ROAD SAFETY IN TURKEY- IMPLEMENTING VISION ZERO

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Abstract

EU financed project to improve road safety focused on: redesigning the institutional framework; improving data collection; improving enforcement of traffic rules, driver training, and communication campaigns.

The problems encountered included a lack of understanding about Vision Zero, diffuse and distributed institutional responsibilities, lack of good data, and limited technical capacity. The project carried out a comprehensive needs assessment, several training programs and study trips, redesigned the crash data collection process, implemented a pilot communication campaign, and developed proposals for redesigning the institutional framework for managing road safety.

While the long-term success of the project remains to be seen, the Vision Zero concept was officially adopted by Turkey as the basis for its road safety policy.

Lessons from this work are that implementing concepts like Vision Zero requires a technically advanced audience, a political champion, and underlines the importance of having high-quality data to support policy.

Keywords
Vision Zero; Safe System Approach, Road Safety; Turkey; European Union;

Introduction

The Government of Turkey recognizes the challenges it faces in improving road safety. In 2012, the Government of Turkey implemented the Road Safety Strategy and Action Plan 2012-2020. The most recent National Development Plan (2019) also recognizes and explicitly addresses road safety, it sets a specific target of reducing the number of fatalities from traffic accidents from 6675 in 2018 to 4900 in 2023.

To help Turkey meet its ambitious goals, the EU Delegation to Turkey and the Government of Turkey funded the "Road Safety – Vision Zero for Turkey" project. The overall objective of this project was to align Turkey's efforts for road safety with the EU policies and the Brasilia Declaration. The specific project objectives were to:

- Create a new institutional and legislative framework with a designated lead agency and a develop a long-term Road Safety Strategy Document for 2021-2030.
- Improve institutional capacity of the Road Safety Services department/unit of Turkish National Police (TNP) for better implementation of strategies and enhanced enforcement.
- Improve the road crash reporting, data collection and reporting of TNP, and
- Improve the public relations, communication, and advocacy capacity of TNP

The central premise of Vision Zero, a paradigm to end traffic-related fatalities and serious injuries, is that road deaths and injuries are unacceptable and preventable. Underlying Vision Zero is the Safe System – an approach that places the responsibility for road safety from the road user to the designers and managers of the road networks.

The Global Road Safety Facility developed country guidelines to help countries improve road safety. The country guidelines are based on applying and using:

1. Safe System principles,
2. Evidence-based interventions, and
3. Results-focused management

The current situation and road safety management system was evaluated based on these principles.

Key Trends

In 2018 there were 151 cars per 1000 people compared to 92 in 2007 (Turkish Statistical Institute, 2019a) While the number of cars per 1000 persons has been increasing, it is still lower than the number of cars per 1000 people in the EU28 (European Commission, 2019).

The number of registered vehicles increased from more than 13 million in 2007 to more than 22 million in 2018, an increase of more than 50% in 11 years (TNP, 2019a). The number of driving licenses for motorized vehicles increased from slightly less than 19 million in 2007 to more than 84 million in 2018 (TNP, 2019a)!

The total vehicle kilometres driven in Turkey, by every type of vehicle, increased between 2015 and 2017 (Turkish Statistical Institute, 2019b).

The total number of crashes between 2011-2019 did not change much. There was a slight decrease in the number of crashes between 2015-2019 from 1,313,359 to 1,168,144 (11.1%) (TNP, 2019a). However, during this same period, the number of crashes resulting in a fatality or serious injury increased by 32.6% (from 131,845 to 174,896) (TNP, 2019a).

Injuries resulting from road crashes increased by 19% from 2011 to 2015, and then decreased by 7% from 2015 to 2019 (TNP, 2019a). Turkey witnessed a decrease in the number of fatalities from 2011 to 2019; fatalities decreased every year except in 2015 and 2017; there was 27.3% reduction in the number of fatalities (7,530 to 5,473) between 2015 and 2019 and an especially large decrease from 2017 to 2019 (TNP, 2019a).

To summarise, the number of vehicles, licensed drivers, and distances driven are all increasing in Turkey. While the total number of crashes has remained stable, the number of crashes resulting in death and/or serious injury increased. The number of fatalities, however, has declined.

Road Safety Management in Turkey

In Turkey, the Road Traffic Safety Strategy and Coordination Board (RTSSCB), under the Ministry of Interior, coordinates all activities necessary to achieve the road safety goals and objectives.

