat for culture
- Secretariat for education and child care
- Secretariat for sport and youth
- Secretariat for health care
- Secretariat for social welfare
- Secretariat for inspections

- Secretariat for administration

Special administration units and departments have been formed for the purpose of implementing certain tasks within the scope of secretariats' work.

Special organizations (*Decision on the City of Belgrade Administration, Article 72*):

- Agency for investments and housing matters
- Office for youth and cooperation with associations
- Communal Police

Professional services (*Decision on the City of Belgrade Administration, Article 72*)

- Office for Assembly affairs and regulations
- Information service
- Office for communication and coordination of relations with citizens
- Office for general affairs
- Office of the Head of the City Administration
- Mayor's office
- Office of the President of the City Assembly
- Office of the City Manager

Road Safety Council of the City of Belgrade is the body created by the Mayor which, according to the law, has vital functions of coordinating road safety tasks, including the field of motorcyclist road safety. The Council should initiate and systematically monitor all the activities that are aimed at improving motorcyclist road safety, assist and support all the stakeholders in efforts they are putting in improving road safety. It is of particular importance for the Road Safety Council of the City of Belgrade to professionally prepare the proposal for the Schedule of use of funds intended for road safety, and in particular for the improvement of safety of motorcyclists participating in road traffic. The Council should regularly discuss the road safety situation and related issues at its meetings, to review the implementation of measures and activities from the Road Safety Strategy and performance of undertaken measures, to propose the advancement or correction of measures, or correction of parts of the Strategy.

The City Council should initiate and monitor the creation of road safety bodies at the municipality level, to supervise and support the work of municipality assemblies and provide vertical coordination with the City and the Republic. The Council is responsible for providing horizontal coordination of all City stakeholders.

Secretariat for transport performs a series of tasks related to the improvement of the overall road safety on the territory of the City of Belgrade. However, the following activities related to safety of motorcyclists in road traffic will be highlighted in this part:

- Road traffic regime, technical regulation and organization, tailored for vulnerable road user types, including motorcyclists;
- Reconstruction, maintenance, use and management of municipality roads and streets in urban areas, as well as of state roads (with the exception of highways), according to the needs of vulnerable road users;





- Public procurement in the field of road traffic which concerns the motorcyclists, and other tasks according to the law, the Statutes of the City and other regulations;
- Implementation of campaigns targeted at motorcyclists and of other types of prevention-propaganda measures;
- The Secretariat executes the road traffic related work of the State Administration that is entrusted by the Republic to the City of Belgrade.

Having in mind that the road factor influences to the great extent the occurrence and consequences of road crashes involving motorcyclists, the tasks relating to reconstruction, maintenance, protection, use and management of municipality roads and streets in urban areas, as well as of state roads (with the exception of highways), arrangement and provision of special conditions for putting the billboards and making an appropriate registry thereof are done by the **Road Directorate**.

The Secretariat for transport implements directly or is taking care of the implementation of very important road safety management measures and activities in the City of Belgrade, including the measures and activities that directly or indirectly aim at improving motorcyclist road safety. As a rule, the Secretary for transport is the Chairman of the Road Safety Council of the City of Belgrade and therefore has an extremely important role in urging all stakeholders into implementing measures from their jurisdictions and coordinating their work, which is of great importance for the advancement of motorcyclist road safety.

Secretariat for sport and youth carries out the work relating to the following:

- Organizing and holding sports competitions and events of importance for the City;
- Monitoring activities and cooperating with associations of public importance for the work with young people, associations, youth organizations and organizations for young people;
- Encouraging and monitoring the programs of associations, youth organizations and organizations for young people that are multidisciplinary by their contents and diverse by the type of work, whose objective is the implementation of the City Action Plan for young people;
- Making of the conditions for active and quality leisure time of young people, by cherishing healthy and safe life styles;
- Providing conditions for seminars, professional conferences and other gatherings of experts organized by institutions or organizations, having the international character and being a part of the program activity of youth associations and associations for young people, as a member of appropriate European-International Student's Association.

The Secretariat carries out other tasks and assignments in these fields, according to the law, the City Statues and other regulations.

Office for youth and cooperation with associations

The Office has been set up within the process of implementation of the National Youth Strategy of the Republic of Serbia, as well as the Strategy supporting the development of civil society on the territory of the City of Belgrade.

The Office for youth and cooperation with associations performs the following tasks:

- Cooperating and implementing the programs of interest for young people, together with its local branch offices, on the territory of the City of Belgrade;
- Cooperating with institutions through which the public interest is achieved in the fields of youth sector, these institutions being founded by the City and the institutions that are working systematically with gifted and talented young people;
- Providing conditions for active and quality leisure time of young people, by cherishing healthy and safe life styles;
- Ensuring equal position of young people in society;
- Encouraging and evaluating the achievements of young people in different fields;
- Improving the possibilities for the organization of quality leisure time of young people;
- Implementing socially responsible campaigns in the fields of ecology, security, solidarity, youth health.

