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NEED OF JOINT EFFORTS TO PREVENT ROAD CRASHES DEATH AND INJURIED

WSPÓŁPRACA INSTYTUCJONALNA W ZAPOBIEGANIU WYPADKOM DROGOWYM I OGRANICZENIU ICH SKUTKÓW

A b s t r a c t

This article describes the current situation in the area of European road safety and draws attention to the adverse developments in several Central European countries. It presents the approach of the international project SOL in relation to strengthening road safety management capacity in the region of Central Europe. It underlines the added value of networking and contains recommendations for building multi-stakeholder partnerships for road safety at national, regional and community levels. It also provides a resume of stakeholder assessment undertaken in Zilina region.

Keywords: *safety, networkig*, *multi-stakeholder partnership*, *strategy*, *project SOL*

S t r e s z c z e n i e

W artykule opisano obecną sytuację z dziedziny bezpieczeństwa europejskiego ruchu drogowego i zwrócono uwagę na niekorzystne zmiany, jakie zachodzą w kilku krajach Europy Środkowej. Zaprezentowano podejście międzynarodowego projektu SOL w relacji służącej do wzmocnienia zdolności zarządzania bezpieczeństwem ruchu drogowego w Europie Środkowej. Podkreślono wartość dodaną sieci oraz zawarto zalecenia dotyczące budowania wielostronnego partnerstwa w bezpieczeństwie drogowym na szczeblu krajowym, regionalnych oraz gminnym. Zawarte zostało również podsumowanie oceny przeprowadzonej dla udziałowca z regionu Zilina.

Słowa kluczowe: *bezpieczeństwo*, *sieci*, *wielostronne partnerstwo*, *strategia*, *projekt SOL*

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1. Introduction

The degree of road transportation and motorization is constantly increasing. Apart from the undoubted advantages, it causes a heavy loading of the road network and places constantly increasing demands on traffic and its safety. Road safety is actually not only an important traffic and social issue, but also an economic one.

There is universal recognition of the tremendous global burden resulting from road traffic crashes, and that road traffic injuries constitute a major but neglected public health problem that has significant consequences in terms of mortality and morbidity and considerable social and economic costs. According to the WHO and the World Bank [4], a multi-sectorial approach is required to successfully address this problem. While the number of deaths and seriously injured people is falling, studies have shown that faster progress is possible if all effective means are applied [3].

Road crashes and road crash injury are no longer seen as 'an inevitable outcome of road transport' but rather as 'largely preventable and predictable'. A core component of this 'new paradigm' is the recognition that road safety is a multi-sectorial issue and a public health issue – all sectors need to be fully engaged in responsibility, activity and advocacy for road crash injury prevention. Good infrastructure and vehicles must be complemented with common sense everyday human behaviours and effective trauma care services [10].

2. The actual traffic situation in Europe

Road safety is a major societal issue in Europe because about 80% of Europeans live in cities. European cities are suffering heavily from congestion high levels of pollution, noise, and road crashes, largely caused by excessive use of the private car. Road strategy depends greatly on how communities choose to manage their transport systems in relation to their overall health and safety objectives and how they are balanced with economic, social and environmental considerations [1]. The growing trend away from public transport, walking and cycling towards motorized transport has marked a move towards modes and means of transport that pose comparatively higher costs to society economically, environmentally, and in health terms.

In 2007, for the first time since 2001, the number of people killed on European roads had not decreased in comparison with the previous year [8].

In Western Europe, the number of road traffic fatalities declined in 2007 by 1.2%. However, this decrease was accompanied by a rise in both the number of casualties (+1.4%) and the number of accidents (+5.6%). These data were strongly influenced by the performance of Turkey which has shown significant increases in all three indicators. In 2007, only the United Kingdom and Greece recorded drops in the number of fatalities, casualties and injury accidents. At the same time Denmark, Finland and Sweden have seen their road fatalities increase by 32.7%, 13.1% and 5.8% respectively.

