

GOVERNMENT STATUS REPORT - POLAND

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INTRODUCTION

The following report contains information on the progress achieved in Poland with regard to aspects of road traffic safety since the time of 22nd ESV Conference (Washington DC, 2011). This period was generally characterised as the intentional effort towards the traffic safety items within all its main system fields taking into account priorities drawn from analysis of domestic and international accident statistics. The current accident statistics for the last ten years are given on Figure 1, and Figure 2 and in Table 1.

In 2014 on Polish roads 34 970 road accidents occurred resulted in 3 202 fatalities and 42 545 injured persons which gives for the years between 2010 and 2014 as follows:

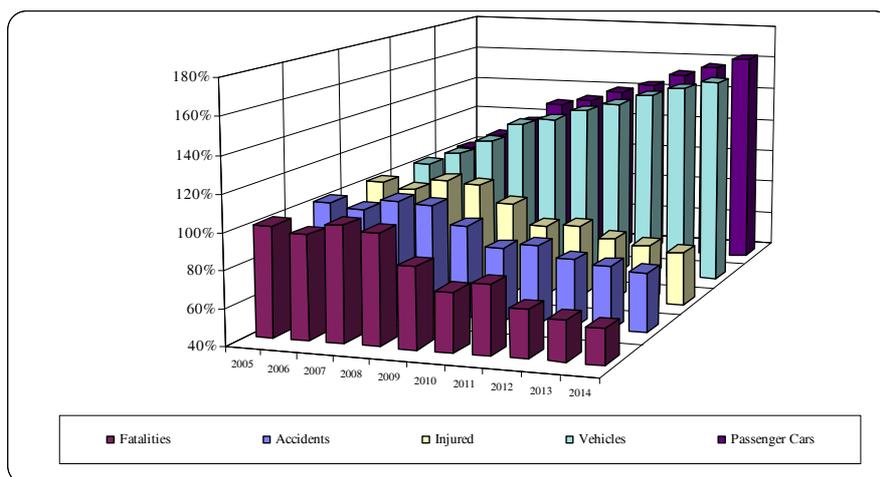
- 3 862 less road accidents (- 9.9%),
- 705 less fatalities (- 18%),
- 6 407 less injured (- 13,1%),

Even if the last four years on our roads were not that bad still Poland demonstrate the higher level of danger on the roads in comparison to other EU countries.

I. The diagnosis of Road Safety in Poland.

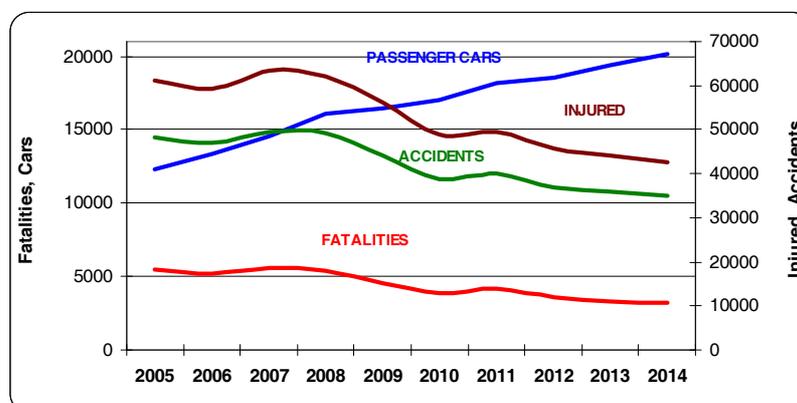
Over the past 10 years (2005÷2014) more than 45 thousand people died and approximately 532 thousand were injured (of which about 25% seriously injured) on Polish roads. During this decade, the number of accidents decreased by 27%, the number of fatalities by 41%, and the number of injured by 30%.

