



LearnforLife®

Road Safety in Oman

empowers people & patients

“Oman Road Safety: Motivating the Drivers®”

Addressing the Human Factor

Brief on Road Safety in Oman

Introduction: Addressing human behaviour on the roads

Increased knowledge and understanding of the causes of road crashes have resulted in greatly improved road safety in most countries, including through improved safety measures within cars and in crafting infrastructure that can help counter accidents. While developed countries are ahead, emerging and developing countries are also making progress in such respects. At the same time, the prime determinants of the catastrophic differences in road accidents between the countries that perform the best in this area, and those that are behind, particularly emanate from differences in attitudes and human behaviour. Still, limited attention has been paid to the determinants and consequences of people's behaviour on and around the roads.

Background for “Motivating the drivers”

The proposal has been requested by the Royal Oman Police (ROP) as a response to the Sultan's request for an urgent response to the critical issues of Road Safety in Oman. The Sultanate of Oman is marked by the second highest death toll from traffic incidents (i.e. the number of persons per 1000 whose death is caused by involvement in road accidents) in the world. Only Libya is a worse performing nation in this respect. In one month, October 2011, Oman experienced 670 traffic accidents in which 110 persons were killed and 903 seriously injured. Given the size of the population, these numbers signal very high casualty rates (OECD countries with three times as large population may experience similar numbers in any given time period).

Oman has, in contrast to many other countries with high numbers of fatalities in road crashes, a well developed road system as well as a relatively new car fleet. In other words, Oman has the “hardware” for Road Safety - but not the “software”. To further reflect this, 98% of the road crashes in Oman are reportedly due to human factors. Hence, there is a tremendous need for raising awareness, starting new learning processes and changing the behaviour of people on the roads.

The opportunity has now arrived to address this situation. The rapid diffusion of ICT opens up new, previously unprecedented, means for active two-way communication between providers of learning tools on the one hand, and citizens/users on the other hand, applying equally strongly to developed and developing countries.

The “Motivating the drivers” programme draws on the wider “LearnforLife” methodology, developed in collaboration with universities, private companies and health authorities. LearnforLife puts new knowledge to use in addressing key behavioural factors in areas including health, safety, and environment.

LearnforLife adds to previous experience by introducing a novel portfolio of reward systems, which has been pioneered in response to a selected set of precise situations to meet with critical threats to safety and well-being. LearnforLife is building its data base in parallel with piloting novel reward systems, making use of modern communication tools to identify and upgrade the most effective stakeholder engagement and behavioural adjustment scheme.

The purpose of LearnforLife is to provide practically useful understanding of how individuals can be enlightened to enable self-governed critical adjustments in lifestyle patterns. Insights how to target individuals living under different conditions blend with a broadly based outreach methodology capable of reaching people regardless of, e.g., possession of specific mobile communications hardware, profession or background skills.

Part of the main task is to enable human beings to turn from ignorant to aware, from reactive to proactive, from uncertain to confident. Grasping the opportunity requires the ability to raise interest and to enable engagement and active learning in a wide circle of people. The focus is to target the right kind of issue and to provide the appropriate incentive that works through a self-reinforced e-learning process.

Making use of mobile telephony

New applications in Information and Communications Technology (ICT) are mostly developed from the supply-side perspective, based on the interest of business and with the aim of operating through simple entertainment. Much of the information currently in digital circulation displays little concern for existing cultural and societal perceptions. At this stage, however, the capacity to make use of ICT has reached a stage, and is diffused to a degree, that can allow for addressing critical outstanding needs.

Mobile telephony is set to play the leading role in this context. The handset device has developed into a highly personal item and plays a social role at the same time, i.e. it provides a combination of integrity and connectivity in a unique manner. With the “Motivating the drivers” programme, the potential of the mobile phone as a tool for behavioural change is applied to raise road safety in Oman. In the process it will operate

within a broader coherent communication package, encompassing other ICT and media tools as well. Consistency in the use of different channels for providing information and raising awareness will leverage the effectiveness of the core methodology.