The Office is working on securing conditions for the work of associations, establishes partnerships with associations for the purpose of participating in the preparation of projects, participates in the creation of the social ambience which is encouraging for the civil society, offers support to the civil sector in establishing a dialog and strengthening the partnerships with the local self-government bodies, initiates and implements developmental projects in cooperation with associations, and also doing other work in accordance with the law, the City Statutes and other regulations. The Office carries out other tasks and assignments in these fields, in accordance with the law, the City Statutes and other regulations.

The Office has a large and significant potential, but this potential has not been used sufficiently enough to initiate, encourage and implement road safety activities. It will be important for the Office to recognize the activities from its program that will directly or indirectly, alone or in cooperation with other stakeholders, contribute to the systematical improvement of safety of motorcyclists in road traffic.

It is of particular importance for the Office to establish good communication with the Road Safety Council of the City of Belgrade, with civil associations whose programs contain activities on improving motorcyclist road safety, and to support them in their work, as well as with motorcycle organizations with which they can jointly achieve huge benefits in the field of motorcyclist road safety. For that purpose, the Office will have to provide trainings for the employees or otherwise engage road safety professionals and experts.

9.2 ANALYSIS OF KNOWLEDGE, ATTITUDES AND BEHAVIOR

Road user attitudes and knowledge have the most significant impact on road safety. If the attitudes are erroneous or incorrect and the knowledge is insufficient or inaccurate, road user's behavior will, as a rule, be unsafe. Therefore, it will be important to make regular surveys on attitudes, knowledge and behavior of all road user types, and of motorcyclists in particular.





The SARTRE survey which concerns **social attitudes on risks in road traffic**, interviewed and analyzed, among other road users (drivers of passenger vehicles, pedestrians and bicyclists) the attitudes of riders of powered two-wheelers (motorcyclists and moped riders).

This survey has been conducted in accordance with the adopted methodology from the SARTRE 4 project, but included additional survey of riders of powered two-wheelers in the City of Belgrade, so that the total sample involved 400 surveyed riders of mopeds or motorcycles.

The results of the survey have shown that 39% of motorcyclists are of opinion that roads are not safe for travelling. Around four fifths of motorcyclists think that fines for not wearing safety helmets must be more rigorous. Also, the motorcyclists surveyed have shown positive attitudes with regard to the use of safety helmets. According to their statements, safety helmets wearing rate on highways is over 95%, while it is 94% in rural areas and 87% in urban areas. On the other hand, around a half of respondents would like to enjoy riding a motorcycle without a safety helmet, while 43% of respondents are wearing them because the Law has prescribed so.

As for the use of safety helmets and protection equipment, 78% of respondents state that they use a full-face helmet, 49% wear a protective motorcycle jacket, 37% use back protectors. The sample included 32% of respondents transporting passengers, of which 23% of passengers did not wear a safety helmet. The largest number of motorcyclists (82%) is of opinion that the use of safety helmets reduces the likelihood of serious injuries.

In terms of alcohol, motorcyclists (86%) support tightening of penalties for riding under the influence of alcohol. 85% of motorcycle riders are of opinion that alcohol must not be used even though they can ride carefully, while 89% of motorcyclists think that riding under the influence of alcohol increases the risk of road accidents.

Around two thirds of motorcyclists think that other motorcyclists exceed the posted speed limit on highways, urban and rural roads. The largest number of motorcyclists (89%) is of opinion that the surveillance cameras recording the passing at the red light would be useful for the improvement of road safety. They share the same opinion for the cameras recording the over-speeding (87%), while 62% of respondents support the least the introduction of more car-free and motorcycle-free zones in urban areas.

It is very important to highlight the subjective attitude of majority of motorcycle riders according to which riding a motorcycle is the least safe means of transport, while the safest one is the public transport.

According to motorcyclists' attitudes included in this survey, the following are the most important contributory factors for the occurrence of a road accident involving motorcyclists: excessive speed, riding under the influence of alcohol, keeping a short distance behind a vehicle, inadequately maintained state roads and bad weather conditions, which correlates with the data obtained in the analyses of road crashes.

It is of particular importance to stress that in addition to the self-reported motorcyclist behavior, the survey measuring the use of safety helmets by motorcyclists has been also conducted. This percentage is still unsatisfactory. The measurement of road safety indicators using the national methodology since 2013 has shown that the trend in safety helmet use is slightly increasing, from under 90% to over 93% in 2016. The methodology for recording road safety indicators relating to motorcyclists and moped riders should be improved in the forthcoming period. In fact, when it comes to the helmet use, the methodology should include recording of the safety helmet type and methods of use. Namely, certain helmet types do not offer adequate protection, and should be banned. Therefore, the percentage of use of the so called full-face helmet should be defined as an indicator, along with the rate of wearing helmets that are well observed (the so called highly visible helmets), percentage of riders and passengers on motorcycles and mopeds using highly visible protection equipment (the so called highly visible equipment, etc.).

