Analysis of the Municipal Traffic Safety Programme Execution - Vsevolozhsk district (including the town of Vsevolozhsk), the Leningrad Region, 2011-2012 (9 months)

Content

Some Definitions related to the work

Programme - a sequence (of stages, actions, projects) ordering according to an algorithm of transition from the current condition to a desired one, responding to the objective assigned.
Objective - an assigned condition, desired result for a team to achieve working together. Objectives are outputs of a planning process.
Planning - a process to select objectives and make decisions of steps to achieve the objectives.
System – self-sufficient structure, created with a certain objective and consisting of interrelated and complementary components, existing rather independent and sustainable, being evolving in answer to changes.
System approach – a methodology based on consideration of subjects as systems in their integrity and diversity of relations within a united theoretical picture. Principles of the system approach are underlying for many fields: management, ecology, finance, transport, medicine, etc.
Safety - an ideology of a system to minimize risks, which threaten the system balance.
Road traffic – an dynamic **system**, where components «Human», «Vehicle», «Road and its surroundings» are in interaction.
Risk - a probability of occurrence of unfavorable event (**accident**) in a system, which threaten the balanced system functioning.
Accident – unfavorable event in a system because of technical failures, external impacts or **human actions**, effecting system unbalance. Usually accidents are results of accumulating defects and mistakes, which increase risks up to critical quantities, when small external impact results in accident.
Road traffic accident rate – indicator of accidents (failures) have been occurring in the system "Road Traffic".
The main task of safety – to support balance of system components and prevent appearance of accident risks (prophylactic).
Prophylactic - arrangements to support functionality of a system with elimination of factors with negative influence on the system components.
Mechanism of social leveling - a managed process to increase number of people adopting certain rules of behavior (for example, observing traffic rules) till critical majority, which transform the behavior into a social norm. Minority of people rejecting the norm of behavior become subjects of social censure, which make them gradual leveling their behavior according to the norm. The period of the critical majority increasing is the most difficult, demanding intensive activity to promote the desirable model of behavior through all channels (informational campaigns, films, advertisements, demonstration of right behavior of respected public people). The most effective way to increase the critical majority - is a sum of "addressed" impacts on target groups instead of general appeals «without concrete addresses».

Analysis of the Traffic Safety Programme Execution of the Vsevolozhsk District, 2011 - 2012 (9 months)

Preamble

The Russian community goes through the complicated period - rising level of motorization causing unavoidable consequence - increase of road traffic accidents risks.
The period of vehicle fleet was difficult in all countries. The main reason of the difficulty was similar - delay of authorities and bodies responsible for traffic safety from changes. Characteristics of the period, reasons of accidents and main directions to act according to recommendation of international practice in order to decrease the national costs of the period see in **Annex 1** «Characteristics of the motorization growth period and main directions to curb community costs caused with road traffic accidents».

Tasking

The Task: Analyzing execution of the municipal Traffic Safety Programme of Vsevolozhsk District, 2011-2012 and proposals to develop an appropriate traffic safety programme on the period of 2014-2020.

Methodology to solve the Task

The guiding vector of the task solving is **innovative**, consisting of applying the universal scientific approach to solve the practical task of the municipal level - analyzing execution of the Traffic Safety Programme of the Vsevolozhsk District, 2011-2012 and following development of the programming (2014-2020).
As known, the "technology" of scientific approach consists of the following steps:

1. **Analysis** of the subject (the Programme 2011-12) with its separation into components;
2. Selection of the components, which can be improved;
3. Deep analysis of the selected components and search for solutions to make improvements;
4. **Synthesis** of the deep analysis results into an integrated **system solution**.

Table 1 includes explanations of the terms «**analysis**» и «**synthesis**» with examples related to the road traffic safety practice.

Table 1 Explanations of the terms «analysis» и «synthesis» with examples related to the road traffic safety practice

Term	Explanation	Example
Analysis	An operation of dividing the Subject (Problem) into components in order to explain integral and complex Subject as a sum of more simple explanations. **A problem** - integral cause of some effects, which shall be identified, because **a problem solution = a sum of impacts onto the effects**. **Conclusion:** The more exact identification of the effects, the more exact impacts to eliminate the effects, the better integral result of the	**Road traffic accidents** (the Problem) is a failure in the dynamic **system**, integrating components «Human», «Vehicle», «Road and its surroundings». In order to eliminate the Failure, it is necessary to: 1. Identify failures (defects) of every component and faults of their interactions; 2. Select proper solutions and instruments (or develop them) to correct defects and eliminate faults.

	problem solution.	
Synthesis	An operation of assembling the previously separated, analyzed and improved components into an integral unit of **new quality**. **Conclusion:** The synthesis of a subject of better quality is impossible without previous analysis of old subject (Problem).	3. Assemble improvements and instruments into system solutions with traffic safety programming; 4. Correct defects and eliminate faults with addressed and coordinated projects (black spot elimination, campaigns to improve safety of driver's behavior); 5. Evaluate the integral result of the Problem solving (new quality) with comparison of indicators (statistics of accidents) "before" and "after".

Practical solving the Task demands a logical order of activities. The logical order is presented in the **Table 2.**

Table 2 The logical order of activities to solve the Task "Analyzing execution of the Traffic Safety Programme of Vsevolozhsk District, 2011-2012 and proposals to develop a programme on 2014-2020"

Activities	Logic of the Activities
Activity 1. Identification of components for analysis and criterion for quantitative assessment	The components are identified following the international practices. The practices are explained with **References** and **Conclusions**, adapting the international experience to the Russian conditions. The Conclusions are used to produce **Findings 1**, identifying components to analyze execution of the municipal traffic safety programme of Vsevolozhsk District, 2011-2012.
Activity 2. Analysis of Information by Components	The information available is allocated by components. The component allocated information is analyzed with certain criterion. The Conclusions are used to produce **Findings 2** concerning execution of the traffic safety programme of Vsevolozhsk District, 2011-2012.
Activity 3. Synthesis of outputs (Activities 1,2) into Proposals	The outputs of the Activities 1, 2 (Conclusions and Findings) are assembled to produce **Proposals** for developing the actualized traffic safety programme of Vsevolozhsk District for the next period of 2014-2020.

The technological order to solve the Task is presented with the **Table 3.**

Table 3 The technological order to solve the Task "Analyzing execution of the Traffic Safety Programme of Vsevolozhsk District, 2011-2012 and proposals to develop a programme on 2014-2020"

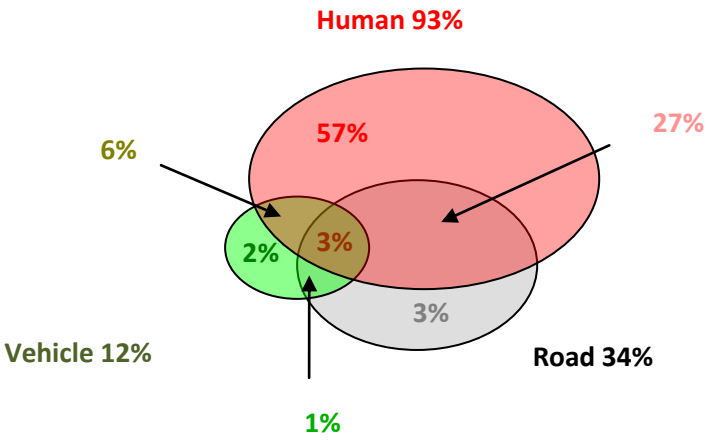
<table>
<tr><td colspan="3">Activity 1
Identification of Components to Analysis</td><td colspan="2">Activity 2
Analysis of Information by Components</td><td>Activity 3
Synthesis of Outputs (Activities 1,2) into Proposals</td></tr>
<tr><td>Review of the international practices</td><td>Adaptation of the international practices to the Russian conditions</td><td rowspan="7">Finding 1 after identification of the Components and Quantitative Criterion to analyze the Traffic Safety Programme execution, 2011-2012</td><td>Analysis:</td><td rowspan="7">Finding 2 after results of analysis the Traffic Safety Programme execution by Components</td><td rowspan="7">Proposals to develop a Traffic Safety Programme on the next period of 2014-2020
Outputs 1,2 = Conclusions (1-8) + Findings (1-2)</td></tr>
<tr><td>Reference 1</td><td>Conclusion 1</td><td rowspan="2">Analysis - Component 1
Conclusion 7</td></tr>
<tr><td>Reference 2</td><td>Conclusion 2</td></tr>
<tr><td>Reference 3</td><td>Conclusion 3</td><td rowspan="2">Analysis - Component 2
Conclusion 8</td></tr>
<tr><td>Reference 4</td><td>Conclusion 4</td></tr>
<tr><td>Reference 5</td><td>Conclusion 5</td></tr>
<tr><td>Reference 6</td><td>Conclusion 6</td></tr>
</table>

Activity 1: Identification of Components for Analysis and Criteria for Quantitative assessment

Reference 1 Components of the system «Road Traffic» and ratio of risks, caused with the components

The German studies discover: the number of accidents with presence of "Human factor" reaches 93% (See **Picture 1**), in that:

- 57% - accidents, caused by human behavior is the main factor (e.g. alcohol, over speeding, fatigue);
- 27% - accidents, caused by the combine factor - fault of interaction Human/Road (e.g. misunderstanding of traffic signs or road situation);
- 6% - accidents, caused by the combined factor – fault of interaction Human /Vehicle (e.g. interference of driving skills);
- 3% - accidents, caused by complex combined factor - fault of interaction Human/Road/Vehicle (e.g. young driver drives new car on unknown slippery road in darkness).



Picture 1 The ratio of road traffic accident risks and their combinations (information of the German Ministry of Transport, 2002). Studies made in other countries give results, comparable with the German ones.

The risks caused by components «Vehicle» and «Road» are subjects of regulation with standards.
The risks caused by components «Human» are out of standards and require **innovation solutions** (See **Reference 2**). Human behavior in different conditions (congested traffic, physical and psychological stresses, weather difficulties and etc.) depends of personal experience, age, health condition. No doubts that in the dynamic system «Road Traffic» **the most vulnerable component is "Human"**.

Conclusion 1: Maximal accident risks in the dynamic system «Road Traffic» are caused by the «Human» factor. Assessment of the risks is difficult because impossibility "to standardize" human behavior and necessity in additional researches and delicate innovative "instruments" to manage factor "Human".
It is known that accident risks caused by factor "Human" are increasing in the period of motorization level rise. Relatively, elimination of the accident risks of the period is required additional efforts and new instruments implementing**.**

Reference 2 Logic to cope with road traffic accident risks

The logic supposes that **actions** to cope with the risk factors, generating the Problem of road traffic accidents, shall be **proportional to the ratio of risks**. The risk ratio is known (See **Reference 1**).
In order to solve the road traffic accident problem the risk ratio demands **maximum of actions** shall be targeted to developing **a safer model of transport behavior** of road users.
Though, besides the quantity of activity, **quality of activity** has critical importance. The quality of activity is determined with **interpretation** of the factor «Human» in the context of the road traffic accidents.

The world practice shows, the interpretation of the human factor depends on qualitative changes in the community when motorization. The most important qualitative changes is “maturing” of the community to implement system activities to manage road accident risks (See **Reference 3**).