The Ministry of Interior is responsible for enforcement of traffic rules and regulations, and for public awareness campaigns. The Ministry of Transport and Infrastructure is responsible for the designing, construction, operation, and maintenance of road infrastructure. The Ministry of Health, Department of 112 Emergency Health Services, is responsible for delivering post-crash care to victims of crashes. The Ministry of National Education is responsible for the training of drivers, the testing and certification of drivers in order to get a driving license, and for educating students in schools about road safety and road use.

The role of local administrations, non-governmental organisations, Parliament, and businesses is limited, and in practice altogether absent. At the metropolitan municipality level, an organisation called UKOME (Transport Coordination Centre), comprised of representatives of government institutions, takes decisions related to road safety matters. At the provincial and district level there are "traffic commissions," These traffic commissions coordinate with the national government, determine needed measures, and implement them in a province/district.

In Turkey, most NGOs dealing with road safety are not professional, have limited access to resources, are personality driven, single-issue organisations, with limited capacity and competences in the field of road safety.

In the Turkish Parliament, the Internal Affairs Committee deals with road traffic and safety issues.

Under the Presidency of Strategy and Budget, a Road Safety Working Group, including representatives from government, academia, and NGOs, was established to support the preparation of the 11th Development Plan (2019–2023).

As part of the new presidential system, a new Security and Foreign Policies Council was given the responsibility for developing policy proposals in the field of road safety. In 2020, a new unit, the Transport Safety Investigation Centre, was established in the Ministry of Transport and Infrastructure for investigating accidents.

In order to help countries in implementing the Safe System approach, the World Bank's Global Road Safety Facility developed country guidelines. The basis for the work done to carry out the current situation analysis is the country guidelines.

The suitability and performance of the above institutional framework was evaluated vis-à-vis seven management functions (Bliss & Breen, 2013):

1. Results focus
2. Coordination
3. Legislation
4. Funding and resource allocation
5. Promotion
6. Monitoring and evaluation
7. Research and development and knowledge transfer

Conclusions about management of road safety in Turkey

Results Focus - Currently, there is no 'lead agency' for road safety management that can properly implement the Safe System approach in Turkey. The road safety strategy and action plan focus on inputs and don't relate these to outcomes, and targets are often specified in terms of inputs rather than outcomes. Furthermore, there is no clearly identified mechanism for monitoring and assessing performance of various stakeholders. Finally, not all stakeholders are included in managing and improving road safety.

Co-ordination - There is no institution in Turkey that is responsible for horizontal coordination between central Government institutions, or vertical co-ordination between different levels of government Institutions. The stakeholders operate almost entirely within their own field of authority and responsibility as public institutions, with little consultation, or co-ordination with other stakeholders.

Legislation - The legal framework does not reflect the safe management system. The fragmented and dispersed, sometimes conflicting laws, makes it difficult to consistently enforce laws, rules and regulations, leads to conflicts in the laws themselves, and leads to problems when subjected to judicial

scrutiny. These laws, rules and regulations are not periodically reviewed to stay abreast of changes in the road safety situation. Rather, revisions are made based on need, as and when perceived as being necessary. Turkey's national legislation also differs on some points with relevant EU acquis and the requirements of some international treaties to which Turkey is a party. Finally, road safety is not prominent in the Turkish Parliament, few MPs have any awareness of road traffic safety issues. This lack of awareness about road safety among the MPs is as one of the main barriers to the sustainability of the legislative process of road traffic safety.
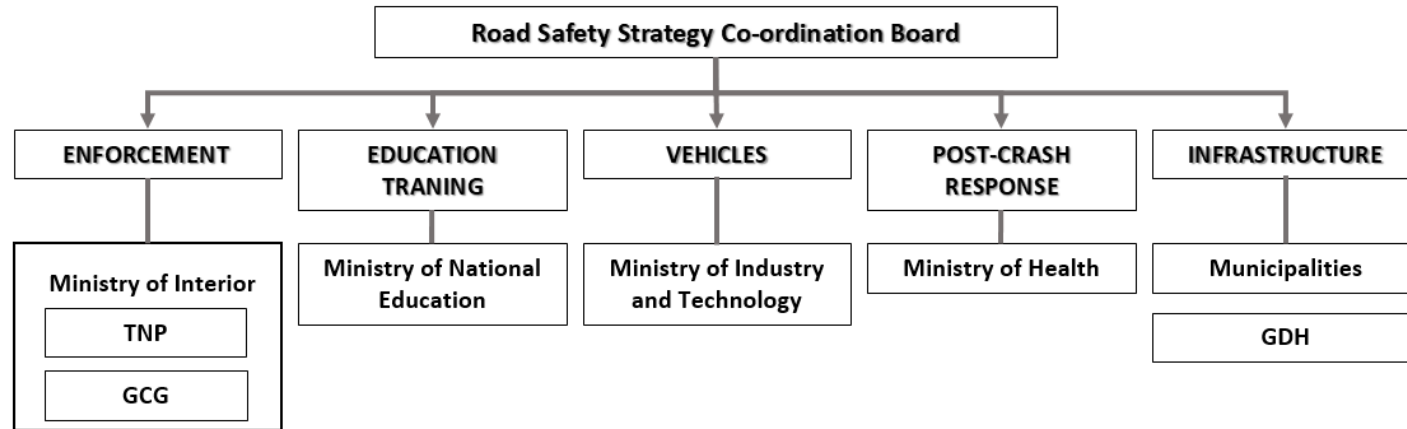
Funding and Resource Allocation - There is no sustainable funding source to support institutional management functions and policy interventions to achieve the desired road safety outcomes. All resources are provided from a central budget. The level of available funding does not seem adequate for achieving the ambitious vision Zero targets that Turkey has set itself. However, we note that it is difficult to separate out the resources used for funding road safety related activities from other activities.