Unique method for targeting drivers' behaviour

In the "Motivating the drivers" programme, mobile telephony is complemented with other media channels to reach out and continuously educate and inspire those adjustments in behaviour that will be most effective in reducing road fatalities and injuries.

In order to achieve the greatest possible impact, the campaign initially focuses on young drivers who are known for driving fast and putting others in danger, while themselves still lacking experience on the roads. This group is also a regular and intensive user of mobile telephony, prone to be influenced by digital communication, social media, etc.

Prepared for application in the Sultanate of Oman, the programme is set to deploy a comprehensive communication and interactive messages campaign. Applying a research-based reward sequence, it aims to help inform, enlighten and incentivize targeted drivers and other related individuals to pass through stages of personal development, so as to systematically build the motivation that is required for them to address the behaviours inflicting the greatest risks on the roads.

The behaviours targeted are partly about speed, but also how to read and interpret traffic instructions and how to receive complementary guidance. Other components include use of safety belts, practices when passing other cars, signalling before going left or right, etc.

The "Motivating the drivers" proposal is not about telling young people what to do. Again, research shows the required change in attitude and in behaviour is best enacted in other ways, through other means. These insights are here structured, packaged and deployed in a systematic manner for the purpose of enacting maximum impact.

The development work that lay behind this programme has been undertaken in close collaboration between local and international actors and researchers and experts, and there have been extensive consultations notably with the Royal Oman Police and The Research Council of Oman. A major additional sponsor has been invited to take an active part in the programme implementation, while providing a contribution to allow for an upscaling of the ongoing initiative.

Following a series of consultations over the past year, the instructions for fine-tuning the proposal were specified by the authorities in 2011. Fine-tuning of the incentive packaging and private sector engagement in the scheme has been further worked on in the spring of 2012.

Key Performance indicators

The programme engages a number of research specialists in the development of performance indicators and measurement methodology, include the control group component. The indicators are structured from the outset and will be reported continuously at certain intervals during the campaign, to feed data which will help

document the precise impact of the programme and how that can be gradually enhanced.

The campaign aims to achieve a reduced number of accidents, and also that accidents that do take place result in less serious consequences. The results are to be documented in scientific reports, along with potentially path breaking knowledge creation and diffusion of insights how to address the human factor in road safety programmes around the world.

Examples of indicators:

1. Number of deaths caused by road crashes
2. Number of permanent disabilities
3. Number of seriously injured
4. Number of injured (several categories for minor injuries can be deployed)

The indicators above will be designed so as to measure gender and age groups influences. Further, we will consider taking into account:

5. Types of accidents (i.e. overtaking, single, roundabout, etc.)
6. Point of time (hour, weekday, holiday) when the accident occurs
7. Location of accident (highway, local road, intersection etc)
8. Types of vehicle involved in the crash (truck, sports car, bus, minivan, etc.)
9. Info on main cause of accident in combination with human behaviour (weather conditions, road conditions, animal crossing, etc.)

In addition to the above, the socio-economic savings resulting from the programme will be systematically measured. For some indications, see below.

Socio-economic implications

The social cost of road crashes and injuries is significant in basically all countries around the world, and they are very high in Oman. It includes loss of life and diminished life quality, loss of productivity, medical, legal and juridical, property damage costs, human suffering, etc.

The negative consequences of road crashes are widely recognized and most countries spend huge amounts of money on improving roads and infrastructure to enable modest reductions in casualties. It is today well known, however, that the human factor contributes to a very extent, and yet relatively small efforts have generally been devoted to address this critical factor. Some developed countries have put emphasis on demanding conditions for attaining a driving license, a strategy that has been less commonly applied in developing countries, where allowing more people the possibility to drive is seen as important to the development agenda.

Consider an example of an estimate, in this case taken from New Zealand, of the socio-economic costs of road crashes.¹ The average social costs per crash and per injury, by cost component and severity, at June 2010 prices, are summarized in Table 1.

The total social cost of motor vehicle injury crashes in 2009 is estimated at approximately \$3.67 billion (down from \$3.72 billion in 2008) at June 2010 costs. This estimate includes both reported and non-reported casualties.