Figure 1. Accident Data in Comparison with the Vehicle Stock in Poland in the Period 2005-2014



By: Anna Zielińska, Motor Transport Institute

Figure 2. Current trend in accident data and the car stock in Poland



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Table 1. Accident Data in Comparison with the Vehicle Stock and Population in Poland in the Period of 2005÷2014

Year	No. of accidents	No. of fatalities	No. of injured	No. of vehicles (thousands)	No. of cars (thousands)	Polish population (thousands)	Fatality factor (No. of fatalities / 1 mln of inhabitants)	Accident severity (No. of deaths / 100 of accidents)	No. of cars / 1000 inhabitants
2005	48 100	5 444	61 191	16 816	12 339	38 157	143	11	323
2006	46 876	5 243	59 123	18 035	13 384	38 126	138	11	351
2007	49 536	5 583	63 224	19 472	14 589	38 116	146	11	383
2008	49 054	5 437	62 097	21 337	16 079	38 136	143	11	422
2009	44 196	4 572	56 046	22 025	16 495	38 167	120	10	432
2010	38 832	3 907	48 952	23 037	17 240	38 530	101	10	447
2011	40 069	4 189	49 506	23 853	17 872	38 538	109	10	464
2012	37 046	3 571	45 792	24 876	18 744	38 533	93	10	486
2013	35 847	3 357	44 059	25 684	19 389	38 496	87	9	504
2014	34 970	3 202	42 545	26 455	20 164*	38 484*	83	9	524

Preliminary data estimated as of March 2015 by Motor Transport Institute

* Central Statistical Office data as of June 30, 2014

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II. The existing programme for road traffic safety and a bit of history

In **2005** the National Road Safety Programme *GAMBIT 2005* was adopted by the government. In the programme it was established that:

1. The Polish far-reaching and ethically empowered vision of road safety will be the **ZERO VISION**.
2. The main objective to be attained by the year 2013 is a decrease in the number of fatalities by 50% over 10 years, i.e. the number of fatalities is to drop to 2800 in the year 2013.
3. In Poland, the high-risk groups most likely to be killed in a road accident include: vulnerable road users (pedestrians, cyclists, motorbike drivers, motorcyclists), children, and young drivers.
4. The main problems regarding road safety include:
 - a) dangerous behavior of road users,
 - b) poor quality of road infrastructure,
 - c) lack of an effective system of road safety management.

In order to reach the main objective, 15 groups of priority actions and 144 tasks grouped into five detailed objectives were established:

1. Creation of a basis for conducting effective and far-reaching operations enhancing road traffic safety.
2. Shaping safe behaviors of road users.
3. Protection of pedestrians, children and cyclists.
4. Construction and maintenance of safe road infrastructure.
5. Reduction of the severity of accidents.

The assessment of the *GAMBIT 2005* Programme implementation, as per its status in the year 2014 indicates that:

1. In what concerns national roads, the set objective has not been attained - the objective was to reduce the number of fatalities down to 770 (the target value was exceeded by 82%).
2. As for the remaining road categories, the stage objectives were attained - the number of fatalities for these road categories is 4÷15% below predictions.
3. In relation to the base year (2003) a decrease of 19%÷40% in the number of fatalities occurred in all districts.
4. In three districts the objective for the year 2010 has been attained.

In the years 2008÷2010 a very encouraging decrease in the number of fatalities could be noticed. It was due to the actions undertaken in that period, as well as to the long-term effects of the changes and measures undertaken in preceding years.

During the period in which the *GAMBIT 2005* Programme was in force, many educational, preventive and infrastructural actions, in line with the programme directions, were undertaken at the national level. Unfortunately, only 84 out of 144 (58%) planned tasks were undertaken. At the same time, in many cases, political and administrative decisions were incompatible with the *GAMBIT 2005* Programme. In Poland, road accidents are still not perceived as a sufficiently important problem, and the poor effectiveness of actions at the institutional level is the result of the principle of shared collective responsibility for the problems with road safety management. Despite the problems mentioned above, a systematic decrease in the number of fatalities due to road accidents is taking place in Poland. An increased activity of Polish experts on the international arena may be observed, as well as a fairly extensive number of the undertaken actions for road traffic safety, within which the *GAMBIT 2005* Programme continues to play an essential role.

Conclusions related to GAMBIT

1. The strategy and action plans for road safety were properly developed under the GAMBIT programmes.
2. Trainings for road safety professionals increase the number of experts in this area at different levels. Poland participated in certain trainings conducted abroad (the Netherlands, France, Sweden) and is a well-informed member of the international community handling road safety issues.
3. One essential problem was the failure to implement actions *en masse* under the *GAMBIT 2005* Programme and the lack of assessment of their effectiveness. Unfortunately, sources of funding for these actions were also very limited. As a result, the scope of the undertaken actions was not extensive.
4. The existing regional GAMBIT programmes were properly developed, but the effective implementation of actions under such programmes requires the support from the central level, improvement of databases and performance assessment.
5. The identification of agencies leading in the governmental structures (leaders), performing the tasks regarding road safety indicated an insufficient political will behind the actions for road safety (lack of a political and operational leader, and the institutional problems in the area of cooperation).