Promotion – There is no national communication strategy emphasizing the shared responsibility for improving road safety; communication does not reflect a long term strategic and Safe System approach. The lack of a lead agency, staffed with communication professionals, and the lack resources hampers efforts to promote awareness about road safety in Turkey.

Monitoring and Evaluation - There is little data of the type and detail to meet the monitoring and evaluation needs of the Safe System approach and data driven management of road safety. Currently, activities such as baseline setting, monitoring and evaluation of activities or their impact are not performed at all.

Research and development and knowledge transfer - The level of Research and Development (R&D) and knowledge transfer are currently inadequate for meeting the needs of the Safe System approach and the road safety management system.

Figure 1 summarises the current institutional framework for managing road safety in Turkey and highlights the gaps and deficiencies. This figure shows stakeholder organisations and their responsibilities. Under the relevant institutions, the list of the seven functions, deemed to be essential for the management of road safety in a country, are given. Each pillar is coloured green, light green, red, or light red. Green means the function is being carried out as intended. Light green means that the function is being carried out but needs to be strengthened. Red means the function is not being carried out. Light red means the function is being carried out, but it is not being carried out as intended.

Road Safety Strategy Co-ordination Board

ENFORCEMENT	EDUCATION TRANING	VEHICLES	POST-CRASH RESPONSE	INFRASTRUCTURE
Ministry of Interior	Ministry of National Education	Ministry of Industry and Technology	Ministry of Health	Municipalities
TNP				GDH
GCG				

	ENFORCEMENT	EDUCATION TRANING	VEHICLES	POST-CRASH RESPONSE	INFRASTRUCTURE
Promotion					
Funding & Resource Allocation					
Results Focus					
R&D, Knowledge Transfer					
Monitoring and Evaluation	(Only fatalities, serious injury and accidents)				(Traffic volume and hotspot analysis)
Legislation	(own area)	(own area)	(own area)	(own area)	(own area)
Co-ordination					

Data to support policymaking – the evidence base

The data needed to improve road safety can be grouped into five categories, namely:

1. Risk Exposure Data
2. Crash data
    a. Property damage only crashes
    b. "Investigated" crashes
3. Transport related data
4. Safety Performance Indicators
5. Health outcomes data, linked to crash data

Much of this data is not collected in Turkey. Turkey does not conduct a periodic household travel demand survey, and neither does it conduct a commodity flow survey. Thus, the travel demand data, is incomplete in terms of its geographic coverage and lacks details on crucial characteristics of travel demand. Most municipalities do not even have a digitized road networks.

The crash data on accidents is collected by the Turkish National Police (TNP) and the Gendarmerie. The data collected in the crash investigation reports is not detailed enough to carry out a proper forensic crash investigation to determine the causal chain of events leading up to the crash. The number of staff who are competent to conduct proper forensic crash investigations and collect data is also limited.

The quality of the data needs to be significantly improved. For example, the validation procedures used for recording and processing crash data are not clear. Neither are the procedures for validating the injury data from hospitals. During our analysis we found problems with even the geo-coordinates of accidents.