In 2010, figures considerably changed and we can observe a positive decreasing trend in the number of fatalities, casualties and injury accidents in more western European countries – France, Austria, Spain, Portugal, Ireland, Denmark and Germany. At the same time,

the number of fatalities in Greece also decreased, but the number of accidents and injuries increased. Sweden, Luxembourg and Malta have been confronted with a rise in the number of fatalities on their roads by 18% and 13% respectively.

In Central and Eastern Europe, the number of road fatalities increased by 6.4% in 2007. This result is all the more disappointing since at the same time, the region recorded a strong increase in the number of casualties (+6.4%) and number of accidents (+6.7%). With the exception of Bulgaria, Estonia, Hungary and Lithuania, which show a drop in road fatalities, casualties and injury accidents, all other countries have been confronted with a rise in the number of fatalities on their roads.

Table 1

Number of road fatalities in Western Europe [7, 9, 11, 12]

	2007	2008	2009	2010	2007–2006 (%)	2010–2011 (%)
Austria	691	679	633	552	–5.3	–6
Belgium	1 067	944	944	812	–0.2	4
Denmark	406	406	303	255	32.7	–13
Finland	380	344	279	272	13.1	7
France	4 620	4275	4 273	3 992	–1.9	–1
Germany	4 949	406	303	255	–2.8	–13
Greece	1 578	1 555	1 456	1 258	–4.8	–13
Ireland	338	280	239	212	N/A	–12
Luxembourg	43	35	48	32	19.4	13
Malta	12	15	21	15	9.1	13
Netherland	791	677	644	537	–2.5	4
Norway	233	N/A	212	208	–3.7	N/A
Portugal	854	885	840	937	0.5	–7
Spain	3 823	3 100	2 714	2 479	–6.8	-6
Sweden	471	397	358	266	5.8	18
Switzerland	384	357	312	327	3.8	N/A
Turkey	5 004	N/A	N/A	N/A	8.0	N/A
UK	3 059	2 645	2 337	1 905	–7.2	6

In 2010, the situation changed for Lithuania, the Czech Republic, Slovakia, Hungary, Romania and Serbia. They experienced a decrease is the number of fatalities, accidents and injuries on their roads, with the exception of Latvia, which showed a decrease in the number of fatalities, but a drop in road casualties and injury accidents. Countries like Estonia, Poland, Bulgaria and Slovenia saw their fatalities increase by 29%, 7%, 4% and 2% respectively.

Acording to statistics published by The European Commission in the summer, of 2011, EU road fatalities decreased by 11% in 2010. In 2011, the first year of the 2020 Road Safety Target, the overall number of road deaths decreases compared with the previous year, but the reduction slows down (to –2%). This was the slowest decrease in road deaths in a decade (wide reduction throughout the last decade was on average –6%). However, country by country, statistics show that the number of deaths still varies greatly across the EU. Whereas

in some European countries, the road safety situation has improved constantly over recent decades, in many others, the road safety challenge has not been addressed so successfully and number of road fatalities is still very high.

Table 2

Number if road fatalities in Central and Eastern Europe [7, 9, 11, 12]

	2007	2008	2009	2010	2007–2006 (%)	2010–2011 (%)
Albania	384	N/A	N/A	N/A	38.6	N/A
Bulgaria	1 006	944	944	812	–3.5	4
Croatia	619	N/A	N/A	N/A	0.8	N/A
Czech Repub.	1 222	1076	901	802	15.0	–4
Estonia	196	132	98	78	–3.9	29
Hungary	1 232	996	822	740	–5.4	–14
Latvia	419	316	254	218	2.9	–18
Lithuania	740	449	370	299	–2.6	–1
Poland	5 583	5 437	4 572	3 908	6.5	7
Romania	2 794	3 061	2796	2 377	12.8	–15
Serbia	962	905	810	656	6.9	N/A
Slovakia	661	622	380	371	8.7	–13
Slovenia	293	214	171	138	11.8	2

This road safety challenge has reached a magnitude that even puts the overall competitiveness, the attractiveness as location for working and investments as well as the quality of life in the most seriously affected parts of the cooperation area at considerable risk. Road crashes have a severe negative impact on the social and economic situation in respective countries, costing up to 2% or more of the GDP [6].

