QUEENSLAND TRANSPORT

SUBMISSION

TO THE INQUIRY INTO

NATIONAL ROAD SAFETY

October 2003

TABLE OF CONTENTS

Introduction

This paper has been prepared by Queensland Transport in response to an invitation from the House of Representatives Standing Committee on Transport and Regional Services October 2003 to prepare a submission to their inquiry into national road safety. The inquiry is to:

1. review the strategic objectives, priority areas and proposed measures in the National Road Safety Strategy 2001-2010, and the National Road Safety Action Plans for 2001 and 2002 and for 2003 and 2004 and consider whether these remain appropriate.

2. identify any additional measures or approaches that could or should be adopted by the Commonwealth, States and Territories, local government and non-government agencies and bodies (including industry) to reduce road trauma and

3. identify factors that may be impeding progress in reducing road trauma, and suggest how these could be addressed.

This submission sets out the terms of reference as the three main sections of the paper. The objectives in the National Road Safety Strategy 2001-2010 and the action areas of the National Road Safety Action Plan 2003 and 2004 are addressed under section one. Section two provides information on Queensland's approaches to reducing road trauma in relation to behaviours and attitudes, vehicle compatibility, technology, equity, licensing and the road environment. Section three has identified 4 key areas which, at a strategic level, are currently impeding road trauma reduction in Australia.

Queensland is committed to reducing our road toll to 5.6 fatalities per 100,000 population by 2010 under the National Road Safety Strategy. The draft Queensland Road Safety Strategy 2004-2011 and proposed two-yearly Queensland Road Safety Action Plans will deliver a mix of proven (as delivered under the current Queensland Road Safety Strategy 1993-2003) and innovative approaches to deliver targeted reductions in the economic and social costs of road trauma.

The period 2004-2011 has been chosen for the new Queensland strategy as it establishes a cycle where state road safety strategies will be produced one year after their national counterpart. As such, the work conducted on the national strategy, including targets and objectives, will inform the development of the state strategy.

The new Queensland strategy will:
- further develop a co-ordinated, strategic approach to road safety
- enhance community and stakeholder input into, and ownership of, road safety
- directly address issues that will affect the road system to 2011 and beyond and
- draw on best-practice initiatives and link with the National Road Safety Strategy 2001-2010.

This submission reflects the approach that Queensland is taking in the new state strategy.

1. National strategy and action plan objectives, priority areas, and proposed actions

National Strategy

Queensland Transport supports the objectives of the National Road Safety Strategy and the priority areas in the National Road Safety Action Plan 2003-2004 and provides the information below on how we are utilising them in the work we do. The direction Queensland is taking in its approach to road safety is also provided in relation to the national objectives and priority areas.

Improve road user behaviour

Queensland believes the national strategic objective covering 'improve road user behaviour' is an important element for improving road safety. To this end Queensland Transport maintains a strong focus on road user behaviour as a means of improving road safety and managing inappropriate behaviour through enforcement, legislation and education. Queensland Transport continues to increase its focus on the development of safe road use through legislation, enforcement and education, in order to decrease the chances of death and serious injury for road users.

In particular, Queensland Transport, having identified particular at-risk road user groups (e.g., young drivers and riders, rural and remote road users), will continue to refine current road safety initiatives to target these groups, and where relevant develop specific approaches to improve their safety. Further, we will actively identify and undertake research relating to high risk behaviours and attitudes (e.g., alcohol, speeding, inattention). These approaches will then utilise proven road safety initiatives (e.g., public educations campaigns, fleet safety initiatives, intelligence based enforcement) to improve the safety of both the at-risk groups and the community.

Improve the safety of roads

Improving the safety of Queensland's roads remains an important element of the government's approach to road safety. The Department of Main Roads is committed to a key outcome of safe roads, safe road environments and the safe management of traffic. Local government is also committed to improving safety on their network. Providing safe roads is a particular challenge for Queensland, as the State has the largest road system in Australia and 44 percent of the state controlled road network is older than 20 years. The estimated cost of maintenance and rehabilitation of the state's roads is $4 billion. Queensland is also experiencing unprecedented population growth, and increased related economic activity is expected to double the freight task over the next 15 years.