The last three decades of rising motorization and improving understanding of road accident nature changed the interpretation of the human factor in road traffic accidents. The most **principle effect** was **significant shift of responsibility for road accidents from road users to professionals** (engineers), responsible for safety of **road infrastructure** and **vehicles**.

The **Table 2** presents the difference of the human factor interpretations in road traffic accidents in practices the motorized countries and Russia.

Table 2 The difference of the human factor interpretations in road traffic accidents in practices the motorized countries and Russia

Interpretations	Effects
The Russian variant: The most number of road traffic accidents are caused with human **GUILT**	Relatively, efforts to decrease number of accidents are mainly concentrated on: • **detecting** the road users guilty for violations and their **penalties;** • propaganda, information and training aimed to improving **observance of traffic rules**. The main actors are: road police guided with the objective - to detect violations, to penalize road users guilty of violations and promote safety in order to **predict violations**. Indicators: accident statistics produced by the road police - numbers of fatalities and casualties. The task of propaganda is to change attitude to safety through **change of awareness** of road users. The task is too general, large scale and unsolvable practically. **Note:** It is known - change of awareness takes place when change of personal world-view coming with age maturity and formation of value system. Sustainability of the value system is a base for self-control (also when driving), excluding necessity of stimulations and penalties. Achieving the self-control of 100% of road users is utopia (as minimum, because of their age differences).
The variant of the countries-traffic safety leaders with high level of motorization: The most number of road traffic accidents are caused with human **MISTAKE**	Relatively, efforts to decrease number of accidents are concentrated on: • **predicting mistakes** of road users through identification of reasons, provoking the human mistakes effecting accidents. The main actors are: road industry, NGOs, educational institutions, road police united with the common objective – save leaves and health of citizens. Acknowledgement “a human mistake is the reason of accidents” determines the enemy - **a risk of mistake**. The enemy is concrete and can be defeated with known **methods**. The subjects of impacts are specified risk groups with certain characteristics. Indicators: statistics of accidents from community point of view (numbers of fatalities and casualties supported with social and economic assessments). **Note:** The task of risk management is concrete and «workable» and a set of tools is increasing due to practical lessons and researches in many disciplines (psychology, medicine, engineering, pedagogy). Big input provides bringing experience from other industries, where risk management is a part of productive process within safety audit (example - power engineering).

The principal difference of the human factor interpretation in the road accidents in the practices of the motorized countries and Russia, relatively, determines the principle difference in the **road traffic safety ideologies and methods**, applying in order to decrease the number of accidents.

Conclusion 2: The motorization rise and improved understanding the road accident nature change in principle the interpretation of the factor «Human» in the dynamic system «Road traffic»: **responsibility for road accidents is shifted from road users to professionals**, responsible for safety of **road infrastructure** and **vehicles**.
The practice of successful motorized countries proves that **revision of the road traffic safety ideology** is a **start point**:

- to change **attitude** of professionals to road accidents;
- to stimulate **innovations** in many sectors to accelerate out of accident crisis;
- to **encourage cooperation** of authorities, business and NGOs to achieve the common objective - decreasing risks of fatalities and casualties on roads.

Reference 3 Stages of a community readiness to system activities on accident risk management

Improving road traffic safety is a process, including three levels of evolution:

1. Beginning - **signals** of the problem (**information and statistics**, **benchmarking** - comparison of the national accident statistics with the statistics of other countries);
2. The signals attract attention of **professionals**, forcing them to activities;
3. The professionals involve mass media, which attract attention of **public** to the problem, forming **public opinion** in favor of safety, which **forces the authorities** to solving the accident problem.

The process is developing step-by-step. It is impossible to step over any stages of the process. Though, it is possible to accelerate the process with adoption of the best practices.
The **Table 3** indicates the characteristics of a community readiness to solve the road accident problem.

Table 3 The stages of a community readiness to solve the road accident problem

The stages of readiness	**Indicators of a community readiness to solve the road accident problem**
Stage 1	Lack of awareness of road traffic safety importance to the community prosperity. Accident data collecting is out of system approach, databases are primitive and fragmentary. Trends and target risk group are not studied. Interest of the government to the problem is low, though some concerned public people bring up the accident topic. The number of engineers, able to analyze the problem in a system approach, is low. Traffic safety professionals of the international level are absent. Media pays attention on sensational accidents only (with famous people killed or many victims) without professional conclusions of the accidents reasons. The conclusions are replaced with sentence of the types: «Seems it is the fate», «Bad luck», which refer road traffic accidents to misfortune being out of human will to prevent. The community is not ready to the accident problem solving.
Stage 2	The government admits the importance of the road traffic accident problem, but does not include its solving into a list of the national priorities. Separated databases of different authorities exist, but their integrated analysis is not possible. There are processes are going on: to form groups of professionals and public directed toward road safety; to establish Road Traffic Safety bodies, which, however, are not able to effective functioning. Some authorities are periodically active into the accident problem solving guided with motivation “to do something”.

	Some politicians include the topic of road accidents into their programmes, suggesting solutions, which are out of any system professional approach and, because of this are ineffective. Media brings up the road accident topics more and more often, particularly after noticeable accidents, and some institutions (e.g. universities) make some researches on certain issues. Social tensions because of growing number of traffic accidents increases. Importance of some measures (e.g. penalties for violations of traffic rules) is overstated, but same more effective measures are ignored (e.g. elimination of risks for pedestrians with better street lightening or road crossing facilities, traffic flow channeling). The community demonstrates the first signs of maturing in order to solve the road accident problem.
Stage 3	The national government demonstrates signs of real concerns with the accident crisis and admits necessity to attract external expert assistance. The most progressive-minded politicians and public people arrive at awareness of their own responsibility for traffic safety and demonstrate the model of safe traffic behavior. The accident databases are developing, road safety specialists improving their professionalism in accordance with up-to-date knowledge. The activities are started to identify: ▪ "Black spots" on the road network with analysis of accident reasons and addressed measures to eliminate the accident risks; ▪ Risk groups of road users. The National Traffic Safety Programme is accepted and the National Council (Commission) on Traffic Safety coordinates the Programme implementation, assisting to the Council (Commissions) of regional level to implement the regional TS Programmes. Road engineers and officials of Road administrations obtain sufficient professionalism to make economic assessments of traffic safety measures and identify the potential accident risks from road user point of view. NGOs are active to promote road traffic safety among the risk groups. The NGOs participate in the following works in a system way: • Elimination of risks for vulnerable road users (pedestrians, children, elderly people, disabled people); • Assessment of legislative acts, normative requirements and standards affecting safety of urban areas; • Involvement of public to participate in transport planning; • Training of drivers. Quality of vehicle inspections is improved with implementation of new technologies. Provision of road infrastructure with traffic safety furniture is increased (traffic calming, equipped pedestrian crossing and underpasses, etc.) More and more road traffic safety professionals are respected with international professional society. Studies and pilot projects introduce the best world practices being implemented by international professional teams. Responsible authorities, business and NGOs cooperate to achieve the common objective to decrease the number of road fatalities and casualties, which is stated by the national government clearly. Media are able to give information related to road traffic safety and promote the safety in a professional way being guided with the objective - to form public opinion in favor of safety as the most important value for developed motorized community. The community is ready to solve the road accident problem in a system way.

Conclusion 3 The recommendations of the world experts for the countries, which are not ready to solve the road accident problem in a system way, are - to concentrate efforts onto solving the following prioritized tasks:

1. **to inform public** of the road traffic accident problem in order to form awareness of safety as the most important value. In this context the professionalism of media to promote safety is an issue of critical importance;
2. to implement potential of **simple, inexpensive and addressed measures**, which are able to decrease significantly the number of fatalities and casualties through elimination of:

- Severity of injuries in the issue of accidents (safety belts, car chairs for children, bike helmets);
- Accident risks for the most vulnerable groups of road users (reflectors, traffic calming).

IMPORTANT! In order to achieve SUSTAINABLE SAFETY of road traffic it is critically important to realize that the problems of road accidents must be solved before the road network extent. Extending unsafe road network in the community not ready yet to solve the road accident problem in a system way will result in growth of fatalities and casualties and related costs of the community breaking its economic and social development.

Reference 4 The list of obstacles to attract public attention to the road traffic safety problem

Table 4 introduces obstacles to attract public opinion to the road traffic safety problem.

Table 4 The obstacles to attract public opinion to the road traffic safety problem

Obstacles	Reasons	Effects
1.Weak interest of media to the road traffic accident problem	Losses of a road traffic accident looks incomparable with losses of accidents of air, railway or waterway traffic. Such comparison does not show accidents enough impressive to attract attention of media.	Losses of road traffic accidents as a total sum of the accidents do not come up the public attention, being known in narrow administrative circles only. **The real scale of the national accident tragedy do not realize in full by the public**.
2.Deficiency of statistics and absence of accident cause analysis	No analysis - no understanding of real reasons of accidents. This leads to perception of accidents as occurrences taking place because of unlucky fate, which is out of human will.	The activity to improve road traffic safety is limited with inert usual actions to demonstrate to public that something is doing for safety. The target tasks to decrease concrete accident risks are not set. The risks are out of professional management. **The accident problem has no addressed, effective and efficient solutions.**
3.Benefits of an accident interpretation as an occurrence because of unlucky fate or bad habits of road users	Interpretation of accident with unlucky fate or bad habits of a driver (persistent violator of road traffic rules) is rather easy. This makes free from professional responsibilities many of those, who contribute much more into high accident risks (drivers' school with their out of date programmes of training, advertisings and film producers, politicians and public people	The examples of avoidance of professional responsibility present road planners and designers, building and maintenance contractors. They protect themselves with standards, despite some of them are out of date because were developed for low levels of motorization on the base of physics of single vehicle. High levels of motorization demand upgrade the standards in accordance with physics of traffic flows. The modernized standards and roads never will be **offered**, if **the community (the End**

	demonstrating unsafe models of behavior).	**User) does not demand safety of the road network** from the road industry - **producer of the product**.
4.Deficiency of information concerning economic losses of the community caused with road accidents	Absence of public information in media concerning economic losses of the community caused with accidents and benefits of decreasing the accident number.	**Absence of economic assessments** does not allow to see that road safety is super beneficial investments for a community, which save resources of the community (human, financial, material) and open new economic opportunities. **No economic assessments - no proved justification to sufficient investment into road safety.**
5.Populism	Traditionally politicians support implementation of large scale and noticeable projects, because such projects create them image of big progressive reformers.	Address, concrete and inexpensive arrangements to decrease accident risks for pedestrians on road black spots, look rather modest in comparison with the gigantic road reconstruction projects. They cannot bring political dividends. Therefore the projects to improve safety of **existing roads, which are the most effective for the community, usually are not politically supported** by mayors, governors, etc.
6.Corruption	Projects of large -scale road construction or reconstruction represent strongly lobbied huge resource-demanding activities with implying “benefits”.	Interest of the road construction lobby is weak to the small size projects to improve safety of existing roads, which are not resource demanding, but demanding better professionalism. Therefore the road safety projects are **forced to the end of the turn for financing.**
7.Weakness of basic resources	The basic resources, needed to system activity to eliminate road traffic accident risks, are weak, namely: 1.Information (see in the Table above), 2.Professionals (absence of some specialists), 3.Technologies (out of date safety principles and methods), 4.Materials (lack of road safety furniture, reflectors, vests, etc.), 5.Financing (see reasons in the Table above).	The example of the resources deficiency: In order to start the **mechanism of social leveling** it is necessary to achieve **critical majority** demonstrating the **safe model of behavior**. The majority is achievable through **differentiated influence on the risk groups.** Implementation of the differentiated influence demands: 1.Identification of the risk groups (researches), 2.Informing representatives of the risk group (methodology selecting, planning, organizing and implementing of actions in a professional way), 3.Control of results achieved with cost-benefit analysis. **The weakness of basic resources does not allow carry out the system activity and, therefore, does not allow achieve the desired result** - the improved safety of behavior model for the critical majority.
8.Conflict	Road infrastructure	Improvements to eliminate accident risks