Even though there are several good practice examples of road safety management, serious joint efforts are required by all relevant stakeholders on all levels to make a contribution to reach the overall policy goal set by the European Commission – a decrease in the number of road crashes by 50% in the midterm.

There is a lack of national and local government commitment to road crash/trauma prevention and sustainable transport in many countries.

Even where national strategies exist, the political commitment is often lacking to ensure these policies are properly implemented at all levels of government. Progress in reducing road crashes/trauma and promoting sustainable transport is hampered by the fact that management, implementation and resources are largely concentrated at the national level. In addition, the responsible national departments are thinly staffed and there are generally weak links to community level government to facilitate local level action and enable the implementation of national policies at the community level even though legal frameworks allow for local government action in road safety and transport planning.

At the community level, dedicated multidisciplinary institutional structures to manage effective road safety and sustainable transport programs are generally very weak or entirely absent. This weakness is compounded by a lack of well trained professionals with

the knowledge and skills to develop, implement, monitor and evaluate effective long-term road safety and sustainable transport programs, grounded in a multidisciplinary systems approach.

Experience from countries with the best road safety records showed that the delivery of effective road safety and sustainable transport interventions is most successful when action is coordinated among different levels of government, from the national to the community level and different sectors and disciplines. It is important that local government and local professionals are actively involved and supported in the delivery of national policies because they are in the best position to turn national objectives into local solutions.

3. Approach of the SOL project

Based on the findings previously presented and on the fact that the transnational cooperation for mutual learning and the joint development of standards and innovative road safety measures has proved to be the most effective instrument for advancing the quality standards and effectiveness in managing road safety issues, the SOL project initiative was created. The project started in April 2010 and will finish in March 2013.

SOL is a project co-financed by The Central Europe Transnational Cooperation Programme (CEE). It involves 8 central European countries: Austria, Czech Republic, Germany, Hungary, Italy, Poland, Slovakia and Slovenia. It is representing a significant regional road safety programme that is contributing to global road safety with critical experience, tools and knowledge.

The basic objective of the project is the enhancement of capacities of local and regional stakeholders to prevent road accidents in Central Europe. Its main goal is jointly to develop a strategy of road safety that will support the Central European regions in catching up with the highest EU standards in road safety, specifically:

SOL is linked to global work – it seeks to assist communities in implementing the main recommendations of the world report on road crash injury prevention (World Bank), including an overall increase of political commitment towards road safety, developing activities based on evidence rather than “ad hoc”, developing strategies and action plans, allocating resources to the main road safety risks, implementing projects, monitoring and evaluating impacts.

The SOL Work Programme is designed to generate a continuous cooperation among different levels of administration on one hand, and different local entities from different countries on the other, to build up a network made of vertical and horizontal connections.

Firstly, a top-down input was applied, as the expert teams reached the local communities and recognized the most active ones in order to supply them with the necessary professional skills and tools to get the awareness of the focal issues concerning their own community. Secondly, the local communities, once endowed with the above described skills and tools, were fostered to get a stable connection with the upper level started in order to communicate the main discovered needs (also thanks to the skills built in the top-down stage) and get an active role in building an action plan and a consequent pilot action, with a bottom-up input.

This cross of top-down and bottom-up inputs is creating a vertical network made of interconnected realities, in permanent cooperation, sharing useful data and knowledge.

Fig. 1. Pyramid model of the SOL project activities

On the other side, local communities and technical project teams are networking from a horizontal point of view with local communities from different countries, implementing a real transnational cooperation in the field of road safety, sharing data and successful practices in order to reduce the number of fatalities on the roads.

By the end of the project the following tools will be available and disseminated to followers:

- Central European space specific and comprehensive road safety assessment strategy to define the most urgent need for local action.
- Concept for ideal road safety management structures involving regional multi-sector focus groups of all stakeholders.
- Guidelines for jointly elaborating and implementing regional/local road safety programmes and action plans.
- Central European space specific and comprehensive road safety assessment strategy to define the most urgent need for local action.
- Set of good practices for successfully tackling road safety challenges in different fields tailored to the target groups.
- Strategies for raising public and political awareness as a first step towards concrete action in target areas.