There is no one single agency or organisation that is responsible for collecting and processing all the data needed to properly address road safety issues. Doing a detailed analysis of the road safety situation requires data to be collected from numerous governmental agencies. Not only does this take time and money, but there are problems of harmonisation of definitions and inconsistent data quality. The crash data that collected by the Turkish National Police and Gendarmerie are different; the data differ in terms of the data that is collected and stored.

Thus, one of the most important conclusions of our work is to conclude that the quality and completeness of data to support road safety policy is entirely inadequate. Without data, the implementation of the Safe System approach is unlikely to yield the desired results.

Lessons Learned

This project was a comprehensive project designed to improve road safety outcomes in Turkey. The Turkish authorities were clearly motivated to remedy the road safety situation in their country. Despite this, however, the success of this project was limited and the project encountered several problems. The question is why, and what can be learnt from it to design and deliver better projects in the future?

Policy Context

The ToR prescribed a policy solution for improving road safety in Turkey (Activity 1.3), in particular, it prescribed the creation of an "adequately funded and publicly accountable lead agency / road safety coordination body" and define what this lead agency should do. However, the ToR did not adequately consider take into consideration the near total lack of inter-organisational cooperation and co-

ordination in Turkey. Consequently, the project was mired in the middle of "turf" battles between various organisations. Future projects should be based on a more thorough and proper consideration of the institutional context in which project is to be implemented.

Project Design

While the ToR specifically outlined the Safe System approach as the way forward, it did not adequately cover the requirements for successfully implementing such an approach in Turkey. The Beneficiary of this project was Turkish National Police (TNP). The TNP is responsible primarily for the enforcement of traffic rules and regulations. The Safe System Approach, however, involves more. The ToR as it was written ignored the other pillars of the Safe System Approach (post-crash response, education, vehicle safety, and infrastructure).

The ToR also included elements that should not have been part of such a project. For example, it required "A cost-benefit analysis report comparing the costs of changes in the renumeration of road safety staff and the expected benefits." The ToR then stated that the "cost-benefit analysis should be presented to the beneficiary as a report … and possible recommendations about the possible actions that can be taken to improve the conditions of the TNP-RSS staff." There is no evidence of any correlation between the renumeration of the staff, their working conditions, and road safety. One wonders why such elements were included in the ToR.

To conclude, this ToR was written without a proper understanding of, or consideration of the local realities and context, it displays a disturbingly poor understanding about what is needed for managing and improving road safety. The ToRs, especially of such large and important projects, should be prepared more carefully in terms of balancing theory with practice.

Project Scope

The scope of the project was too broad, and poorly defined. In some places the scope included in all organizations involved in activities related to road safety, and in other places its focus is only on enforcement and the organization responsible for this, the TNP-RSS.

The ToR also mixed a strategic focus with much more operational activities. For example, it requires the development of a comprehensive road safety strategy, action and investment plans (activity 1.2). However, at the same time it also requires the "incorporation of How to Safety Manuals of the UN in Daily Operations of TNP." This confusion is evident throughout the ToR.

Project Management and Coordination

The mechanisms considered in the ToR for managing such a large and complicated project proved to be inadequate right from the start. The representatives of the beneficiary lacked the technical expertise for undertaking such a project, but there was no mechanism to support the Beneficiary.

For such a complex and ambitious project, having a two-tier formal mechanism (a SC and an additional management mechanism, including representatives from both Beneficiary and Contractor), involving the project team and the Beneficiary for providing technical and procedural support from the very start of the project would have improved efficiency. This could have aided project progress and would have led to a stronger result in terms of capacity development.

Use of Local Expertise

The identification and use of local experts to supplement the expertise and experience of foreign experts is an important lesson learned from this project. A balanced approach is needed in hiring local and international NKEs. Availability of local experts, without whom no major development effort can succeed, is far short of the need. The difficult task of creating an adequate corps of such experts in a

reasonable time must be attacked on several fronts as domestic expertise helps to create a better understanding of the specific context and facilitates communication and interaction with the Beneficiary and other stakeholders.

Translation

One of the surprising obstacles in delivering this project was translation! The resources allocated to translation and interpretation should proportionate to the task. Properly translating technical terms and documents is a painstaking and time-consuming exercise especially for technical and legal documents. Understanding those documents itself is an arduous task, especially if it is in a different language. A small mistake can completely change the meaning of a whole sentence. This is also linked to the intensity of the communication with the Beneficiary and secondary stakeholders that was required as this was not a desk research type of action. Thus, future projects must take this aspect of delivery into account.

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