safety/speed	improvements to eliminate accident risks and improve fluency of traffic flows, always calm traffic speeds. As usual, an uninformed driver considers speed as a prioritized value against safety. The reason is lack of awareness the relation "dose-effect", such as "high speed and its destructive kinetic energy - destruction of a vulnerable human body with small doses of kinetic energy".	meet negative attitude of some drivers, first of all, those of risk groups (young, inexperienced, characterizing with nonrealistic optimism concerning their driving skills or rights, etc.), who are far from awareness of real accident reasons. Many politicians are followed with electorate belonging to risk groups, instead of guidance with principles arising from scientific conclusions and the best practices of the successful motorized countries.
9.Existing of departmental frames	Departmental frames do not allow think wider, cooperate and coordinate activities with neighbor authorities to achieve more significant results through common efforts.	Separated activity without system approach, as it known, always decrease: 1. **Effectiveness** of activities to mitigate accident risks, 2. **Efficiency** of activities implemented.
10.Missing Partnership	Absence of good examples of partnership of authorities, business and NGOs aimed to achieving **the common objective** - decreased number of fatalities and casualties because of road accidents.	**Absence of possibility to accelerate solution of the accident problem**, which is possible only with united efforts in order to: • firstly - to stop the negative dynamic of accident number growth; • then - to break the situation in favor of sustainable process of decreasing the accident number, despite the rise of motorization level.
11.Missing the national objective and political will	Missing the **objective set**, clearly stated by the national leaders and supported with **assignment of responsibility** for the objective achieving.	**Absence of «guiding vector»** able to direct separated "players" and organize them into a powerful, object oriented national team, "able to win".

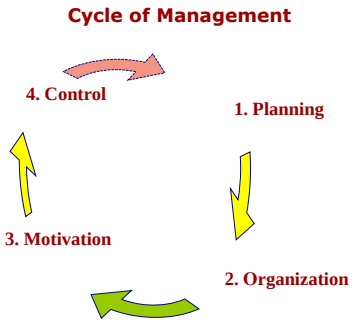
Conclusion 4: Existing obstacles to attract public opinion to the road traffic safety problem **slow down** processes to:

- achieve **readiness of community** to solve the accident problem in a system way;
- accumulate the **critical majority** of citizens to introduce the safe transport behavior model as **a social norm**.

The important function of actions to eliminate the obstacles is **motivation** of the community to solve the road accident problem (See **Reference 5**).

Reference 5 The universal management «conveyor»

«Technology» of management is universal and consists of four functions in continuous sequence (See **Picture 2**).



Picture 2 The Cycle of Management, which in time context can be better presented not like a moving circle, but spiral lifting

The **Table 5** presents contents of the functions forming a cycle of management**.**

Table 5 The content of the functions forming a cycle of management

Function	Content of the management functions
Planning	**The start function**, which includes data collecting, their processing and analysis, forecast of tendencies, identification of risks, taking into consideration the lessons learnt, development of solutions, cost/benefit and impacts assessments. Decision making to select optimal variant, prioritization and action planning, resources planning. Planning is the most important stage of management, which quality determines the most of future risks will or won't occur, success or failure of the following functions of management. Practice shows that the main reason of projects failure is insufficient planning (something is forgotten, not taken into consideration, underestimated, overestimated, etc.). **Sufficient information and professionalism and experience** of planners are critical precondition and **foundation of success** of an Activity to be managed.
Organizing	**The function of all the resources mobilization**, defined with planning. Organizing is operative activity to accumulate necessary resources (information, professionals, technologies, materials and finance) in a certain places and times to provide **fluency of implementation** of the planned Activity (project, programmes, etc.). **Good organizing skill of team leaders** is a critical precondition to implement the function and **contribute to success** of the Activity.
Motivation	**The function of encouragement** for productive work, cooperation, team spirit. Motivation function includes setting of objectives, good vertical and horizontal communications, explanation of tasks, encouragement to innovative thinking and other stimulation to develop and open potential of human resources. **Leading skill of managers** is a critical precondition to implement the function and contribute to **sustainability of success** of the Activity.
Control	**The function of analysis of effectiveness and efficiency** of the Activity implemented. Control function is identification of omissions, proposals to correct the situation and exclude repetition of mistakes when planning the next cycle of management. **Analytical skill** is a critical precondition to implement the function and **contribute into management improving**.

This universal technology of management can be adapted to solution of any task, for example such as **"Road Traffic Accident Management"** to decrease the number of fatalities and casualties (See **Reference 6**).

Conclusion 5: Success of complex problem solving depends on **quality of management**, which demands:

- Observing the functionality of the management "conveyor" cycles: **planning - organizing - motivation - control** when every cycle of management;
- Provided **functionality** of every chain of the "conveyor" (management function);
- **Coherence of the cycles** through analysis of lessons learned after every cycle completed and before implementation of the next one.

Reference 6 Road Traffic Risk Management

Risk Management - is a continuous process to mitigate probability of undesired events approaching, through analysis of the probabilities and measures to prevent the events or minimize impacts of the events. The risk management is introduced into many types of activities (e.g. energy supplying, financing, air transportations, etc.).

The "technology" of the risk management consists of continuous sequence of the known functions of management:

1. Planning (data analysis, classification of information, forecasts, assessments, prioritizations. As usual, specialized instruments are used to deal with huge amounts of information. Their function is to support system approach when activities planning. Example of such an instrument is Haddon Matrix enclosed in **Annex 2**);
2. Organizing (implementation of activities according to the priorities: **preventive** activities; activities to **minimize severity** when accidents, which were not prevented; activities to **eliminate impacts** of the accidents);
3. Motivation (facilitation of coordination, data change, cooperation of participants);
4. Control (monitoring of effectiveness and efficiency of activities implemented, in order to obtain lessons and introduce improvements).

Table 6 explains the mechanism of Risk Management implementation.

Table 6 The mechanism of Risk Management Implementation adapted to tasks of road traffic accident risk management

Stages	Implementation principles
1. Identification of risks	1) **Risk classification** (human, vehicle, road) 2) **The current situation fixing** (indicators, supporting conditions - winter road, darkness) breaking the accident data according to the classification (e.g. over speeding, poor road pavement, ignored safety belts, etc.) 3) Analysis of risks and their reasons (**risk audit**), e.g. defects of road planning, design, building or maintenance. 4) Development of **proposals** to eliminate the reasons, which increase the accident risks.
2. Obligatory of permanent risk management	A **political decision** shall be made on an official level concerning introduction of the risk management for all the identified "risk generators" (e.g. risk groups of users, road section "black spots").
3. Regulation of Risk Management procedures	1.A determined responsible body on Risk Management starts from the current fixed risk level, shall introduce the whole risk audit process (monitoring, identification of new risks, risk forecasting, proposing improvements). 2.The establishing the Risk Management system shall be **officially approved on the highest** level of a body (a project or organization), which establishes the responsible unit. 3.Methodologies and regulations of the risk management process and order of their upgrading shall be described in documents.
4. The risk	The unit on risk management shall be **independent** from units, which might be involved

management unit independence	into risk generation. E.g. monitoring of risks caused with fatigue of drivers shall not be delegated to units, responsible for control of work/rest regime of drivers.
5. Development of skills and professionalism	Specialists involved into risk management, shall have possibility to **improve their qualification and practical experience** in risk management to improve effectiveness of their professional activity on the base of the best world practices.
6. Collective nature of risk management	A collective body shall act in the structure of executive power (commission, council), which identify **policy of risk management for the system in a whole**. This body is a platform for discussions of system combined risks, which require interdisciplinary coordination and common decisions.
7. Keeping records	Decisions of the collective body responsible for the system risk management and decision of other bodies (experts) on risk management are **subjects of control**. All minutes with decisions made, as well information to justify the decisions, shall be kept during long time.

Conclusion 6: Changing the interpretation of the factor "Human" and acceptance of a **human mistake** as the main reason of road traffic accidents have defined "the enemy" - **risks** (probability) **of road users' mistakes**. Introducing the risk conception has principal importance, because it significantly **move accents** from "those, guilty for the traffic rules violation" (**already made**) and **general appeals** to observe traffic rules to **concrete actions able to prevent the violations** and minimize their effects within the **system of risk management**.

There are separated fragments of risk management in the Russian practice, but they "live" in different authorities and organizations. This fragmentation makes obstacles to:

- Form **a system** of road accident risk management;
- Develop **balanced programmes**, providing adequate impact onto all the risk factors and good management of the activity of the risks'elimination;
- Use efforts and available resources **the most effective way** to decrease the number of accidents and related social and economic losses of the community.

The Finding after results of the Activity 1

Rise of the motorization level makes community change in quality and makes more strict demands to authorities responsible for road traffic safety.

More strict demands make authorities cooperate and look for solutions in partnership with science, business, NGOs sharing responsibilities for results.

The way is passed by many countries with more long experience of motorization. Their experience proves: success of the accident problem solving depends of a community's abilities to:

- Unite efforts and **resources**;
- **Balance** the efforts and resources in proportion to risk factors (human, vehicle, road);
- Use the resources **the most effective and efficient way** with assistance of the **system of risk management**.

Criteria for quantitative assessments

The analysis of RESOURCES, allocated to the purpose of decreasing the number of road traffic accidents in the Leningrad region, is limited with consideration of the resource "**financing".** The reason is availability of the data for analysis. The data available are analyzed by the following criteria:

1. **A BALANCE** of resources allocation when the Traffic Safety Programme (2011-12) implementation in relation to the proportion of risk factors contributing to road accidents;

2. **A PRESENCE OF RISK MANAGEMENT COMPONENTS** in the process of the Traffic Safety Programme implementation.

The analysis is made on the pilot base of the Vsevolozhsk District (including the town of Vsevolozhsk) - one of the administrative-territorial components of the Leningrad Region locating near the EU/RF border.
The order of analysis, developed with the Vsevolozhsk pilot, can be applied to access execution of Traffic Safety Programmes of other districts of the Leningrad Region. The expected results of the standardized approach might be the following:

1. Comparability of results and possibility to compare activities of different districts;
2. Summarizing the district results and definition of general positive and negative tendencies when implementing Traffic Safety Programmes in the Leningrad Region in a whole.