III. Current situation

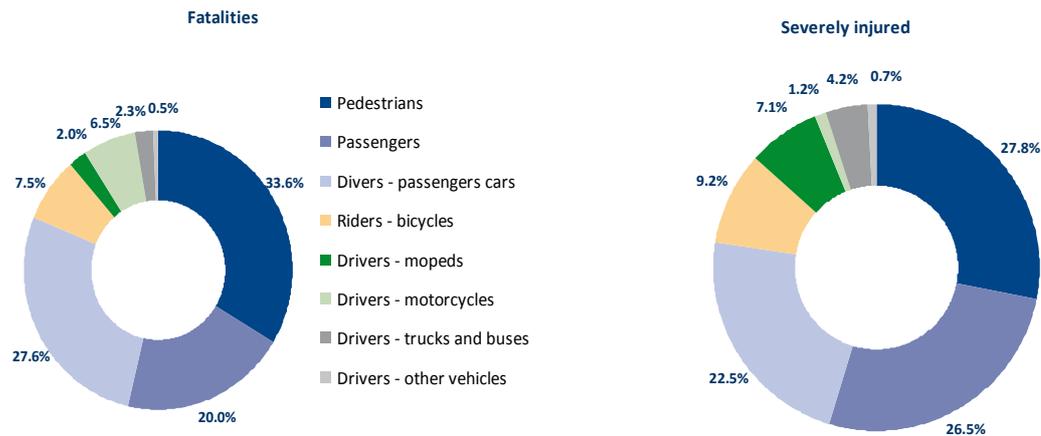
Scope and characteristics of the problem. Based on the available statistical data, it can be stated that per 100 accidents on Polish roads, there are approximately: 9 fatalities, 31 seriously injured persons, and 92 moderately and lightly injured persons.

Poland against the background of the European Union. Since 2007 Poland has been an inglorious leader among the European Union countries as regards the number of fatalities in road accidents. The share of Poland in the total number of fatalities amounts to 11%, although Polish population accounts for only around 7% of the total number of residents in the European Union. The risk of loss of life on Polish roads was twice as high as the European average in this respect, and over three times higher than in the countries leading in the area of road traffic safety, such as Great Britain, the Netherlands, or Sweden. The most frequently used rate for international comparisons is the mortality rate, which is the number of annual fatalities per 1 million inhabitants, and this rate for Poland amounted to 83 fatalities. Therefore, in 2014 Poland was one of leaders among all the countries of the European Union in this classification.

Types of accidents. For many years now, most people killed in road accidents (over 33% of the total number of fatalities) die in accidents connected with running over a pedestrian, which sets us apart negatively not only from Europe, but also from the world. These are the accidents connected with pedestrians moving on a street. Another group of accidents with a high mortality rate (15÷20%) are accidents caused by a head-on collision, the reason for which is often the lack of divided roads. There are frequent side collisions on intersections and entries/exits, which can also have fatal consequences. Equally dangerous are the accidents connected with driving into an obstacle (a tree or a post) located too close to the edge of the road.

Victims of road accidents - groups of high risk. From all the victims of road accidents, pedestrians represent the largest group (33.6% of fatalities and 27.8% of seriously injured) (Figure 3). Among drivers, the largest group of victims are the drivers of passenger cars (27.6% of fatalities and 22.5% of seriously injured). Cyclists should be taken into consideration, as they amount to approximately 7.5% of fatalities and 9.2% of seriously injured, while their share in the road traffic accounts for around 1%. The share of motorcyclists (2.3 % of fatalities and 4.2% of seriously injured) and moped drivers (2.0% of fatalities and 7.1% of seriously injured) in the number of road accidents victims is also increasing. The accidents in which pedestrians are the victims take place mainly in urban areas, while accidents in which drivers and passengers of vehicles are the victims take place mainly on country roads. However, a huge severity of the accidents with the participation of pedestrians (25% fatalities and 30% seriously injured in comparison to the total number of victims) takes place on the national roads.

Figure 3. Victims of road accidents - groups of high risk.



The age of the victims of accidents. The highest mortality rates (number of fatalities per 1 million of inhabitants) refer to young people (aged 15 to 24) and people over 65 years old.