As was mentioned above, one of the main objectives of the SOL project is to strengthen road safety management capacity in the region of Central Europe. Currently, road safety management structures differ greatly between countries. In some of them, road safety management and coordination structures that involve multiple stakeholders at all levels of government are well developed. In other countries, coordination structures exist at the national level, but not at the community level. In some, structures exist at all levels of government, but they are not operational or their work is not effective enough.

SOL aims to add value to existing structures, where they exist, and to create a mechanism for coordinating a multi-stakeholder road safety intervention where there is a need and no such structure is in place. The main motivation is to ensure the smooth implementation of the SOL project in the country and there may be additional longer-term benefits as well.

As part of the SOL project, two types of multi-stakeholder partnerships were explored in each SOL country – the national advisory group and SOL community partnership.

The basic step for building the national advisory group and SOL community partnership was undertaking a stakeholder assessment.

The first function of the assessment was identifying the main political figures to be involved in SOL national/regional and community partnership in relation to mobilizing additional financial support and community backing, as well as those with the relevant technical expertise.

The second important function was examining the remit of all the stakeholders and understanding the relationships between them.

Key objectives of this analysis were:

- Identify key stakeholders, define their characteristics and examine how they will be affected by SOL (e.g. their specific interests, likely expectations in terms of benefits, changes and outcomes).
- Assess their potential influence on the development, and implementation of SOL.
- Understand the relationship between stakeholders and possible conflicts of interest that may arise.
- Assess the capacity of different stakeholders to participate and the likelihood of their contributing to the process.
- Decide how the stakeholders should be involved in the process to ensure the best possible quality and viability of the programme, in particular the nature of their participation (e.g. advisers, consultants or collaborating partners), the form of their participation (e.g. member of working group, advisor or sponsor) and the mode of their participation (e.g. individual participant or representative of a group).

The second step of the process of building the national advisory group and SOL community partnership consisted of developing a stakeholder assessment map by looking for answers to the following questions:

A. Identification (of stakeholders)

Who will benefit from SOL and receive the project deliverables (e.g. tools)? Who will work with you to implement SOL, both from your organisation and from the pilot community? Who is considered an expert at the national level from the community about different aspects of road safety? Who serves as your champion in the pilot community? Who is already undertaking road safety activities in the community? Who can help co-finance SOL in the community or from the national level?

B. Interest

What direct benefit do stakeholders expect to get from SOL? What outcomes do stakeholders expect as a result of SOL? What changes will stakeholders be expected to make as a result of SOL? What resources are stakeholders willing (or not willing) to provide for SOL? How do stakeholders feel about each other? Do stakeholders have conflicts of interest concerning SOL? For which stakeholders does SOL help to meet their goals, needs, or interests (or not)?

C. Influence

What legitimate authority do stakeholders have for road safety in the community (e.g., government appointed lead organisation)? From where do stakeholders get their leadership authority (e.g., is it formal or informal)? Who controls strategic resources and decision-making in the community that are important for the successful implementation of SOL? How much negotiating power or influence do stakeholders have over others?

D. Impact

How will each stakeholder impact the project (negatively or positively)? How much will these impacts affect the success of the project? If they can impact the project negatively, how can you prevent or correct the situation? If the project is impacted positively, how can you make the most of it?

4. Road safety situational assessment of Zilina region

The Zilina region, which is located in the northwest of Slovakia, crosses several significant roads. These roads allow a connection of states: Hungary, Austria, Poland and The Czech Republic. Roads- E50, E75, E78, and E442 are the most loaded roads in Slovakia – according to the nationwide traffic census on the road network of the Slovak Republic which was realized in 2010. High volumes of traffic intensity also impact on the number of traffic accidents in the region. The negative trend of the accident rate in the Zilina region is the main reason for participation in the SOL project whose implementation should contribute to solving its problems in the area of road safety.

The objective of the SOL community situational assessment was to compile and present the data needed to assess the road safety situation in the Zilina region, including road crash and injury data, institutional capacity, public opinion and knowledge survey, stakeholder map and main conclusions from the analysis.

The assessment leaded to the identification of priority issues for action and served as a baseline for monitoring and evaluating the impact of the SOL project and its interventions in the communities. Its categories are described in Table 3.