Activity 2: Analysis of Information Available by the Components, Conclusions

The available material accessible for analysis of executing the Vsevolozhsk District Traffic Safety Programme (2011-2012) is limited with:

- Reports of the municipal administration of the Vsevolozhsk District, the Leningrad Region concerning executed activity plans of the long term object oriented Programmes to improve Road Traffic Safety in the Vsevolozhsk District in 2011 and 2012 (9 months).

The limitation of data available allows make preliminary **Conclusions on the base of quantitative indicators** (allocation of the resource "financing"). Quality evaluation of the activities executed within the Programme is not possible at the stage, because of data insufficiency.
More data, relatively, allows:

- Correct Conclusions of the quantitative analysis;
- Add Conclusions concerning quality of the activities executed;
- Complete the list of proposals to programming for the next period of 2014-2020.

2.1 Analysis of a BALANCE of the Programme resources allocation in relation to the accident risk factors proportion

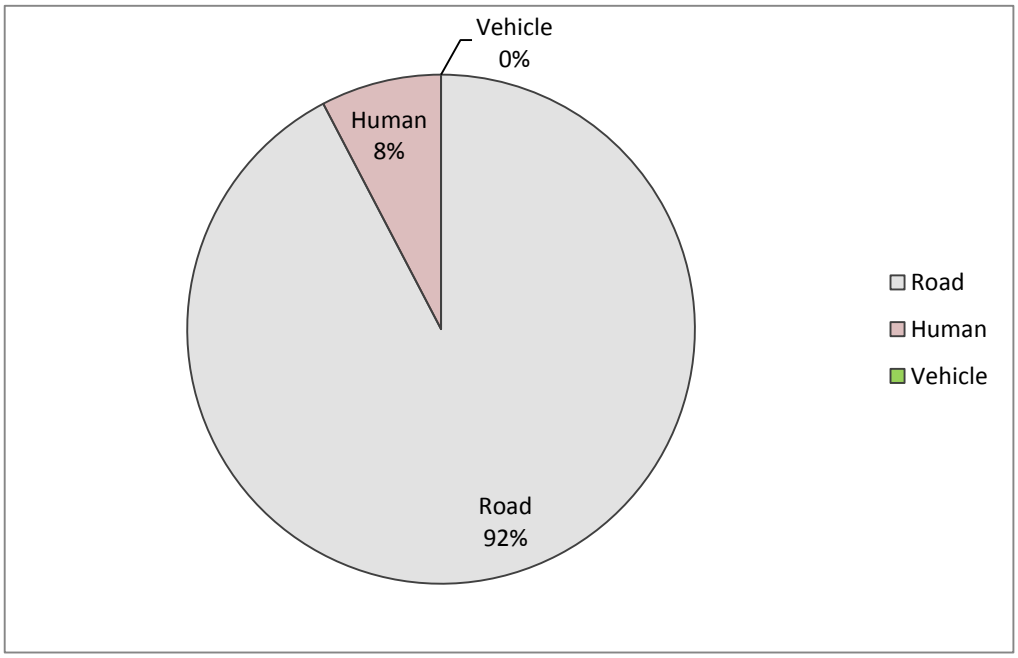
The **Table 7** shows breaking down the reported data of the resource "financing", allocated for implementation of the Traffic Safety Programme in the Vsevolozhsky district in 2011-12 (9 months) in order **to react on the road accident risk factors**.

Table 7 Breaking down the reported data of the resource "financing", allocated for implementing the Traffic Safety Programme, the Vsevolozhsky district, 2011-12 (9 months) in order to react on the road accident risk factors

Road		**Human**		**Vehicle* (Note)**
Activities, №	Allocated resources, th.rur	Activities, №	Allocated resources, th.rur	The factor "Vehicle" is controlled, mainly, by vehicle producers, transport operators and a system of technical inspections. The local self-governing, though, **can manage** the risk factor also through impact on transport choices of the population by means of balanced policy of so called **"pulling" public transport usage and "pushing" personal car usage**. The result of the
2.1	360.0	3.1	314.04+276.753	
2.2	3431.5+2471.5	3.2	0	
2.3	600.0+660.3	3.3	0	
2.4	832.0+116.8	3.4	30.0	
2.5	429.0	3.5	0	
		3.6	0	
		3.7	60.0+40.0	
		3.8	10.0+10.0	

Sum	8901.1	Sum	740.8	policy implementation is decreased accident risk with cars. The legislative base for the policy in Russia is provided with the federal law N 131 «Concerning grounds of local self-governing».
Totally	**9641.9**			

The data of the **Table 7** are interpreted graphically with **Picture 3**.



Picture 3 Breaking down the resource "financing", allocated for implementing the Traffic Safety Programme, the Vsevolozhsky district, 2011-12 (9 months), %

The diagram updating

Changes of reporting concerning the Vsevolozhsk TS Programme 2011-12 (9 months) execution shall be made in the inserted Excell table (click on the diagram) and correct the tabled data. The updated diagram will change automatically.

Conclusion 7: The **analysis** of a proportion of financing **to impact at the accident risk factors** in frames of the municipal Traffic Safety Programme (the Vsevolozhsk District, 2011-2012), displays evident **DISBALANCE:** the programmed resources are concentrated at the risk factor "Road", though the maximal risks are caused with the factor "Human".

Important: The required **BALANCE** of impacts shall be achieved without decreasing activities aimed to improving safety of road infrastructure, but with increased activities to impact on the factor "Human" through involving **additional resources** (information, professionals, technologies, material and financing) from the sources with their own potential and resources:

- **Public organizations**, which will work with risk groups;
- **Business** (driver schools, transport companies, producers of advertisements, films, clothes, accessories, etc.);
- **Educational institutions** (from kindergarten till universities) and **scientific agencies**;
- **Medical institutions** (maternity clinics, traumatology centre, etc.)

It appears from this: A demand to extend functions of Traffic Safety Programmes is evident. Such a Programme shall function rather as a **«platform»** to agree and coordinate activities of **increased number of participants**, than as an instrument to allocate the budget resources earmarked for traffic safety purposes.

The expected final result is **better balanced** impacts onto the all risk factors and **acceleration** of accumulation of the **critical majority** supporting the safe model of transport behavior as a social norm, when the social environment corrects unsafe behavior of minority (risk groups).

2.2 Analysis of a PRESENCE OF RISK MANAGEMENT COMPONENTS in process of the Traffic Safety Programme implementation

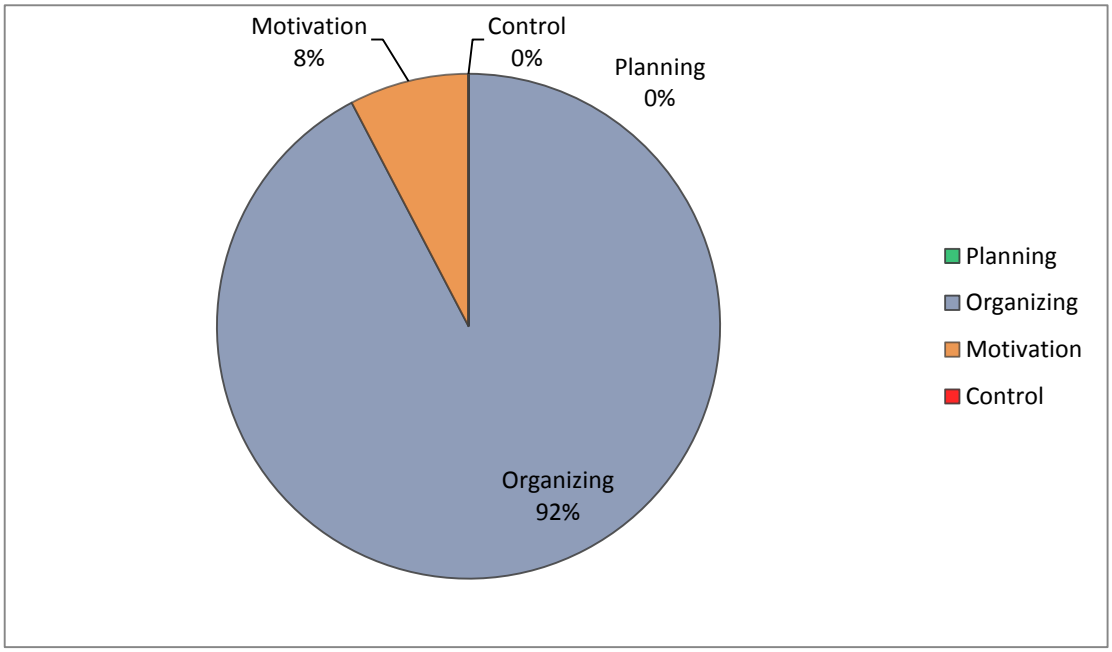
A **Table 8** shows breaking down the reported data of the resource "financing", allocated for implementation of the Traffic Safety Programme in the Vsevolozhsky district in 2011-12 (9 months) in order **to improve road traffic safety management**.

Table 8 Breaking down the reported data of the resource "financing", allocated for implementation of the Traffic Safety Programme, the Vsevolozhsky district,2011-12 (9 months) in order to improve road traffic safety management

Components of management, (functions)	**Activities № in the Programme**	**Resource allocated, th. rur.**
1 PLANNING	1.1 Summarizing best practices on Traffic Safety provision. Travels to other districts of the Leningrad Region, which have got positive tendencies of traffic safety provision for experience exchange. 1.2 Monitoring and accident forecasting ДТП on the roads of Vsevolozhsk District (planning purposes). 1.3 Organizing and conducting the Road Traffic Safety meetings of the Vsevolozhsky District (planning purposes). 1.4 Organizing interaction between Road Police Units, Administration of the District, public and other organizations on Road Traffic Safety issues and activities (coordinated activity planning).	Common efforts of organizations involved into the Road Traffic Safety Commission activity (institutional cooperation) No data available
2 ORGANISING	2.1 Modernization of the Automatised System of Traffic Management and street lights (traffic flow organizing). 2.2 Improvement of street lightening on potentially risky road sections (organization of better visibility of traffic flows). 2.3 Installation of fences on potentially risky street sections (traffic flows segregation). 2.4 Establishment of a system of routing with installation of street lights (improving traffic flow fluency). 2.5 Development and implementation of an addressed programme of humps installation near kindergartens и schools (traffic calming on potentially risky sections of streets and roads)	8901.1
3 MOTIVATION	3.1 Supplying the children educational units with packages of methodological materials and aids. 3.2 Conducting events, attracting information and advertise agencies to prophylactic events, informing on road traffic safety issues. 3.3 Social advertising. 3.4 Mass events in favor of preventing accidents with children. 3.5 Distributing reflectors among schoolchildren. 3.6 Improving qualification of teachers of schools and kindergartens. 3.7 Competition of young bicyclists "A Safe Wheel". 3.8 Competition of children creative handcrafts "Road and Our"	740.8

4 CONTROL	**Control** of results, analysis of mistakes made and lessons learnt in order to improve planning of the next programme is missing.	No data available

The data of the **Table 8** are interpreted graphically with **Picture 4**.



Picture 4 Breaking down the resource "financing", allocated for implementation of the Traffic Safety Programme, the Vsevolozhsky district,2011-12 (9 months) in order to improve road traffic safety management, %

The diagram updating

Changes of reporting concerning the Vsevolozhsk TS Programme 2011-12 (9 months) execution shall be made in the inserted Excell table (click on the diagram) and correct the tabled data. The updated diagram will change automatically.