9.3 ANALYSIS OF ROAD ACCIDENTS

In order to fully understand the risk of casualties of two-wheelers (motorcycles and mopeds) in road traffic, it will be necessary before all to understand the share of this road user type in the total number of motor vehicles. In fact, the percentage of share of powered two-wheelers in the total number of registered motor vehicles is low (around 2,8%) compared to the percentage of share of registered passenger vehicles in 2014 (around 78%). On the other hand, the number of motorcycles per 1000 inhabitants in Serbia is 9, while the number of passenger vehicles has been for a long time over 250 per 1000 inhabitants. There were around 27.000 registered powered two-wheelers in the area of the City of Belgrade in 2015, of which mopeds constituted one third. It is important to mention that actual databases relating to the number of registered motorcycles and mopeds in the area of the City of Belgrade have certain drawbacks that must be removed in the future. They relate to the following:

- Unadjusted national databases on vehicles, especially in terms of mopeds (until 2010, the term “engine propelled bicycle” had been used).
- Undefined vehicle types (until 2010, tricycles and quadricycles had not been “recognized” as types of vehicles).
- Inaccurate data on motorcycle categorization according to style, power, etc.

Based on these drawbacks and available data it is possible to identify the areas that are more endangered in road traffic, the City of Belgrade included, by using the “risk mapping” that understands the use of recognized and adopted risks in road traffic (public, traffic, dynamic, collective, individual, etc.).

The Table below shows the values, or ranks and classes of public and traffic risks in Serbia and the City of Belgrade, without the autonomous province of Kosovo and Metohija, in 2010, obtained on the basis of available data.





**CITY OF BELGRADE'S ROAD SAFETY STRATEGY
2017-2020**

Taking the aforementioned into account, the calculation is made of the traffic risk of motorcyclist casualties, per 10 thousand registered motor vehicles, per municipalities in Serbia, in 2010. Distribution of risk per municipalities is made on the basis of the rank and class of risk. It is possible to note that a considerable number of municipalities have a very high traffic risk of motorcyclist casualties, which is also the characteristic of the City of Belgrade.

Table 9.1. Ranks and classes of public and traffic risks, Serbia and Belgrade, without Kosovo and Metohija, 2010 (RSA, 2011)

No (road safety rating)	Risk level (description)	Public risk		Traffic risk	
		Number of fat+ser.inj. per 100.000 inhabitants		Number of fat+ser.inj. per 10.000 reg.mot.vehicles	
		Class (interval)	Rank (number)	Class (interval)	Rank (number)
1	Very low	Up to 25		Up to 10	
2	Low	25 – 50		10 – 20	
3	Medium	50 – 75		20 – 30	
4	High	75 – 100		30 – 40	
5	Very high	Over 100		Over 40	

$$TRR_{casM} = \frac{\text{Number of RA with motorcyclist casualties}}{\text{Number of registered motor vehicles}} \cdot 10.000$$

The trends in the number of road accidents involving motorcyclists and consequences of these road accidents for the City of Belgrade do not differ significantly from the cumulated data for the territory of Serbia. In fact, the City of Belgrade accounts for a generally decreasing, but also unstable trend in the number of fatalities of motorcycle and moped riders, from 2011 to 2015. However, this is not the case with the numbers of injured, as there are no significant deviations (RSA, 2016).

Table 9.2. Number of road accidents involving moped riders – consequences

Year	RAFAT	RAINJ	RACAS	RAMD	RATOT
2011	4	122	126	94	220
2012	4	119	123	55	178
2013	4	70	74	57	131
2014	2	91	93	39	132
2015	3	115	118	40	158
Total	17	517	534	285	819

Table 9.3. Number of road accidents involving motorcyclists – consequences

Year	RAFAT	RAINJ	RACAS	RAMD	RATOT
2011	20	260	280	165	445
2012	10	245	255	100	355
2013	6	229	235	87	322
2014	5	230	235	90	325
2015	4	262	266	84	350
Total	45	1226	1271	526	1797

REDUCING MOTORCYCLIST CASUALTIES IN THE PERIOD 2017-2020

The trends shown above indicate the absence of an established stable decreasing trend in the number and consequences of road crashes involving motorcyclists and moped riders. It also shows that it will be necessary to set up a quality strategic management model in this field in order to introduce positive trends in reducing the number of motorcyclist and moped rider casualties in the area of the City of Belgrade.



Figure 9.1. Traffic risk of motorcyclist casualties in road traffic, distribution of risk per municipalities, Serbia and Belgrade, without Kosovo and Metohija, 2010.



Figure 9.2. Public risk of motorcyclist casualties in road traffic, distribution of risk per municipalities, Serbia and Belgrade, without Kosovo and Metohija, 2010.