The assessment lead to the identification of priority issues for action and served as a baseline for monitoring and evaluating the impact of the SOL project and its interventions.

The complex problem of solving road safety requires a lot of input data and detailed information which are necessary prerequisites for obtaining a common approach for all the interested organizations and representatives from different disciplines of the national economy. Therefore, an emphasis is given to the identification and analysis of the entities involved in the topics related to road safety.

During the analysis were identified goals of respective subjects, their responsibilities (resulting from actual Slovakian National Road Safety Plan for the period 2011–2020.) as well as evaluated their interests, influence and impact in relation to road safety. Interests and influence of the subjects were evaluated using thee-stage rule:

– **Considerable** – organizations with considerable interests and significant influence on solutions to road safety problems,

– **Limited** – organizations with limited interests and limited influence on solutions to road safety problems,
– **Insignificant** – organizations without significant interests or influence on solutions to road safety problems.

Table 3

Parts of road safety assessment

Category	Purpose of the assessment
Road safety assessment	To strengthen understanding of road crash as and road crash injury situations in specific geographical areas of the pilot community. The information is vital for road safety management and advocacy purposes.
Institutional capacity assessment	To understand institutional strengths/gaps for delivering and managing a systems approach to road safety including multi-stakeholder interventions and for encouraging safe and sustainable mobility. To understand training needs of road safety professionals and community road safety stakeholders
Public opinion survey	To understand public knowledge, opinion about road safety, and to understand travel preferences. The road safety plan must be acceptable to the local population. The results will help in preparation of the road safety plan reflecting on expectations of the local population.
Stakeholder map	To identify stakeholders in the community who can: • participate in the SOL community teams • contribute to delivery of the SOL and community road safety objectives

Impact of subjects on SOL project implementation was evaluated by using three-stage evaluation rules:
– **Great impact** – organizations whose participation on the SOL project implementation is key and for whom project success is desired,
– **Intermediate impact** – organizations whose participation on the SOL project implementation is recommended, they could make a significant contribution to the project,
– **Insignificant impact** – organizations whose participation on the SOL project implementation is recommended but contributions of these organizations are limited.

By analysis and evaluation of actual situation, road safety in the Zilina region was found out that the most numerous representations have organizations from transport area at the situational assessment map. The trade-union composition of these entities should enable a complex problem solving of road safety. However, it will be important to determine the system of management and financing, as well as the management entity, control subject, the mutual cross-links and the scope of competence, which should ensure the effective functioning of the system. The range of competitions should be divided between: police; stations and services responsible for technical control of vehicles; local and regional authorities; education sector, medias, medical organizations; road administrations; insurance companies; producers and car importers; transport organizations; driving schools; motoring associations; research and development organizations.

Creation of this management and funding model will not be easy because this model has not been established either in the territory of Zilina region or in Slovakia so far. However, it belongs among the priority tasks of the national plan to increase the road safety for the period 2011 to 2020.

5. Conclusions

The best global, European and regional examples show that road crash and road trauma prevention can be sustainable. But we need to build on good practic experiences and facilitate long term measurable improvement by empowering local communities and local citizens with the knowledge, skills and networks that they need to work to make their roads safer.

Many countries show similar weaknesses in dealing with road safety issues on the political and technical levels. Political commitment, professional capacity and institutional structures are not robust enough to stem the growing number of deaths and injuries from road crashes. Therefore, a transnational working approach is favoured in order to facilitate mutual learning processes that envisage a higher level of professionalism in dealing with this issue.

Government, business and civil society need to collaboratively and actively participate in programmes for the prevention of road traffic injury through injury surveillance and data collection, research on risk factors of road traffic injuries, implementation and evaluation of interventions for reducing road traffic injuries, provision of pre-hospital and trauma care and mental-health support for traffic-injury victims, and advocacy for prevention of road traffic injuries.

Multi-stakeholder partnerships that bring together different sectors and disciplines within the framework of a targeted "safe system approach" offer the greatest possibility of innovative, comprehensive and sustainable solutions for road crash injury prevention. Their role in the process of the prevention of road traffic crash-related deaths and injuries is crucial.

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