Conclusion 8: The **analysis** of a proportion of financing **to improve traffic safety management** in frames of the municipal Traffic Safety Programme (the Vsevolozhsk District, 2011-2012), displays that:

1. the Programme attention is limited with two functions of managements - «Organizing" and «Motivation», despite functionality of managing "conveyor" requires continuous sequence of four functions - "Planning - Organizing -Motivation - Control". Excluding some of the functions or their discontinuous does not allow manage with the situation (in the context - with the accident risks) similar to an immobilized vehicle without full specified number of wheels.

The effects of the functional shortage are deficiencies of:

- "Planning", which is the starting and the most critical function for an activity. Therefore, success of an activity is hardly probable without a plan;
- "Control" which is the analytical function (evaluation of results, finding mistakes and neglecting to correct them and avoid in the future), which is critically important for the next Programme planning. This means violating the basic rule - No analysis of previous - no future success.

The final result is ineffective and insufficient using of the community resources.

2. The implemented functions are limited with:

- General activity without addressing to concrete risk groups, despite the practice proves that not addressed activities when risk management have low effectiveness and efficiency;
- Addressed events to target group "Children" only. Other risk groups, e.g. elderly people, are out of focus.

It appears from this: The first step shall be done to start the “managing conveyor” is identification of needs to eliminate the deficiencies of the Programme has been completed and including the related activities into the next Programme.
This work, executing within the international project, offers **a prototype of the analytic instrument** to:

- Introduce the function “Control” of results achieved with the municipal Traffic Safety Programmes;
- Prepare proposals to develop the function “Planning” for the next Programmes;
- Develop the function “Control” when data increasing to be analyzed.

The Finding after Results of the Activity 2

The analysis of the resource “financing” allocated on the municipal level to purposes of road traffic safety (the pilot is the Road Traffic Safety Programme of the Vsevolozhsk District, Leningrad Region) identifies the following needs of development:
1.Improving BALANCE of supporting activities directed to mitigate the road accident risk factors according to the proportion of the risk factors. The main direction to improve the balance is transforming Traffic Safety Programmes from their current status of instruments to allocate budget resources for safety purposes rather into **«platforms»** to agree and coordinate activities of **increased number of participants**.
An increased team of the Programme participants, sharing common objectives, will increase the resource “Financing” and **add** it with deficient, but critically important resources: “Information”, “Professionals”, “Technologies”, “Materials”.
The expected results:

A. Increased impact onto the main risk factor, causing road traffic accidents - “Human”;
B. Facilitated process of accumulating the critical majority in the Russian community, supporting the safe model of transport behavior, as a social norm.

2.Developing the missing functions of the “managing conveyor” to form the **RISK MANAGEMENT SYSTEM**. The task of priority is developing the function of “Control”, including analysis of mistakes and deficiencies.
This work, executed within the international Project, offers a **prototype** (versio 1) of an **analytical instrument** to implement the function “Control”. The improved function “Control” will contribute to improving the function of “Planning” to provide better effectiveness and efficiency of the next Programme, making it **more actual to the community**.

Activity 3: Synthesis of the Outputs of the Activities 1,2 into Proposals to Make More Actual the Traffic Safety Programme on Period of 2014-2020

The proposals to make the next Traffic Safety Programme for period of 2014-2020 are based on Conclusions, resulting execution of:

- **Activity 1** - Identification of components for analysis and criteria for quantitative assessment on the base of the world practices - Conclusions 1-6, Finding 1;
- **Activity 2** - Analysis of information available by the components - Conclusions 7-8, Finding 2.

All the **Proposals** are classified by the levels:

I. The updated principles to adapt the Russian System of Road Traffic Safety to high level of motorization;
II. The proposals to improve the Russian Traffic Safety Programming;
III. The proposals to improve effectiveness of the municipal Traffic Safety Programmes (the pilot example is the TS Programme of the Vsevolozhsk District, the Leningrad Region);
IV. The proposals to develop a methodology to assess Road Traffic Safety programmes.

I. The updated principles to adapt the Russian System of Road Traffic Safety to high level of motorization

When rapid motorization, it is **critically important** for a community, which is not ready yet to solve the road traffic safety problems in a systematized way:

A. **To update the safety ideology** of the system "Road Traffic", namely: to accept as the most vulnerable component of the system and main value of the community - **HUMAN** with characteristic **be mistaken**. When rising motorization the road traffic volumes overload the human psychic, increasing risks of mistakes leading to increased accident risks. Therefore **risks of mistakes** are a subject of **management.** The task is - to forecast probable mistakes of road users and act preliminary **to prevent** them.
B. **To unite efforts and resources** of a community in order to form a **united system of road traffic accident risk management**. The accident risks shall be managed before the road network extending. Extending the unsafe road network stimulates growth of traffic volumes/intensity leading to increasing numbers of accident fatalities and casualties.

II. The proposals to improve the Russian Traffic Safety Programming

The growth of motorization addresses more strict requirements to the authorities responsible for road traffic safety, creating needs to cooperate with science, business and public to solve the accident problem. The expected effect of the cooperation is sharing responsibilities for the results. The Road Traffic Safety Programme is and instrument to:

1. Coordinate activities of an increased number of participants, some of whom can input to the problem solving through their improved processes and with own resources, without the Programme financing. The example: Better control of professional drivers' fatigue in transport companies, instructing of young drivers on safer truck loading and freight fastening, introduction of motivation for safe work through annual bonuses, corporative safety rules accepting, etc. The Programme can include a seminar for the transport companies as a site to compare results, experience exchange, presentation of the best transport techniques, award winners - safety leaders on the local transport market, etc.
2. Strengthen impact onto the main accident risk factor - "Human" with means to accumulate the critical majority of road users supporting the safe model of transport behavior to become a

social norm. Identification of the target groups is a grounds to develop differentiated information campaigns with following analysis of their effectiveness in order to support development of the process to manage the risks caused with the human factor.

3. Provide the adequate balance of activities proportionally risk factors (Human, Vehicle, Road) with using the international techniques of road traffic safety programming;
4. Introduce monitoring to control effectiveness/efficiency of the programmes and, analysis of results achieved/lessons learnt for purposes of the next programme planning.

III. The proposals to improve effectiveness of the municipal Traffic Safety Programmes

(the pilot example - the TS Programme of Vsevolozhsk District, Leningrad Region)

The **Table 9** contains the **Conclusions** resulting evaluation of the Road Traffic Safety Programme execution in the Vsevolozhsk District, 2011-2012 and logically implying **Proposals** on actualization the next Programme for the period of 2012-2020.

Table 9 the **Conclusions** resulting evaluation of the Road Traffic Safety Programme execution in the Vsevolozhsk District, 2011-2012 and logically implying **Proposals** on actualization the next Programme for the period of 2012-2020

Conclusions	Proposals on actualization the next Programme
1. Maximal accident risks in the dynamic system «Road Traffic» are caused by the «Human» factor. Assessment of the risks is difficult because impossibility "to standardize" human behavior and necessity in additional researches and delicate innovative "instruments" **to manage factor "Human"**. It is known that accident risks caused by factor "Human" are increasing in the period of motorization level rise. Relatively, elimination of the accident risks of the period is required **additional efforts** and **new instruments** implementing**.**	1. The maximum efforts within the Road traffic Safety programmes shall be addressed to **improving safety of transport behavior** or road users, therefore the maximal accident risks are caused with the risk factor "Human".
2. The motorization rise and improved understanding of the road accident nature change in principle the interpretation of the factor «Human» in the dynamic system «Road traffic»: **responsibility for road accidents is shifted from road users to professionals**, responsible for safety of **road infrastructure** and **vehicles**. The practice of successful motorized countries proves that **revision of the road traffic safety ideology** is a **start point**: • to change **attitude** of professionals to road accidents; • to stimulate **innovations** in many sectors to accelerate out of accident crisis; • to **encourage cooperation** of authorities, business and NGOs to achieve the common objective - decreasing risks of fatalities and casualties.	2. It is needed **to revise the Russian ideology** of road traffic Safety and modernize **the principles of the safety provision** in new environment of high level of modernization. It is expected, that updating the ideology and principles will create new **stimulation** to development of: • **innovations**, aimed to accident risks decreasing, and first of all, the risks for the most vulnerable groups of the road users (pedestrians, children, elderly and disabled people); • **cooperation,** aimed to achieving the common objective - decreasing the number of fatalities and casualties because of road traffic accidents.
3. The recommendations of the world experts for the countries, which are not ready to solve the road accident problem in a system way, are - to concentrate efforts onto solving the following prioritized tasks: **1.** **to inform public** of the road traffic accident problem in order to form awareness of safety as the most important value. In this context the professionalism of media to promote safety is an issue of critical importance; **2.** to implement potential of **simple, inexpensive and addressed measures**, which are able to decrease significantly the number of fatalities and casualties through elimination of: ▪ Severity of injuries in the issue of accidents (safety belts, car chairs for	3. It is demanded to **concentrate efforts** on solving the tasks of priority: ▪ №1 – to **inform public** of the road accident problem, changing attitude of people to the problem and forming a social demand in safety in the Russian community. The objective is - to form public opinion concerning safety, which will motivate leading politicians, public people, business and authorities to contribute to safety. It is critically important to establish a dialogue with highly professional media. ▪ №2 - to realize huge potential of **simple, low-costs and addressed means** (reflectors, safety belts, children chairs, helmets, traffic calming) to decrease accident risks to vulnerable groups of **road users**

children, bike helmets); ▪ Accident risks for the most vulnerable groups of road users (reflectors, traffic calming).	**and severities of traumas if accidents took place.** The objective is - **quick and significant decrease of the number of fatalities and casualties.**
4. Existing obstacles to attract public opinion to the road traffic safety problem **slow down** processes to: • achieve **readiness of community** to solve the accident problem in a system way; • accumulate the **critical majority** of citizens to introduce the safe transport behavior model as **a social norm**. The important function of actions to eliminate the obstacles is **motivation** of the community to solve the road accident problem.	4. It is demanded to **eliminate the obstacles** to attract attention of public to the accident problem in order to accelerate formation of realized attitude of citizens to transport safety as a **social value.** Elimination of the obstacles is achieving through: • including **activities aimed to elimination of the obstacles** to attract attention of the public to the accident problem into the content of the traffic safety programmes. The function of the activities is **motivation** of the community to solve the road traffic accident problem.
5. Success of complex problem solving depends on **quality of management**, which demands: • Observing the functionality of the management "conveyor" cycles: **planning - organizing - motivation - control** when every cycle of management; • Provided **functionality** of every chain of the "conveyor" (management function); • **Coherence of the cycles** through analysis of lessons learned after every cycle completed and before implementation of the next one.	5. It is demanded to develop «managing technologies» for solving the road accident problem, first of all, through: ▪ **Introduction of the tested international methodology** to develop traffic safety programmes based on the management cycle algorithm; ▪ **Input data quality improving** for programme planning purposes (including such input data as analysis of mistakes made when the previous programme implementing).
6. Changing the interpretation of the factor "Human" and acceptance of a **human mistake** as the main reason of road traffic accidents have defined "the enemy" - **risks** (probability) **of road users' mistakes**. Introducing the risk conception has principal importance, because it significantly **move accents** from "those, guilty for the traffic rules violation" (**already made**) and **general appeals** to observe traffic rules to **concrete actions able to prevent the violations** and minimize their effects within the **system of risk management**. There are separated fragments of risk management in the Russian practice, but they "live" in different authorities and organizations. This fragmentation makes obstacles to: • Form **a system** of road accident risk management; • Develop **balanced programmes**, providing adequate impact onto all the risk factors and good management of the activity of the risks'	6. The function of a risk management system can be successfully executed with the **methodology of "Road Safety Audit", which has properties** to: • **Concentrate attention at road users**, identifying risks of their mistakes, which can cause accidents; • Concentrate efforts at preventing the **users' mistakes**; • Fill in the traffic safety programmes with **concrete activities**, addressed to the risk factor "Human", improving the risk factor balance of the programmes; • **Define responsibilities** of the programme participants, integrating their activities into the **system of risk management;** • **Improve output of the resources**, allocated by the community for purposes of road traffic safety improving. See **Annex 2 "Road Safety Audit"**