The circumstances and causes of road accidents. The circumstances which lead to road accidents with fatalities most often include:

- the behavior of road users (maladjustment of speed, failure to give the right of way, incorrect overtaking, incorrect behavior towards a pedestrian, drunk driving and the lack of protection among road traffic users);
- external conditions (mainly: limited visibility and adverse weather conditions).

The geography of accidents and their victims. The largest number of fatalities is recorded in the Mazowieckie District, and then in the following districts: the Wielkopolskie, Śląskie, Łódzkie and Małopolskie Districts. The combined number of fatalities in these five districts accounts for over 50% of the all road accident fatalities in Poland. However, in relation to the number of inhabitants, the highest mortality rate in road accidents and, consequently, the highest risk (Figure 1.9) exists in the Świętokrzyskie and Mazowieckie Districts. It is also quite high in the Podlaskie, Łódzkie, Warmińsko-Mazurskie, Wielkopolskie, Lubelskie, Lubuskie and Kujawsko-Mazurskie Districts. It results, among others, from the low standard of the road network, high transit traffic in these districts, and inappropriate behaviors of road traffic users.

Socio-economic cost of road accidents. Since 2012 the cost of road accidents in Poland is estimated by a commission of the National Road Safety Council. The method of the valuation of the costs of road accidents is based on the generally accepted practice in transport economics and comprises of the following components: medical costs, cost of the lost productivity power (lost production), cost of damage to property and administrative costs. This method does not factor in the cost of human suffering resulting from road accidents. Additionally, the research conducted by the Road and Bridge Research Institute does not take account of the cost of collisions, i.e. accidents without any victims (estimated cost of 8 billion Polish zloty). In the future, this element should be included in the methodology of accident costs valuation. Latest estimation of total yearly road accidents costs for 2013 year amount to 49.1 billion Polish zloty (research of Road and Bridge Research Institute). According to the data from 2011, the greatest share of the annual accident cost in Poland is represented by the costs related to the injuries (57.3%). The costs related to fatalities account for 1/3 of the annual total (32.6%). The smallest share is represented by the cost of material losses (10.1%).

Unfavorable forecast. Forecasts regarding demography and motorization in Poland indicate that, in the years **2011÷2020**: the number of inhabitants may decrease by 1÷4%, the number of vehicles may increase by 15÷25%, i.e. reach the number of 30 million vehicles, and mobility of citizens (measured by transport performance) may increase by 30–35%. The stagnation or the limitation of preventive activities in the following years may halt the decreasing tendency in terms of the number of road accidents and the fatalities resulting from them. It is estimated that, in such a situation, over 40 thousand people may be killed and over half a million may be injured in road accidents by 2020. The value of both property and social loss of these road occurrences may reach 225 billion of Polish zloty. Therefore, it is necessary to take effective steps in order to protect the lives and health of road users.

Diagnostic conclusions. The research allowed for the identification of main problem areas in road safety in Poland:

1. Protection of pedestrians in road traffic.
2. Shaping the habits of driving with an allowed speed.
3. Shaping safe behaviors of road users.

4. Adaptation of road infrastructure to basic standards of road safety.
5. Promotion and use of safe vehicles.
6. Development of road rescue system.
7. Development of road safety management system as a basis for the effective solution of the aforementioned problems.

On the base of the diagnosis national programme was developed within the context of other existing, accepted and planned programmes and strategies - both international (UN and EU) and national documents.

IV NATIONAL PROGRAMME

Despite international documents the following national documents were taken into account to build Polish National Road Safety Programme 2013÷2020.

National Development Strategy 2020. In this document, it is stated that, due to high risk of road fatalities in Poland, programmes for the improvement of Road Safety are to be developed and implemented. Such programmes are to be in line with works on the improvement of infrastructure and information and education campaigns concerning traffic rules and the promotion of safe behavior of road users. Most important tasks include:

- construction and development of automatic traffic monitoring systems,
- development of an integrated system of accidents management,
- development of an integrated system of passenger service and goods transport,
- improvement of forms and channels of communication with society in terms of road traffic safety, Intelligent Transportation Systems,
- development of systems for financing investments within the scope of road traffic safety.