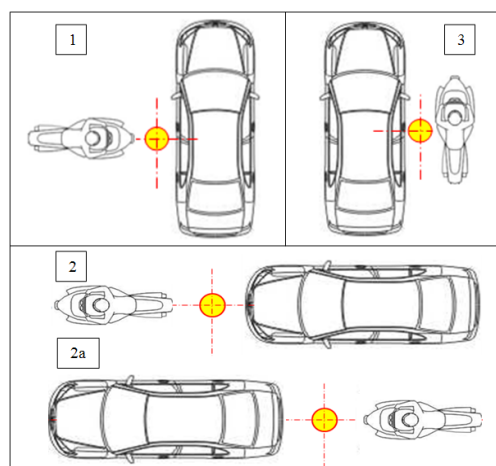


Figure 9.3. Most frequent collision types between a motorcycle and a passenger vehicle





By analyzing the global, European and national experiences it can be concluded that the following are the significant similarities or “universalities” when it comes to the most frequent types and circumstances of road accidents involving powered two-wheelers and motorcyclists in particular:

- Approximately three quarters of road accidents are collisions of motorcycles and other vehicles, which in most cases were passenger vehicles.
- The following are the three most frequent collision types between a motorcycle rider and driver of a passenger vehicle (Figure No 1): side collision (1), collision occurring while driving/riding in the same direction (2 и 2a) and collision occurring while driving/riding next to each other (3).
- Failure to observe motorcyclists by other drivers is the prevailing road accident contributory factor.
- Wrong decision of a motorcycle rider in one quarter of cases contributed to the occurrence of a road accident.
- Main contributory factor to the occurrence of a road accident is human factor (87,5%).
- In almost 90% of cases, immediately before a road accident occurred, a motorcycle rider rode faster than the driver of other vehicle.
- In road accidents involving several vehicles, the driver of the other vehicle most often violated the right of way rule applicable to the motorcycle rider.
- Approximately one quarter of road accidents involved one vehicle (motorcycle/moped) where this motorcycle hit a fixed object in the roadside area.
- A frequent road accident type is another vehicle's turning left at the moment a motorcycle coming from the opposite direction continues to move straight ahead.
- Intersections are the most common point of road crashes, in cases when other vehicles violate the right of way pertaining to motorcyclists, and very often violate other traffic regulations, too.
- Failure to observe a motorcycle or other vehicle involved in a road accident was due to bad vision reduced by the flashing light, fog or other vehicle in almost half of all road accidents involving more than one vehicle.
- Motorcyclists between the ages of 16 and 24 years are involved more significantly in road accidents compared to other age groups.
- In most cases (96%), respondents in road accidents are males, while women riders are becoming an increasingly present sub-group in road accident data.
- Motorcyclists who have already been involved in road accidents are most often present in new road crashes.
- Motorcyclists involved in road accidents very often have no additional professional training.

REDUCING MOTORCYCLIST CASUALTIES IN THE PERIOD 2017-2020

- Motorcyclists had serious problems in avoiding collisions in road accidents, when it comes to sudden and dangerous situations, which is partly the consequence of the lack of additional training.
- Most serious injuries with fatal consequences were head and chest injuries.
- Motorcyclists and passengers wearing safety helmets sustained slighter head and neck injuries compared to those without safety helmets.

9.4 DESIRED ROAD SAFETY SITUATION

The following are the targets for reducing motorcyclist casualties by 2020:

- Reducing the number of motorcyclist fatalities by 50%, compared to 2011,
- Reducing the number of seriously injured motorcyclists by 30%, compared to 2011,
- Reducing the number of seriously injured motorcyclists with permanent disability caused by a road accident, by 40%, compared to 2015,
- Increasing the use of appropriate safety helmets by the riders of powered two-wheelers, to 99%,
- Including at least 25% of motorcycle and moped riders in the forthcoming professional advancement (training) for safe motorcycle/moped riding.

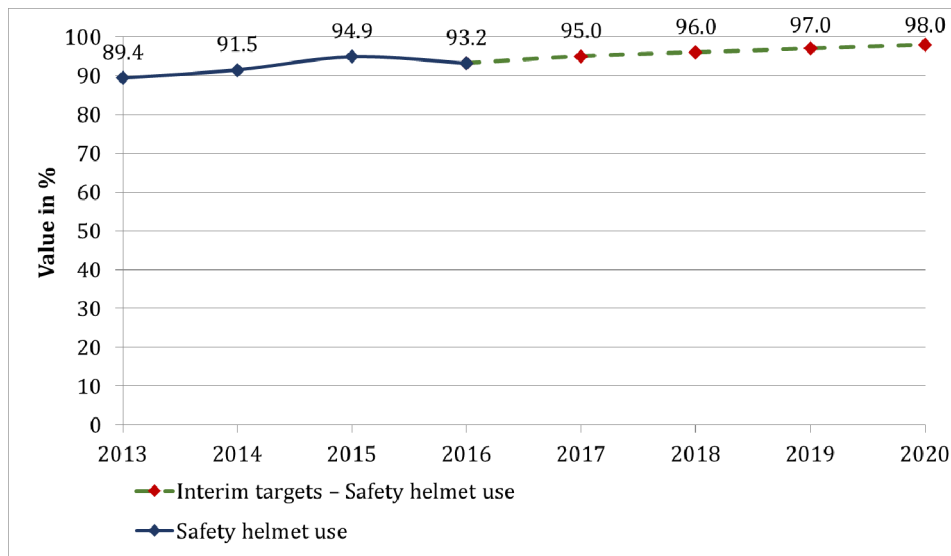


Figure 9.4. Interim targets, per years, and the final target of safety helmet use in 2020