elimination; • Use efforts and available resources **the most effective way** to decrease the number of accidents and related social and economic losses of the community.	According to the Russian practices, there are **no impossible obstacles** to preventing introduction of the Road Safety Audit as a system of accident risk management on the Russian roads (R&D Projects in the Arkhangelsk and Leningrad Regions during 2004-2012).
7. The **analysis** of a proportion of financing **to impact at the accident risk factors** in frames of the municipal Traffic Safety Programme (the Vsevolozhsk District, 2011-2012), displays evident **DISBALANCE:** the programmed resources are concentrated at the risk factor "Road", though the maximal risks are caused with the factor "Human". **Important:** The required **BALANCE** of impacts shall be achieved without decreasing activities aimed to improving safety of road infrastructure, but with increased activities to impact on the factor "Human" through involving **additional resources** (information, professionals, technologies, material and financing) from the sources with their own potential and resources: • **Public organizations**, which will work with risk groups; • **Business** (driver schools, transport companies, producers of advertisements, films, clothes, accessories, etc.); • **Educational institutions** (from kindergarten till universities) and **scientific agencies**; • **Medical institutions** (maternity clinics, traumatology centre, etc.)	7. The Traffic Safety Programme shall function rather as a **«platform»** to agree and coordinate activities of **increased number of participants**, than as an instrument to allocate the budget resources earmarked for traffic safety purposes. The extended function of the Programme will improve its ability to: A) provide **better balanced impacts** to all the risk factors; B) **coordinate activities** of the responsible authorities, have being financed from the budget; C) create a virtual "ground" to agree and associate efforts of the increased **team** with involving the potential participants, who is now beyond the frames of the traffic safety programmes (business, NGOs, different educational and medical institutions). The increased number of participants is the way to: • **increase the financing** available (grants of different programmes, sponsors' support, potential possibilities of business and different organizations within their everyday activities); • **involve new resources**, currently missing and critically important for success - **information, professional, technologies, materials.** **The expected final result** is the accelerated accumulation of the **critical majority** supporting the safe model of transport behavior as a social norm, when the social environment corrects unsafe behavior of minority (risk groups).
8. The **analysis** of a proportion of financing **to improve traffic safety management** in frames of the municipal Traffic Safety Programme (the Vsevolozhsk District, 2011-2012), displays that: 1. The Programme attention is limited with two functions of managements - «Organizing" and «Motivation», despite functionality of managing "conveyor" requires continuous sequence of four functions - "Planning - Organizing -Motivation - Control". Excluding some of the functions or their discontinuous does not allow manage with the situation (in the	8. Identification of needs to eliminate the deficiencies of the completed Programme and related improvements into the next Programme - is the precondition to "adjust and start the management conveyor" targeted to sustainable decrease of road traffic accidents. This work executed within the international project, offers **the following outputs:** **1) A prototype of the analytic instrument** (model) to:

context - with the accident risks) similar to an immobilized vehicle without full specified number of wheels. The effects of the functional shortage are deficiencies of: • "Planning", which is the starting and the most critical function for an activity. Therefore, success of an activity is hardly probable without a plan; • "Control" which is the analytical function (evaluation of results, finding mistakes and neglecting to correct them and avoid in the future), which is critically important for the next Programme planning. This means violating the basic rule - No analysis of previous - no future success. The final result is ineffective and insufficient using of the community resources. 2. The implemented functions are limited with: • General activity without addressing to concrete risk groups, despite the practice proves that not addressed activities when risk management have low effectiveness and efficiency; • Addressed events to target group "Children" only. Other risk groups, e.g. elderly people, are out of focus.	• Introduce the function "Control" concerning the results achieved with a municipal Traffic Safety Programme; • Prepare proposals to develop the function "Planning" for next Programmes. • Develop the function «Control" following development of databases and appearance of possibility to introduce additional indicators for analysis. The issue of critical importance is identification of risk groups to plan addressed impacts with better cost/effectiveness of outputs. (Look the chapter **IV The proposals to develop a methodology to assess Road Traffic Safety programmes**). **2) A Draft of Technical Specifications** (Technical Order) to **actualize the next Traffic Safety Programme for the period of 2014-2020.** Look the draft in the **Table 10**.

A Draft of Technical Specifications (Technical Order) **to actualize the next Traffic Safety Programme of the Vsevolozhsk District for the period of 2014-2020**

A format of Logical Framework is adapted to produce the draft of Technical Order to develop an actualized Municipal Traffic Safety Programme for the period of 2014-2020.

Table 10 The Draft of Technical Order to actualize the next Traffic Safety Programme for the period of 2014-2020.

	The logic of improvements expected of the Programme implementation	**Objectively verified indicators to achieve results**	**The sources and means to prove the results achieved**	**Risks**	**Activities to minimize the risks**
1.Overall objective	To decrease the number of fatalities and casualties caused with road accidents	The number of fatalities and casualties; The number of	The Road Police statistics	Inaccessibility of the accident statistics	Involving the Road Police into the Programme activities

		registered accidents			
2.Specific objectives providing input to achieving the overall objective	1.Modernization of the road traffic safety ideology 2.Creation of the united system of road accident risk management 3. Introduction of international methodology to design road traffic safety programmes	Objective oriented indicators set for the programme (e.g. decreased number of accidents with pedestrians)	Approved programme ready to implementing	Not approved programme because of weak awareness concerning importance of the principles modernization, risk management and balanced programming	Preliminary explanatory activity concerning importance to modernize approaches along the rise of motorization level
3.Tasks to be solved during the programme period	1.Providing maximum impacts on risks, caused with factor "Human"; 2.Stimulating innovations and cooperation in order to eliminate road accident risks; 3.Informing public of road accident problem and use of simple safety means (reflectors, safety belts, chairs, helmets) and elimination of obstacles to attract public attention to the problem; 4.Implementing simple and addressed arrangements to decrease risks for the vulnerable groups (pedestrians, children, elderly people); 5.Implementing the accident risk management system (Road Safety Audit); 6. Developing practice of monitoring implementation and outputs of Road Traffic Safety Programmes.	• Innovations introduced; • Activities implemented within partnerships	Reports presenting: a) indicators of every task solution; b) status of indicators "before" and "after" the programme implementing; c) progress proved with a difference between the programme start and finish indicators for every task.	1. Missing values to measure indicators; 2. Applications of different methodologies to describe of measure indicators "before" and "after" implementation of the programme, which makes the results incompatible.	1.Setting all control indicators when the programme developing; 2.Identification of a methodology to measure indicators when the programme developing.
Concrete activities to solve the tasks	The activities are planned by the programme developer in cooperation with the programme partners on the base consisting of: 1. Conclusions after assessment of the previous completed programme and the related proposals made; 2. Agreed objectives and priorities for the new programme period; 3. Local conditions (budget possibilities, specific of road network, land using changes).				

VI. The proposals to develop a methodology to assess Road Traffic Safety programmes

Improving Road Traffic Safety programmes creates a ground to **enhance the proposed prototype of an assessment model** through introduction of **additional criterion**, to serve as benchmarks for the assessment.
A number of analytical instruments applicable in the international practices can serve as sources of the additional criterion, namely:

1. Haddon Matrix (**Annex 3**);
2. Benchmarking (**Annex 4**);
3. Resource analysis (**Annex 5**).

The expected outputs: An increased list of analytical applications developing the analytical function **"Control"** within the road accident risk management system. More sophisticated analytics will bring more exact **Conclusions** and, relatively, more concrete **proposals for planning highly differentiated activities** to decrease the road traffic accident risks.
The effect: Improving the function "Planning" contributing significantly into improving the road traffic risk management in a whole.
The Final Result: Sustainable decrease of road accidents, the number of fatalities and casualties, as well as economic losses of community despite of rising up the level of motorization.

RESUME

It is critically important to establish **an evolution process** when every next Road Traffic Safety programme:

1. Is based on progress, achieved with implementation of the previous programme;
2. Stimulates cooperation and responsibilities sharing;
3. Contributes to methodology of programme developing and implementing;
4. Contributes to the accident risk management system strengthening.

The expected effects:

- Better output of the resources available, allocated by the community for purposes of road traffic safety;
- Mobilization of resources of budgets, business and civil society to achieve the common objective - decreasing the numbers of fatalities and casualties caused with road traffic accidents;
- Accelerated outcome of the Russian community of **the road accident crisis** and achieving a sustainable road safety similar to the leading countries - permanent process of accident decreasing with related decreasing the economic and social accident costs despite of high levels of motorization.