Transport Development Strategy until 2020. Apart from the general goals which take account of the new concepts of EU common transport policy and of the main guidelines of Polish transport policy developed recently, the document indicates strategic trends in the area of road traffic safety:

- safe behavior of road users,
- safe road infrastructure, safe vehicles,
- effective system of road rescue and medical assistance.

Efficient State Strategy 2020. The document underlines seven detailed objectives. Objective number seven: *Provision of a high standard of safety and public order*, determines the following directions for intervention associated with road traffic safety:

- counteracting road risks,
- road rescue and protection of the population (fire protection; preventive, rescue and firefighting actions),
- implementation and improvement of the rescue alert system,
- improvement of the functioning of the Medical Rescue Alert system.

The aforementioned intervention directions include several issues, such as the development of a national Road Safety programme, unification of the law, raising existing infrastructure standards, improvement of the functioning of structures and of the enforcement of procedures.

National Health Programme for the years 2007÷2015. Road accidents are considered a health related problem of the society. The third strategic goal of the National Health Programme is the reduction of the frequency of injuries resulting from road accidents and the limitation of their consequences. Reaching this goal calls for the reduction of the number of deaths resulting from road accident injuries. The need for preventive measures has also been identified.

National Programme for Prevention and Solving of Alcohol-Related Problems for the years 2011÷2015. The document determines plans for the following actions directed at limiting the number of vehicle drivers under the influence of alcohol:

- increase the number of sobriety tests carried out during standard road checks,
- development of a strategy concerning the problem of drunk driving, development and implementation of a unified programme for drivers detained for driving under the influence of alcohol,
- public education actions concerning the influence of alcohol on human body and the risk of damages arising as a result of driving vehicles under the influence of alcohol.

Programme structure. The Polish National Road Safety Programme 2013÷2020 and its structure of intervention is based on the following five pillars:

- safe behaviors of road traffic users,
- safe road infrastructure,
- safe speed,
- safe vehicles,
- rescue and medical assistance system.

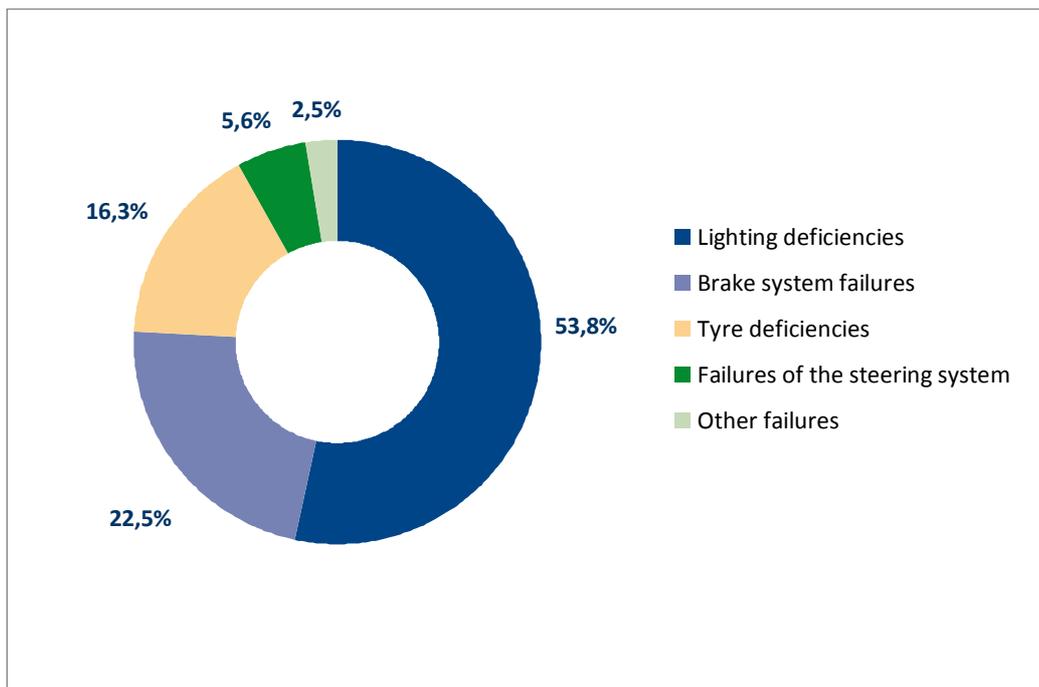
Effective implementation of activities within the above mentioned pillars is conditioned by the improvement of the management system for road safety. Therefore, the Programme indicates also the activities which are essential for planning, implementation, coordination and monitoring activities within its particular pillars. In every pillar, based on the diagnosis of the existing status of road safety, three priority directions (priorities) reflecting fundamental problems of road safety in Poland were distinguished, as well as conditions for their implementation. However, every priority accumulates activities covering:

- Engineering - understood as technical solutions for:
 - road network, which upgrade road safety and make roads “forgive” human errors,
 - vehicles, which protect drivers, passengers and other road users, as well as diminish possible damages of an accident.
- Supervision - understood as visible supervision and control aiming at the verification of existing regulations and prevention of non-compliance.
- Education - understood as enhancing awareness of road safety by identification and understanding the risk. The objective of education is to change attitudes and behaviors at the individual level, as well as at the level of certain communities or at the organizational level.

V. SAFE VEHICLES

Bearing in mind the very technological profile of ESV Conference I would like to give more information on road safety related to vehicle. According to the statistical data, vehicles are in Poland quite rarely the main cause of a road accident (less than 1% of total), but their technical condition more often assist to other causes and significantly influences the severity of accidents.

Figure 4. The main reasons of accidents attributable to technical failures in vehicles.



In addition estimations of the Motor Transport Institute indicate that in 2009, the average age of the vehicles in use in Poland was around 13 years. For comparison: the average age of vehicles at this time in Sweden was just under 10 years, in Finland - over 11 and in the USA - 11 years. Research shows that the average number of failures significant in terms of the safety of road traffic increases with the age of the vehicle. At the same time, it is noticeable that the older the car is the more failures posing a risk to road safety.

Risk factors

Vehicle safety directly influences the number of fatalities and the scale of consequences of accidents. For this reason, solutions in this area should be constantly sought and implemented, especially through equipping cars with elements supporting the driver (active safety) and elements protecting the persons participating in road occurrences (passive safety).

Technical condition of the vehicle. Pursuant to the law in force, the technical condition of vehicles is periodically revised by motor vehicle inspection stations (MVIS). However, an inspection carried out by the

Supreme Chamber of Control revealed that supervision over these inspection stations is insufficient. Nearly two thirds of obligatory devices of the MVIS is not certified. In Poland, the low technical culture is also a problem. It translates into neglect of the technical condition of vehicles, especially in what regards elements influencing the safety, such as brakes, lighting, shock-absorbers, steering system, tire pressure.

Lighting. Lighting deficiencies are among the most frequently listed failures (54%). This allows us to define the lighting issues as one of priorities in those actions for improvement of road safety which are linked with the technical condition of vehicles. Regulations regarding lighting-related technical requirements for vehicles are not in step with the technological progress and the low awareness of drivers is an additional factor, as they usually do not know that even formally proper lighting may not illuminate the way sufficiently.

Spare parts. Another problem is related to the spare parts used in vehicles. Technical requirements which should be met by parts and subassemblies used as replacement of original parts are not regulated by European laws. It has been estimated, based on examination of spare parts, that the quality of over 50% of parts currently on the market, as well as of various operating fluids (including brake fluid) poses a potential direct hazard to the safety of vehicle use.

Equipment - modern safety devices. Currently, all the newly manufactured vehicles in the European Union are equipped with basic safety systems, such as seat belts, ABS system or air bags for the driver. Additionally, thanks to advanced technologies, it is possible to equip cars with more systems supporting the driver in a risky situation on the road. This allows drivers to avoid collisions or to mitigate their consequences, both for the driver and for the passengers, as well as for other road users. Examples of such systems are: electronic traction control (which assists the driver in recovering from skids), camera systems limiting the so-called blind spot or e-Call (a system installed in the car, which automatically notifies rescue services about an accident). These solutions form part of the "e-Safety System". Vehicle producers subject their technical solutions to safety tests and strive to rank as high as possible in consumer rankings, such as Euro NCAP, which helps to popularize these solution and make them more readily available in new cars. Also cars driven in Poland, both imported as used vehicles (mostly from other EU states), are largely equipped with systems enhancing road traffic safety thanks to which a vehicle may limit the consequences of human-made errors and its technical shortcomings are rarely the cause of accidents.

Priorities and directions of actions (Table 2.).The diagnosis of the current state, as well as the experiences of model states of the European Union (in terms of road safety considerations), lead us to adopt two priorities under the Safe Vehicle pillar:

- Priority 1 - Enhancement of actions regarding vehicle technical condition inspections,
- Priority 2 - Improvement of safety systems in vehicles.