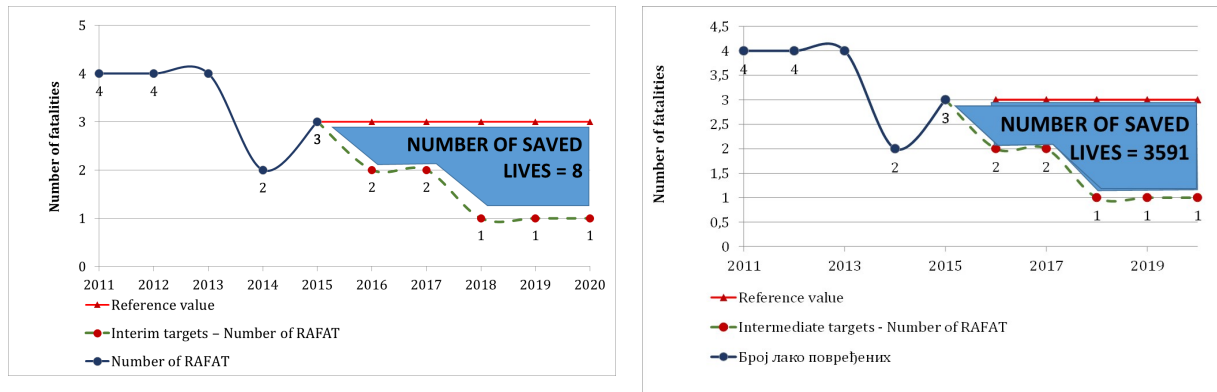


Figure 9.5. Interim targets, per years, and the final target in 2020 – number of road accidents with fatalities – moped riders (left) and motorcycles (right)

9.5 KEY AREAS OF WORK ON IMPROVING MOTORCYCLIST SAFETY

The following is the proposal for the key areas of work:

- Public policy targeted at promoting the advantages of this type of transport.
- Infrastructure adjusted to a safe use by powered two-wheelers.
- Education and training of both riders of powered two-wheelers and other road users.
- ITS technologies, etc.

EDUCATION AND TRAINING

Riding a powered two-wheeler requires a certain level of skills, knowledge, awareness in behavior and correct attitudes. In order to create safer riders of powered two-wheelers it will be necessary to work on their education and training, or to offer to them additional theory and practical knowledge provided by professionals in this field. It is also important to define key risk factors relating to novice riders and rider's licences for appropriate categories so that they could be trained for a safe riding of a motorcycle or a moped.

Separate training need to be defined for moped riders, too, independently of motorcyclists.

Special attention should be also paid to the education of other drivers on the issues such as: higher risks of involving powered two-wheelers and casualties thereof in road accidents, specific features of this road user type and the growing number of powered two-wheelers, which consequently are no longer a “surprise” but the “rule” and should be expected in road traffic.

The abovementioned implies the need of the City of Belgrade for stimulating the work of professional organizations dealing with additional education and training in the field of safety of powered two-wheelers.

CONTROL

Control by the Traffic Police is one of the most important factors that are contributing to safety of powered two-wheelers in road traffic, given the endangerment of this road user type in road traffic. Based on international and national experiences in this field, special focus should be made on control of the following elements:

- Speed,
- Use of appropriate safety helmet type,
- Alcohol and drugs,
- Driving licence,
- Vehicle registration (technical inspection), insurance and
- Reckless riding, etc.

PROTECTION EQUIPMENT

Protection equipment contributes to a great extent to preventing and reducing the injuries sustained by powered two-wheelers in road crashes. Promotion of use of appropriate protection equipment should be one of primary objectives in the area of the City of Belgrade. Basic protection equipment includes the following items:

- Safety helmet (prescribed by the law),
- Jacket with protectors,
- Riding pants with protectors,
- Safety gloves,
- Safety boots, etc.

It is of particular importance to select an appropriate safety helmet, i.e. the full-face helmet. These helmets are so designed to prevent head injuries and represent the most important item of the protection equipment. If the safety helmet is used properly (on the head, buttoned, homologated, right type, etc.) it will contribute to a great extent to preventing or reducing head injuries of riders or passengers. However, a lot can be done in improving the current situation in the City of Belgrade, or in promoting the use of a full-face safety helmet and the other protective items.

With this in mind, it will be necessary to educate and train the riders, before all on the importance of wearing an appropriate safety helmet, and also on the correct selection of a safety helmet. Also, innovative ideas should be introduced, such as registration of powered two-wheelers that is conditioned by a possession of an appropriate safety helmet, etc.





VISION

Erroneous perception of a driver of a passenger vehicle is a significant problem faced by the riders of powered two-wheelers. Mandatory use of daytime running lights greatly impacts the reduction of this problem. However, there is a range of measures that should be undertaken in order to enhance the vision of powered two-wheelers in road traffic, such as the use of reflective jacket and other highly visible equipment.

The following are the special measures that should be implemented: raising/increasing the awareness of other drivers of this problem (through theory training and campaigns), training of drivers of other vehicle types in terms of rightful and timely vision of motorcyclists as an "endangered" road user type, increasing the sight distance in all vehicles, implementing detailed studies on the effects of daytime running lights, etc.