Annex 1 Characteristics of the motorization growth period and main directions to curb costs community caused with road traffic accidents

Социально-экономические особенности, характерные для периода количественного роста парков	Специфика причин, способствующих росту аварийности в этот период	Потребности в более эффективных подходах и мерах для сдерживания роста аварийности и последующего ее снижения
1. Развитие рыночных отношений	Повышенная потребность в мобильности	Переход от традиционных способов обеспечения безопасности к новым, отвечающим изменениям: • в обществе, • в мобильности, • в плотности транспортных потоков
2. Стабильное повышение спроса на транспортные средства	• Рост численности личных автомобилей как результат повышения их доступности (развитие дилерских центров, упрощение доступа к кредитным ресурсам, развитие вторичного рынка автомобилей); • Рост числа управляющих автомобилем	Повышение производительности и качества: • процедур регистрации, постановки на учет, прохождения техосмотра, • подготовки водителей.
3. Невысокая покупательная способность большей части населения	Увеличение в составе национального парка доли дешевых, старых и небезопасных транспортных средств	• Принятие системных мер для остановки процесса массового оттока пользователей с общественного транспорта на личные автомобили путем улучшения качества услуг общественного транспорта и принятия стратегии его развития в новых условиях • Улучшение условий в городах для легкого движения (пешеходного, велосипедного, колясочного)
4. Снижение качества подготовки водителей	Увеличение в составе участников дорожного движения доли плохо подготовленных и неопытных водителей	Повышение требований к подготовке водителей, обновление и расширение программ (управление на зимней дороге, в темное время) для улучшения навыков управления автомобилем
5. Отсутствие национальной политики по повышению безопасности дорожного движения	Проведение отдельных спазматических мер, не способных обеспечить перелом и стабильное снижение общего уровня дорожной аварийности, который остается недопустимо высоким	Необходимые системные действия: • Постановка общенациональной цели и объединение усилий участников, действия которых влияют на уровень безопасности; • Развитие инструментов проведения политики и достижения общей цели – правовых инструментов, целевых программ, методов, проектов; • Экономические обоснования мер, направленных на снижение аварийности
6. Наличие у значительной части населения таких руководящих мотивов для транспортного поведения как: стремление к	Отсутствие в перечне главных мотивов поведения граждан мотива «безопасность», который формируется как результат: • информированности, осознания,	• Системные меры, направленные на формирование безопасной модели поведения участников дорожного движения, путем информирования, обучения, повышения транспортной культуры, наращивание критической массы населения, настроенной в пользу безопасности;

выгоде, демонстрация статуса, потребность в самоутверждении	культуры, • требований социальной среды • контроля и адекватного наказания за нарушения и риск, создаваемый здоровью и жизни окружающих	• Запуск механизма социального нивелирования, когда в данной социальной среде большинство начинает корректировать поведение меньшинства; • Развитие организаций, способных профессионально осуществлять activity по формированию безопасной модели поведения у населения
7. Неадекватность риска ДТП, тяжести последствий и мер наказания за нарушения, послужившие причиной ДТП	Рост количества нарушений из-за безнаказанности	Усиление контроля и обеспечение неизбежности наказаний за нарушения правил дорожного движения и приведение их в соответствие с тяжестью последствий ДТП
8. Несоответствие возможностей дорожной инфраструктуры растущим потребностям общества в мобильности, увеличение перегруженности, снижение производительности сети и скоростей сообщения между пунктами отправления и назначения	Дефицит дорожного пространства и дорожного обустройства, парковочных мощностей и объектов автомобильного сервиса, повышение вероятности конфликтов между транспортными потоками различных направлений и потоками транспорта и пешеходов.	• Повышение защищенности уязвимых категорий участников движения (детей, пешеходов, велосипедистов); • Повышение плавности движения потоков (канализирование, сдерживание скоростей, снижение рисков ДТП на участках концентрации аварийности и повышенного потенциального риска); • Необходимость перехода к новым принципам проектирования безопасных дорог и организации дорожного движения, адекватным транспортным потокам высокой плотности
9. Неготовность служб и учреждений, исполнительных, законодательных органов и гражданского общества в целом к координированным действиям, направленным на устранение причин аварийности	Отсутствие оперативного реагирования на изменения и существующие проблемы, неспособность к предупредительным действиям для снижения риска ДТП	Объединение усилий специалистов смежных ведомств и дисциплин
10. Застройка городов при дезинтеграции планирования развития землепользования и транспорта	Разрыв между спросом на услуги транспортной инфраструктуры и ее возможностями (предложением), конфликты между транспортными и пешеходными потоками, рост аварийности с участием пешеходов, снижение безопасности и качества среды проживания в городах.	Переход к планированию нового качества, интегрирующему перспективы развития транспорта и землепользования в составе генеральных планов, комплексных схем застройки, обеспечивающих комплексное повышение качества среды проживания и защиту уязвимых категорий граждан (дети, пожилые и т.д.), несмотря на повышение уровня автомобилизации.

Conclusion: Увеличение «стажа» автомобилизации способствует повышению безопасности дорожного движения. Это объясняется тем, что по мере роста численности парка транспортных средств, приобретается опыт (как правило, путем издержек и жертв), что обуславливает изменения:

1. Повышение качества парка транспортных средств из-за замены выбывающих из эксплуатации автомобилей новыми, более безопасными и экологичными;

2. Приобретение опыта водителями, организациями, контролирующими органами;
3. Совершенствование законодательства, нормативов, стандартов, правил;
4. Адаптация дорожной инфраструктуры к возросшему спросу и новым требованиям, расширение принципа «пользователь платит» и регулирование спроса/предложения при помощи экономических инструментов;
5. Повышение роли более производительных видов транспорта для обеспечения повседневной мобильности населения - общественного и легкого (пешеходного, велосипедного).

Annex 2 Road Safety Audit

Аудит дорожной безопасности – это инспектирование дороги на разных технологических стадиях ее развития (планирование, проектирование, строительство, эксплуатация) в ходе которого команда независимых, квалифицированных специалистов:

1. дает заключение об общем уровне безопасности движения на дороге и потенциальных рисках возникновения ДТП из-за ошибки человека при восприятии дорожной ситуации;
2. готовит предложения по предупреждению аварийно-опасных ситуаций.

Главная задача аудита безопасности – не только выявить участки дороги с потенциальным риском возникновения ДТП из-за ошибки человека, но и подготовить рекомендации для устранения этого риска, еще до того, как ДТП на этих участках случатся.
Традиционный метод повышения безопасности сети дорог путем выявления участков концентрации ДТП и повышения их безопасности, в отличие от аудита, адресован уже существующей проблеме, и поэтому может быть определен как устранение существующего «эксплуатационного дефекта» дороги. Аудит безопасности, напротив, направлен на предупреждение дорожно-транспортных происшествий. Поэтому, термин «аудит безопасности» осознанно принят вместо традиционного термина «контроль безопасности».

Термин «аудит безопасности» подразумевает анализ безопасности дороги аудитором с позиции восприятия дорожной ситуации различными участниками дорожного движения.
Особенностью практики аудита является и то, что он проводится **независимыми аудиторами.**
Задача аудиторов – не только выявить участки дороги с потенциальным риском ДТП, но и подготовить рекомендации для устранения причин риска до того, как ДТП на этих участках случатся.

Для правильного интерпретирования задач аудита безопасности, в **Таблице 1** приводится опровержение встречающихся заблуждений относительно использования аудита безопасности.

Таблица 1 Чем является и чем не является аудит дорожной безопасности

Аудит дорожной безопасности ЯВЛЯЕТСЯ:	**Аудит дорожной безопасности НЕ ЯВЛЯЕТСЯ:**
Формализованной проверкой уровня дорожной безопасности с позиции правильного восприятия дороги всеми категориями дорожных пользователей, проводимая командой квалифицированных аудиторов, независимых от проектировщиков дороги, характеризующаяся проактивным подходом (цель - предупреждение аварийно-опасных ситуаций)	• Способом оценки, проверки или критики работы проектировщиков • Корректировкой проекта. Команда аудиторов занимается выявлением дефектов/недостатков дороги, аудиторы могут предлагать меры, но в обязанности аудиторов не входит корректировка проекта для устранения этих недостатков. Принять к исполнению рекомендации аудиторов или нет – решение владельца дороги. • Проверкой на соблюдение норм и стандартов. Обеспечение безопасности дороги это не значит простое соблюдение стандартов проектирования. Аудит – это всесторонний, мультидисциплинарный анализ с целью выявления рисков при пользовании дорогой. • Инструментом выбора среди альтернативных проектов или вариантов проектирования. Не следует полагаться на результаты проведения аудита безопасности для выбора среди вариантов проектных решений. Также не следует применять аудит для разрешения конфликтных ситуаций. • Заменой других проверок, экспертиз и осмотров. Проверки, экспертизы и осмотры, которые являются частью традиционного процесса проектирования, строительства и эксплуатации дорог не заменяются аудитом безопасности. • Методом расследования причин ДТП. В процессе аудита может изучаться история произошедшего ДТП, чтобы точно выявить причину и избежать повторения подобных ошибок, но не для того, чтобы установить виновных в ДТП. • Инструментом обоснованным только для крупных проектов. Опыт проведения аудитов показывает, что они полезны для любых проектов, но при малых проектах они особенно оперативны. При масштабных проектах повышается потребность в комплексных решениях, для чего привлекается более многочисленная группа аудиторов, принимаемые решения обсуждаются, что несколько увеличивает сроки аудита. Там где аудит, как внутренняя экспертиза является неотъемлемой частью всех проектов, дороги отличаются высокой степенью безопасности.

Вывод: Цель аудита дорожной безопасности – ответить на вопросы:

1. Какие элементы дороги, существующей, проектируемой или строящейся, для каких категорий дорожных пользователей и при каких условиях могут стать небезопасными и стать причиной ДТП?
2. Как можно устранить или смягчить влияния этих неблагоприятных факторов и минимизировать риски?

Annex 3 Haddon Matrix: Планирование мер для предупреждения ДТП, минимизации тяжести и ликвидации последствий

ФАЗЫ ДТП И ДЕЙСТВИЯ		ФАКТОРЫ РИСКА И ИНСТРУМЕНТЫ ДЛЯ ИХ ПОДАВЛЕНИЯ		
Цель действий	**Область действий**	**ЧЕЛОВЕК**	**АВТОМОБИЛЬ**	**ДОРОЖНАЯ ИНФРАСТРУКТУРА**
До ДТП (Попытка снизить риск ДТП)	Предупреждение ДТП	Информирование Обучение Поведенческие установки Законы и правила Контроль соблюдения правил Предупреждение управления автомобилем в опасных состояниях Продвижение использования средств активной и пассивной защиты Продвижение более безопасных транспортных средств	Хорошее эксплуатационное состояние транспортного средства Использование активных средств предупреждения ДТП (зимние шины, ABS, ближний свет фар)	Повышение плавности движения транспортных потоков, Выявление участков концентрации ДТП и их устранение, Улучшение придорожного сервиса, Обустройство дорог и система сигнализации
Во время ДТП (Попытка снизить тяжесть ДТП)	Снижение тяжести ДТП, если оно все-таки случилось	Использование пассивного защитного оборудования (ремни, шлемы, подушки безопасности, детские кресла)	Срабатывание защитных ресурсов автомобиля (особенности дизайна, масса, бампера, каркас) Наличие и срабатывание оборудования пассивной защиты (ремни безопасности, подголовники подушки, детские кресла)	Особенности дороги (состояние покрытия в результате мероприятий по содержанию, состояние полосы отвода, уклоны откосов) Срабатывание дорожного обустройства (барьерные ограждения, противоударные устройства для опор дорожных сооружений)
После ДТП (Попытка стабилизиро-вать ситуацию и оказать помощь пострадавшим)	Минимизация последствий ДТП	Способность оказать первую доврачебную помощь Анализ действий человека, приведших к ДТП и действия по минимизации риска повторения подобных ошибок	Наличие средств по оказанию спасательных действий собственными силами (аптечки, огнетушители) Минимизация риска возгорания Анализ причин, способствовавших возникновению ДТП и реализация защитных функций конструкции и оборудования ТС	Быстрое информирование о ДТП Наличие служб спасения и их оперативность Отсутствие препятствий на дорогах для быстрого прибытия служб спасения Анализ причин, связанных дорожной инфраструктурой и сопутствовавших внешних условий, способствовавших возникновению ДТП

Conclusion: Матрица Хэддона - инструмент, изначально созданный для планирования мер по минимизации аварий на электростанциях, впоследствии нашел применение в различных областях, где наряду с техническими факторами, присутствует фактор «Человек». Матрица помогает обеспечить сбалансированный и системный подход для поддержания безопасности на объектах инфраструктуры, в данном случае - на сети автомобильных дорог.