Table 1: Average social cost per crash and per injury, by cost component

	June 2010 costs (\$)		
	Fatal	Serious	Minor
Per injury (note)			
Loss of life/permanent disability	3,559,400	355,900	14,200
Loss of output (temporary disability)	0	1,300	300
Medical	6,200	13,700	800
Legal and court	13,100	3,100	500
Property damage	5,600	4,000	4,100
Total	3,584,400	378,100	20,000

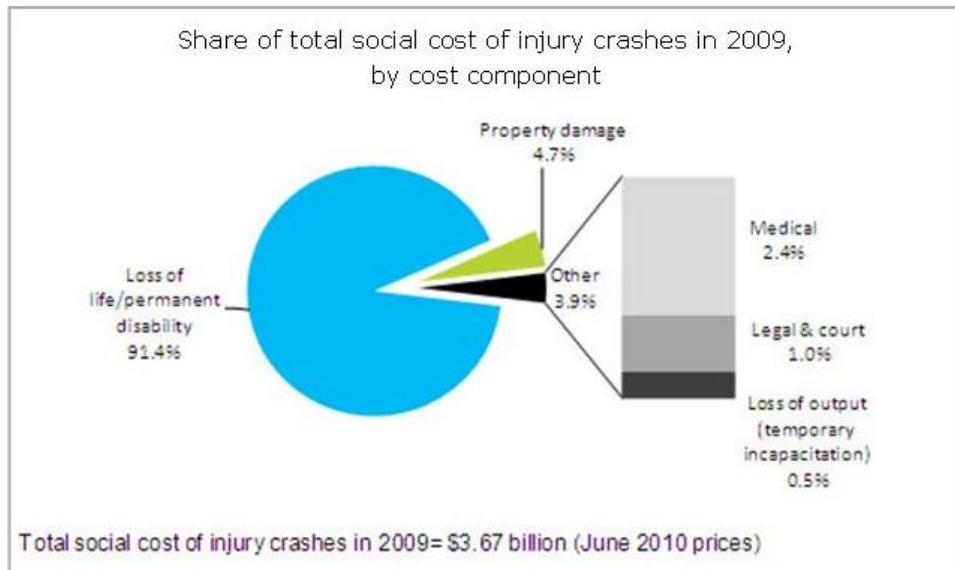
The breakdowns by injury severity are:

- \$1.38 billion for fatalities (up from \$1.31 billion in 2008)
- \$1.53 billion for serious injuries (down from \$1.61 billion in 2008)
- \$0.76 billion for minor injuries (down from \$0.80 billion in 2008).

Figure 1 below shows loss of life and/or life quality due to permanent impairments accounted for approximately 91 per cent of the total social cost of injury crashes. Property damage accounted for around 5 per cent, and other cost components made up the remaining 4 per cent.

¹ Ministry of Transport, "The Social Cost of Road Crashes and Injuries", June 2010 Update, Wellington.

Figure 1: Cost of Injury Crashes



New Zealand and Oman display important similarities, in country size, population, income level (although the level in New Zealand is presently higher, Oman is growing faster and catching up), and in regard to the behavioural factors at focus here (i.e. the role of young male drivers and the factors denoting their behaviour patterns). The figures taken from New Zealand, or any other country, must still be adjusted to the situation in Oman. In the early phase the project will produce a socio-economic estimate for casualties of various kinds in Oman. From the start of the project, the socio-economic will thus be measured and evaluated.

It is nevertheless clear that the project can generate substantial social saving, both by reducing the number of crashes, and the severity of the injuries caused. Assuming the social costs are 90 per cent in Oman of the level in New Zealand, for each fatal crash that can be prevented, there is a saving of 1 million OMR. For each fatal crash turned from fatal to serious, the saving would be OMR 900,000. Given the numbers of fatal road crashes in Oman, our scheme can generate huge social rewards. Even as we will review and adjust the socio-economic calculations as results become available, the economic gains will be in the range of millions of OMR, not to speak of the foregone human suffering, even with modest impacts on behaviour.