Enhancement of actions regarding vehicle technical condition inspections aims to, above all, reduce the risk of accidents caused by poor technical condition of vehicles and to limit their severity.

Improvement of safety systems in vehicles aims to implement such construction solutions so as to render the vehicle capable of protecting its driver and passenger, as well as other road users, to prevent human errors and to minimize the dangers when these errors are made.

Conditions for the performance of these actions. Basic conditions for the successful performance of the actions related to vehicle safety are legislative measures and support resulting from research and exchange of experiences.

Legislative measures aims for development of:

- a concept for a modernized national system for the inspection of the technical condition of all vehicles.
- provisions regarding the professional supervision over the equipment of motor vehicle inspection stations and monitoring their work.
- technical requirements unequivocally and objectively guaranteed by technical tests of vehicles.
- legal base for the implementation of a system (certification, homologation) to supervise the introduction into trade and use in cars of parts and operating fluids.

Research and exchange of experiences

- Introduction of the common practice of using the technologies of objective exploitation tests with the use of devices allowing for precise and quick exploitation measurements. Conducting in-depth research on road traffic accidents, including the analyses of the influence of the technical condition of vehicles for the occurrence of accidents. Conducting development works related to defined groups of advanced technology products. Research, development and pilot implementation of intelligent transport systems related to the cooperation of devices with which roads and vehicles are equipped.
- International cooperation regarding the improvement of legal regulations related to the systems of testing and assessment of spare parts, operating fluids and participation in international research regarding pilot implementation of modern solutions within the scope of active and passive safety.

Table 2. Priorities and directions of actions within the *Safe Vehicle* pillar

Priority	Direction of actions		
	Engineering	Supervision	Education
Enhancement of actions regarding vehicle technical condition inspections	Implementation of modern technologies and techniques at motor vehicle inspection stations;	Modernization of the system of supervision of motor vehicle inspection stations and monitoring their work;	Education within a complex education system ^I regarding maintenance of the proper technical condition of vehicle and how it affects the safety of all road users;
	Improvement of technical homologation and use requirements regarding vehicle equipment;	Modernization of the system for verification of equipment and parts in cars which affect their safety in road traffic; Certification of the obligatory equipment of motor vehicle inspection stations;	Running, within the system of promoting road traffic safety ^{II} , information campaigns and campaigns to promote maintenance of the proper technical state of vehicles ^{III} ; Periodic trainings for diagnosticians and supervisors of motor vehicle inspection stations ^{IV} ;
Improvement of safety systems in vehicles	Equipping the vehicles with modern safety devices ^V ; The implementation of obligation of using devices blocking the vehicle start-up for professional drivers in cases when alcohol content in exhaled air exceeds	The implementation of supervision on proper use of obligatory safety devices installed in vehicle (e.g. child safety seats);	Popularization among the car owners of modern vehicle safety systems;

I. *System of education* included in whole within the *System of road safety management* (tab. 9.1)

II. *System of promotion* included in whole within the *System of road safety management* (tab. 9.1)

III. Including the popularization of the significance of lighting on the road safety and promotion of better quality lighting.

IV. *System of education* for road safety staff, included in whole within the *System of road safety management* (tab. 9.1)

V. Including systems to raise the safety of vulnerable road users, such as automated braking systems, external air bad.

Rescue service and post-crash response. Rescue service are the activities taken up under conditions of sudden or extraordinary danger to life and health, and also to property and environment, performed immediately. The main characteristics of rescue service are the suddenness of the incident preceding the action, for example, of the forces of nature or human, and the urgent course of reaction. Among numerous rescue fields, medical rescue service and post-crash care process are essential for the road safety, because they concern the health and lives of the injured, and, what is more, they require the involvement of many parties.

More detailed information on The Polish National Road Safety Programme 2013-2020 are presented on website of the National Road Safety Council (<http://www.krbrd.gov.pl/en/>).

I am also glad to inform you that accordingly to the request from National Road Safety Council the Motor Transport Institute established Polish Road Safety Observatory and is its operator.

I would like to wish all of you a good co-operation and fruitful exchange of knowledge during this very important scientific international ESV conference being one of the important bases for improvement of everyday life - improvement of vehicle safety and thus road traffic safety.