INTELLIGENT TRANSPORT SYSTEMS (ITS)

A growing number of ITS systems intended for powered two-wheelers have been developed recently, and the number of studies dealing with the improvement and adjustment of these systems to powered two-wheelers is also increasing. It is therefore necessary for the holders of power and for professional circles in the City of Belgrade to promote and facilitate the use of these systems for motorcyclists, as is the case in majority of countries that are taking good care of the safety of powered two-wheelers, where there are many cases of states/cities offering incentives for, for example, the purchase of a motorcycle with an ABS device, etc.

INFRASTRUCTURE

Road design that is responding to the needs of riders of powered two-wheelers does not require huge investments. Adjustment of roads or road infrastructure should be directed before all to the improvement of the quality of road surface, use of appropriate horizontal and vertical signs and signals for road marking, repair of the roadways, etc.

It is well known that riders of powered two-wheelers are facing the big problem in terms of inappropriate horizontal signs and markings having no good adherence, especially in wet conditions. This often leads to the loss of control over the vehicle and consequently to a road accident.

It will be necessary for the road authority in the area of the City of Belgrade to adjust the road infrastructure to the riders of powered two-wheelers, since the changes required by the riders of powered two-wheelers do not affect other road users, but can greatly contribute to increasing their level of safety.

Elastic barrier

Elastic barriers are made so to protect the rider and his/her vehicle in case of a road accident. However, if the barrier is not adjusted to specific needs of motorcyclists, it can cause additional negative consequences to the rider and his/her vehicle. Most often they include the injuries of ribs and internal organs of a motorcyclist, due to "motorcyclist's under-running" the barrier.

In order to solve this problem, it will be necessary to follow good examples and practices of countries (such as the Netherlands, Germany, Great Britain, Norway, France, Spain, Italy, etc.) that are using the tailored barriers safe enough for the riders of powered two-wheelers. This should be the case in the area of the City of Belgrade, especially on roads and streets where many motorcyclists and moped riders are circulating.

Other road elements

Some types of asphalt do not offer adequate adherence in wet conditions. Such types of asphalt with a low coefficient of adherence must be replaced by the state-of-the-art asphalt types offering a higher coefficient of adherence.

Aquaplaning is also a serious problem for the riders of powered two-wheelers, and therefore it is necessary to drain well the road and remove the water from the roadway.

Safety of riders of powered two-wheelers is affected by unsafe objects in the roadside, inadequately posted vertical and light signs and signals, inadequate lighting of the roadway, etc. In order to achieve certain effects, it will be necessary to act upon all the mentioned elements, as well as to implement continuous road safety audits, intended for motorcyclists, according to a particular methodology set.

For example, for horizontal signs and markings, use plastic abrasive markings and colors containing granules for the increased adherence, primarily on huge surfaces (pedestrian crossings), etc. It is also necessary to control the application of current legal norms in this field.

BLACK SPOTS

Some parts of roads are labeled as black spots, due to the increased number of road accidents. However, in majority of cases, no one knows if the users of powered two-wheelers are getting killed or injured on these roads. Warnings concerning the users of powered two-wheelers only and the enhanced endangerment of this road user type are very scarce and mainly concern other road users. Improvement of the current methodology for identifying black spots can yield very good effects in increasing the safety of powered two-wheelers.

MANAGEMENT AND REGULATION

Traffic lanes are designed so that they can offer great comfortability. However, with the increasing number of vehicles, they should be adjusted to the maximum vehicle flow, in order to reduce the travelling time, diminish the risk of road accidents and also reduce the emission of polluting gases. Adjusting the road traffic signs and signals to the needs of powered two-wheelers is in accordance with the mobility increasing strategy.





Riders of powered two-wheelers need to be given priority in relation to other road users, through road traffic management and regulation. They should be made possible to use yellow lanes that are intended for passenger vehicles operating in the public city transport. Powered two-wheelers with the zero emission of polluting gases should be allowed to enter the central city zones in which access to vehicles is otherwise forbidden, "double" STOP lines should be marked which will yield right of way to powered two-wheelers at intersections, etc. in accordance with the recommendations of the Global road safety strategy on powered two-wheelers.

CAMPAIGNS

Motorcyclist road safety campaigns should be directed towards the solution of key circumstances in which road accidents involving motorcyclists occur, and also towards drivers of passenger vehicles as a road user type that is most often in conflict with motorcyclists.

That is why the measures need to be targeted at educating and training the car drivers. They have to learn how to avoid road accidents with powered two-wheelers, and to also know the consequences of these road crashes. All of this is possible to achieve by implementing appropriate campaigns and by raising awareness of car drivers. Campaigns must be carried out in the way that they do not produce any negative effect, but have an impact on the target group in question.

9.6 CONCRETE MEASURES, ACTIVITIES AND STAKEHOLDERS FOR IMPROVING MOTORCYCLIST ROAD SAFETY

The following proposal of **CONCRETE ACTIVITIES (MEASURES)** to be implemented is systematized in the table below, and contain concrete activities, leading agencies and stakeholders and targeted dates of completion of activities.