Annex 4 The Main Ideas of Benchmarking and Benefits of Its Application

№	Основные положения, определяющие суть бенчмаркинга	Выгоды, которые дает организациям практика бенчмаркинга
1	Термин "benchmark" – • "экспертный стандарт, используемый в качестве контрольного эталона" • "стандарт, относительно которого можно произвести измерение или оценку чего-либо"	• Эталонное сопоставление, оценка результатов и процессов и их сравнение с результатами и процессами лидеров, что дает информацию для оценки результативности собственной деятельности и служит стимулом для ее совершенствования. • Мотивирует к улучшениям • Позволяет увидеть тенденции отраслевого развития
2	Метод контроля, включающий поиск практик, показывающих лучшую эффективность, изучение методов работы.	• Внедрения в практику технологий, стандартов и методов работы лучших организаций-аналогов. • Обучение эффективным методам и их реализации в собственных условиях.
3	Бенчмаркинг включает две основные задачи: 1. Сравнение своих показателей с показателями других организаций: конкурентов или лидеров 2. Изучение и применение чужого успешного опыта	• Запуск процесса совершенствования на основе осмысления и адаптации успешных идей. • Определение приоритетов для улучшения работы и концентрация внимание на основных факторах успеха • Определение лучших управленческих практик • Фокус на применение лучших мировых практик • Установка новых эталонов • Повышение морального духа • Осуществление масштабных улучшений («прорывы») • Формирование культуры непрерывных усовершенствований
4	Партнерство по бенчмаркигу – взаимоотношения сравниваемых организаций. Препятствия для развития партнерства по бенчмаркингу: • Отсутствие интереса партнера к сотрудничеству • Нежелание делиться данными • Отсутствие нужных данных • Значительные различия в сравниваемых процессах • Проблемы коммуникаций (в т.ч. языковой барьер)	Улучшает отношения и взаимопонимание между партнерами по бенчмаркингу Содействует развитию профессиональных контактов и взаимодействия с лидерами, у которых можно многому научиться.
5	Бенчмаркинг - непрерывный процесс сравнения, включающий: • Бизнес процессы • Оборудование • Производственные процессы • Продукты и услуги	• Постановка трудных, но достижимых целей • Определение путей достижения целей • Определение степени отставания от лидеров • Определение слабых сторон, «болевых» участков • Открытие новых технологий и методов • Заимствование опыта мирового класса

	Практически бенчмаркинг применим к чему угодно.	• Формирование представления о том, как другие добились успеха • Сокращение производственных затрат • Сокращение продолжительности производственных циклов
6	Система сбора данных в процессе бенчмаркинга: 1. Концентрация на сборе внутренних данных 2. Сбор данных от лидера Сбор данных должен охватывать как минимум период последних 5-10 лет.	• Создание и поддержание базы данных, польза от которой много превышает усилия и потраченные средства • Развитие методов сбора и анализа данных • Расширение знаний и профессиональных контактов
7	Процесс бенчмаркинга – часть общих усилий, должен проводиться исполнительной группой под контролем руководства организации.	Обмен информацией, обучение всех, принимающих участие в процессе бенчмаркинга, улучшение командного духа и управленческих коммуникаций внутри собственной команды
8	Критические факторы для успеха применения бенчмаркинга: • Понимание необходимости бенчмаркинга как ориентации на лучших • Поддержка руководства и восприятие бенчмаркинга как неотъемлемой части управления • Определение направлений бенчмаркинга • Установка приоритетов • Выделение определенных ресурсов • Понимание необходимости проведения изменений • Нацеленность на изменения, а не только на сбор и анализ данных • Поощрение проявления креативности и стремления к внедрению новых идей со стороны работников организации • Стремление делиться и обмениваться информацией в внешними партнерами по бенчмаркингу	• Повышение степени доверия между участниками команды • Повышение патриотизма и лояльности по отношению к своей организации (городу, региону, стране и т.д. в зависимости от масштаба бенчмаркинга) • Повышение престижа организации (города и т.д.)

Conclusion: Копирование **методов**, подсмотренных у лидеров, не может дать желаемого результата, т.к. это не меняет всей системы. Однако при этом часто делается поверхностный Conclusion о том, что «их методы для нас не подходят».

Если скопировать **подход** лидера полностью, приспособив его к своей системе работы, то определенный результат будет получен. Однако подражательный подход - удел вечно догоняющего.

Наилучший результат дает объединение того, что лидеры делают сегодня, с идеями, которые могли бы улучшить их результаты. Иными словами - любой, уже завершенный проект, можно было бы сделать лучше, **при возможности выполнить проект снова**. Тому, кто правильно использует бенчмаркинг, предоставляется именно такая возможность.

Annex 5 The Organizational Structure and Resource Analysis

Любая activity может быть описана универсальной организационной схемой, пример которой (применительно к задаче предупреждения аварийности) приведен на **Рисунке 1**.

Рисунок 1 Универсальная операционная структура деятельности, нацеленной на предупреждение аварийности, обусловленных фактором «Человек»

Операционная система объединяет три под-системы:

- Под-система планирования и контроля (политика вышестоящих структур, стратегии, директивы, указания, решения, нормативы, т.п.);
- Под-система непосредственной деятельности по управлению рисками (планирование деятельности, организация мероприятий, мотивация участников, контроль результатов и анализ причин успеха/неудач);
- Под-система поддержки (поставщики: исследования, рекомендации, изготовление социальной рекламы, отражателей, т.п.).

Баланс Вход/Выход - соотношение между ресурсами «на входе» и результатом «на выходе» - основной показатель результативности (результат, очевидный для всех - снижение аварийности по данным статистики) и производительности организации (какой ценой достигается результат). «Ресурсы на входе» выражаются в денежном эквиваленте, а «Результат на выходе» - в количественном. Результатом становится **«себестоимость единицы результата»**, т.е. стоимость производства условной единицы (продукции, услуги).

Показатели себестоимости информационных кампаний позволяют:

- Оценить результативность кампаний относительно друг друга (бенчмаркинг);
- Оценить результативность примененных методов воздействия на целевые группы риска;
- Экономически оценить использование средств на цели безопасности, сопоставляя число пострадавших «после» проведения кампании с числом пострадавших, (например, погибших в ДТП из-за того, что ремень безопасности не использовался), если бы компания не была реализована.

Пример: Результат информационной кампании по популяризации ремней безопасности - увеличение доли водителей, пользующихся ремнями. Определяется путем сравнения доли водителей, пользующихся ремнями «до» и «после» кампании. Сравнение результативности информационных кампаний приведено в **Таблице 1**.

Table 1 Сравнение результативности информационных кампаний

Кампания	Визуальная презентация кампании	До	После
1.«Пристегните своего ребенка», Польша, 2001-2004 (Национальный уровень) $300 тыс.		Целевая группа - родители, из которых лишь 50% перевозили детей с использованием кресел	75% водителей используют кресла для перевозки детей Рост – 25% Себестоимость **1% = 500000/25 = $12000**
2.«Выбери жизнь – пристегнись!»*, РФ, Сахалин, 2005-2008 (Региональный уровень) $ 500 тыс.		Целевая группа - водители, из которых лишь 3% использовали ремни безопасности	80% водителей используют ремни безопасности Рост – 77% Себестоимость **1% - $6493**

***Примечание:** Кампания была реализована профессиональными специалистами из международного партнерства (Global Road Safety Partnership) с привлечением ресурсов бизнеса. Привлечение профессионалов - условие инвестора как гарантия максимальной отдачи от средств, инвестируемых в безопасность.

Conclusion: Информационная кампания, проведенная на Сахалине, показала лучшую отдачу, чем польская кампания. Данный факт опровергает мнения о том, что зарубежные подходы «не работают» в российских условиях, а бизнес в России социально пассивен. Правильным Conclusionom будет следующий:

- Бизнес поступает по правилам бизнеса, доверяя инвестиции лишь профессионалам, способным обеспечить отдачу от инвестиций. Поэтому, для привлечения бизнеса в число партнеров, следует подходить к использованию финансового ресурса для нужд безопасности как к деятельности:

a) Инвестиционной, с вытекающими требованиями;
b) Профессиональной на основе лучших методов и технологий.

Ресурсы

В обобщенном виде любая activity состоит в преобразовании входных ресурсов в выходной результат, по которому потребитель (общественность) оценивает результативность этой деятельности. Согласно классической теории менеджмента, ресурсы подразделяются на 5 видов:

1. Информация,
2. Профессионалы,
3. Технологии,
4. Материалы,
5. Финансы.

Важно! Устойчивая тенденция современного, динамично меняющегося мира - все большая зависимость жизнеспособности (конкурентоспособности, эффективности) организаций (проектов, деятельности) от своевременности, полноты и качества **информации,** а также, **профессионалов,** их способности реагировать на изменения и адаптироваться к ним через совершенствование **технологий, материалов** в русле главных трендов хозяйственной деятельности 21 века – ресурсосбережения, безопасности, мобильности.

Качество ресурсов информация и профессионалы определяет качество технологий и материалов, а значит, и потребность в финансировании. Не информированность и непрофессионализм всегда обходятся слишком дорого.

Table 2 представляет универсальную классификацию входных ресурсов и статьи ресурсных затрат.

Table 12 Универсальная классификация входных ресурсов организации (деятельности)* и статьи затрат

Ресурсы	Состав затрат
«Информация»	Затраты по сбору, обработке и хранению информации, необходимой для принятия решений (базы данных, документы, отраслевая информация, приобретение литературы, подписка на периодические профессиональные издания, членские взносы в ассоциации и федерации и т.п.). Значение информации растет. Изменения предъявляют к информации дополнительные требования: нужны не только данные статистики (отражают прошлое), но и понимание тенденций (направления изменений) для прогнозирования рисков и принятия дальновидных решений, снижающих риски, предупреждающих ошибки и нерациональные расходы.
«Профессионалы»	Затраты, связанные с повышением профессионализма и мотивации специалистов: оплата труда; стимулирование (материальные поощрения, социальные начисления, премии); обучение, повышение квалификации и переподготовка.
«Технологии»	Затраты, связанные непосредственно с обеспечением процессов преобразования ресурсов в результат, например, реализация технологических стадий информационной кампании.
«Материалы»	Затраты, связанные с обеспечением технологических процессов материалами (носители информации, плакаты, краска, наклейки, отражатели и т.д.)
«Финансы»	Затраты, связанные с обеспечением финансовой стабильности организации, привлечением финансовых ресурсов для поддержания баланса ресурсов в изменившихся условиях (например, обновление технологии, обучением специалистов), налоги, штрафы, иски, платежи, регистрационные сборы, проценты по займам, проведением тендеров и т.п.

Каждая организация решает самостоятельно, на какую ресурсную статью относятся те или иные издержки организации в зависимости от специфики ее деятельности. Например, затраты по участию в тендере подрядная организация отражает по стать «Финансы» (привлечение финансовых ресурсов), а организация-заказчик, проводящая этот тендер – по статье «Технологии».

Хорошее управление стремится сбалансировать ресурсы, чтобы улучшить производительность и результативность всей системы «на выходе». Например, повышение профессионализма инженеров по дорожному содержанию дает технологические улучшения, которые позволяют в рамках имеющихся ресурсов делать больше и лучше для дорожных пользователей их комфорта и безопасности.