Table 9.4. Plan of activities according to key areas

Field	Activity	Leading agencies/ stakeholders	Time
Safety and public policy of promoting the advantages of the type of transport	Defining relevant motorcycle road safety indicators, making of/modifying the methodology for indicator measurement and establishing regular measurements, monitoring, reporting and use of results.	SfT	2017, 2018, 2019, 2020
	Implementing campaigns that relate to key risk behavior of riders of powered two-wheelers (risk factors: protection equipment, speed, alcohol, vision, selection of a motorcycle style, conflicts). Special focus should be put on implementing the campaigns that are targeted at reducing the risk of casualties of riders of sports motorcycles due to excessive speed, depending on the road type.	MiO, SfT, CM	2017, 2018, 2019, 2020

REDUCING MOTORCYCLIST CASUALTIES IN THE PERIOD 2017-2020

Field	Activity	Leading agencies/ stakeholders	Time
	Implementing campaigns with the aim of promoting the use of powered two-wheelers as a mode of transport.	SfT, CM	2018, 2019, 2020
	Applying modern methods of control and sanctioning of unconscientious riders of powered two-wheelers, especially in terms of exceeding speed limits.	Mol, judiciary	2018, 2019, 2020
	Modifying the methodology for the study titled "In-depth analysis of road accidents involving powered two-wheelers in the area of the City of Belgrade".	SfT	2018, 2019, 2020
	Organizing at least one seminar and/or workshop (annually) intended for road safety of powered two-wheelers, these events being organized by the City of Belgrade, professionals from this field and other interested stakeholders.	Mol, SfT, NGO	2017, 2018, 2019, 2020
	Introducing incentives and promoting economic benefits for the users of this mode of transport (incentives for parking, etc.).	SfT	2018, 2019, 2020
Infrastructure adjusted to a safe use of powered two-wheelers	Providing appropriate infrastructure capacities (parking lots, proper horizontal and vertical signs and signals, etc.) by competent institutions.	SfT, CM	2017, 2018, 2019, 2020
	Making of the Project for defining the most frequent motorcycle routes in the area of the City of Belgrade and adjusting road traffic infrastructure on these routes to the needs of motorcyclists (motorcycle safety zones).	SfT	2019, 2020
	Identifying and repairing "black spots", or locations where an increased number of riders of powered two-wheelers get killed or injured	SfT	2017, 2018, 2019, 2020
	Allowing the use of the "yellow lane" to the riders of powered two-wheelers (Model: http://www.tfl.gov.uk/roadusers/redroutes/10151.aspx).	SfT	2017
Education and training of both riders of powered two-wheelers and other road users	Planning and implementing the annual safe riding training for initial riders (for example, the Model: Initial Rider Training Programme, Europe (www.initialridertraining.eu), as well as the annual training for riders with riding experience under 3 years (for example, the Model: BikeSafe, www.bikesafe.co.uk).	SfT, Mol, Driving schools	2018, 2019, 2020
	Promoting the program of additional education and training. Exchanging knowledge among motorcycle groups and peer education.	SfT, Driving schools, NGO	2019, 2020
ITS technologies	Monitoring and reporting on the number of powered two-wheelers having the ABS device. Developing a stimulating program for use of powered two-wheelers with ABS, ESP, and similar devices.	SfT, importers	2019, 2020
	Developing a stimulating program for the use of "airbag" protection equipment by the riders of powered two-wheelers.	SfT, importers of equipment	2019, 2020
	Developing a stimulating program for use of systems for a better vision of riders and powered two-wheelers (for example, Light mode helmet system, etc.).	SfT, importers of equipment	2019, 2020





Figure 9.6. The scheme of interested stakeholders in the area of road safety of powered two-wheelers

Given the number and structure of interested stakeholders, it will be necessary to strengthen continually the cooperation of various interested stakeholders and improve the harmonization of measures and activities of these stakeholders. Based on that, cooperation and coordination of the most important stakeholders – carriers of measures and activities related to powered two-wheelers should be established and continuously improved (Figure 2).

These stakeholders are expected to consistently execute their basic activities and thus contribute to a strengthened road safety system of powered two-wheelers. On the other hand, new measures and activities, or new road safety procedures should be also introduced.

9.7 APPENDIX 1 – ADVANTAGES AND DRAWBACKS OF THE MODE OF TRANSPORT

It is of particular importance for the City authorities to recognize all the advantages of motorcycles as the mode of transport, which is of significance for the achievement of the goals and objectives of the City of Belgrade's Road Safety Strategy 2017-2020 and for the reduction in the number of motorcyclist casualties as a consequence of the growing number of motorcycles in the area of the City of Belgrade.

As for the advantages of the mode of transport, the ACEM (2015) mention the following facts indicating the significance of powered two-wheelers at the European level (Jevtic, 2015):

- Powered two-wheelers represent a significant element of the future development of the transport systems of many European countries.
- The number of sold powered two-wheelers in 2011 in the EU was over 1.7 million.

REDUCING MOTORCYCLIST CASUALTIES IN THE PERIOD 2017-2020

- This branch of industry currently has the fastest technological-economic development in Europe, with the total value of around 150 billion Euros.
- Motorcycle industry in Europe employs over 150 thousand workers.
- Road safety of powered two-wheelers represents the priority of future development.
- Motorcycle sports and motorcycle tourism are new branches of tourism and have an outstanding growth.
- Elvik (2012) mentioned that the powered two-wheelers most often represent the individual type of transport, which is characterized by mobility, economical features, flexibility and the feeling of freedom. All of this makes this type of transport suitable for the solution of problems related to traffic jams in cities, parking lots, social issues, etc. Special importance lies in the saving of resources, such as fuel and protection of environment.

Future European economic scenario of a sustainable development has foreseen a doubled share of powered two-wheelers in the transport system by 2030 (FEMA, 2005). The goal is the integration of these road users into the countries' transport systems, in the best and fastest possible way. This understands taking of positive attitudes in relation to the advantages of this type of transport, at all levels of authority, but also a far higher responsibility, when it comes to challenges, i.e. reduction in the risk of casualties.

Table 9.5. Advantages of powered two-wheelers as a type of transport (ACEM, 2006, 2008, 2012; FEMA 2005; WH, 2014; IMMA, 2014)

Advantages of the type of transport
Mobility
Significant increase in mobility and reduction of traffic jams, having in mind the exploitation characteristics. Business and social mobility. Saving in the capacity of parking space, faster finding of a parking lot. Saving in the traveling time by 16-48%, during traffic jams, compared to passenger vehicles. Occupying less available space at public traffic surfaces and out of them.
Ecology
Reducing the negative impacts on environment. Reducing the impact of dangerous emission of CO ₂ and of noise in cities, compared to passenger vehicles. A fast technological growth in the field of "electric powered two-wheelers" of high autonomy – "zero pollution".
Economy
Economical travelling compared to passenger vehicles, saving in the fuel consumption of 55%-81%. Economic cost-effectiveness of the transport means (market price of some powered two-wheelers is less than 500 EUR), Causing far less damage to road infrastructure.
Socialization
Significance in the part of socialization depending on the motive (recreation, work, sport, tourism). Charitable and socially beneficial work (frequent activities of motorcycle clubs, etc.). Public health, etc.





Haworth (2012) indicated that the advantages of the use of powered two-wheelers in urban areas are multiple, and key advantages refer to the following factors: mobility, ecology, economy and socialization (Table 9.5).

9.8 APPENDIX 2 – LEGAL PROVISIONS GOVERNING THE CIRCULATION OF MOPEDS, MOTORCYCLES, TRICYCLES AND QUADRICYCLES IN SERBIA

Participation of mopeds, motorcycles, tricycles and quadricycles in road traffic in Serbia is regulated by the Law on Road Safety, in Chapter IV (The Rules of Traffic), part 20 (Special provisions on the traffic of bicycles, mopeds, tricycles, quadricycles and motorcycles).

The Law on Road Safety does not recognize the term of a powered two-wheeler, or certain specific terms (stunt, filtering, etc.), and this deficiency should definitely be eliminated in the following amendments and complements to the Law on Road Safety.

By incorrect standardization, or by failing to standardize certain conditions for the participation of powered two-wheelers in traffic, the legislator has directly affected this road user type, and consequently the whole society as it bears equally the negative consequences of road accidents.

When it comes to speed, as a significant factor of motorcyclist casualties, and of riders of sports motorcycles in particular, the Law on Road Safety does not recognize the term "steering on one wheel" (stunt). Such a way of steering a powered two-wheeler can currently be included in Article 90 (Steering and Stability), where this action should be explicitly mentioned. However, bearing in mind that this is a high-risk behavior, it can also be characterized as a reckless riding (Article 41).

The absence of specific penalties for such riding creates the space for such a ride to be promoted and remain unpunished.

Another type of problem that can directly affect the increased number of offenses, especially when it comes to excessive speed, is the failure to have a license plate on a powered two-wheeler. Research studies carried out in Serbia have shown that the use of the license plate is a significant indicator of motorcyclist road safety and is related to the acceptance of extreme overspeeding. By "hiding" consciously the registration plates (by placing them in an inappropriate way and place, usually on the part above the rear tire of their powered two-wheelers), it is impossible to record the violation properly. This offense is underestimated (the fine amounts to only 3,000 dinars), leaving a considerable space to riders to commit violations.

Also, the value of a penalty to be imposed for not wearing an appropriate helmet in the prescribed manner should be re-examined (at the moment, the penalty is 5,000 dinars). In order for this penalty to work incensively, the value of the penalties to be imposed should be agreed with the cost of the helmet ("one penalty - one homologated helmet").

Over 50% of road accidents occur due to poor vision of a rider of a powered two-wheeler, most often in night conditions (ACEM, 2003), where riders of mopeds are endangered in particular (Kwan and Mapstone, 2009). Taking into account the speed, dimensions and technical-exploitational characteristics of a moped, the introduction of the obligation to wear a reflective vest, in conditions of reduced visibility, for these riders/passengers, would significantly contribute to reducing the road accidents of this type.