Queensland is also mindful of the work undertaken for the national strategy whereby major gains will be achieved through improving the safety of the road system. Therefore, Queensland is focussing efforts on the safe design, construction and maintenance of roads, bicycle facilities and footpaths. This will also include the systematic identification of locations and corridors experiencing a disproportionately high number of crashes, and the application of best practice solutions for their treatment.

A forgiving roadside environment will also be developed on proposed and existing roads to help drivers correct errors and avoid a crash, or in the event of a crash, minimise injury to the road user. Planning for at-risk road user groups will continue to be included as will the safe passage of pedestrians and bicycles through shared facilities, separation, and identification of alternative routes, speed reduction, appropriate enforcement measures or other best practice initiatives.

This approach also includes traffic management. This ensures that road safety is included in decisions about the land use in towns and cities, and promote comparatively safe forms of transport (urban buses) while improving the safety of other modes. It also provides for the enhancement of communication systems so that emergency services are made aware of any road closures or other features that may block access to the crash site.

Improve vehicle compatibility and occupant protection

Queensland Transport believes that vehicle design and compatibility has a key role to play in reducing the level of trauma experienced in crashes. Vehicle safety features protect both occupants and other road users in the event of a crash.

Vehicle incompatibility as outlined in this objective provides a challenge for road safety. Population growth, changing vehicle purchasing patterns and the increased freight task are impacting on the types of vehicles entering the transport system resulting in increasing numbers of small passenger vehicles, 4WDs and light commercial vehicles. This may lead to a potential for greater injuries for small vehicle occupants in the event of a crash with a larger vehicle. Of increasing concern is the mass and geometry incompatibility of 4WDs with other passenger cars that may result in higher injury levels to occupants in passenger cars in the event of a collision with a 4WD.

Vehicle compatibility goes beyond vehicle-to-vehicle crashes and includes vehicle-to-person crashes raising particular concerns for at-risk groups. For example, 4WDs are also, unsurprisingly due to their size and shape, over represented in fatal pedestrian crashes. Road crash data figures for Queensland indicate that 4WD crashes in 2001 increased 16% over the previous year compared with an overall increase of 8% for the state. 4WD crashes leading to medical treatment increased 40%. Vehicle safety cannot focus on self protection in isolation from compatibility.

The increasing number of 4WD drives entering the transport system also raises particular concerns for the safety of vehicle occupants. Used car safety ratings, prepared by Monash University from crash data provided by Qld, NSW, Vic and SA indicate that the overall level of safety of 4WDs is lower than that provided by family passenger cars - probably due to a higher percentage of single vehicle crashes of 4WDs, such as rollovers.

Use new technology to reduce human error

Planning for the uptake of new technology that has the potential to reduce the likelihood of a crash is an important building block in Queensland's road safety future. The Draft Multi-modal ITS Strategy for Queensland presents Queensland's position on the development and implementation of technology to reduce human error and road trauma. The ITS Strategy outlines a number of elements, including traffic management, travel information, freight logistics, public transport, transport safety and security and electronic business. Each of these elements contains a road safety aspect, particularly in relation to in-vehicle technology, infrastructure-based technology, personal safety and security, and freight efficient vehicles.

While Queensland can be confident that the future will see the increased adoption of 'intelligent' systems that will assist road users and reduce the likelihood of crashes, Australia must also ensure that these vehicle innovations do not exceed people's ability to use them, and do not provide extra distractions or further complicate the driving task. Government and research sectors objective assessment of the safety benefits of these devices may result in either regulation or encouragement of particular devices. Concern regarding this issue has come about because the contribution of inattention to fatal crashes has been increasing since 1997 and in 2002 it was estimated to have contributed to 25 percent of fatal crashes.

Queensland Transport will also continue to work with the federal government in the development and promotion of safe vehicle design standards.

Given the broad applicability of new technology over many of the objectives stated in the national strategy, the requirement for a separate objective on the use of technology is questionable. Technology is a delivery mechanism by which other objectives are met rather than an objective in itself, and as such sits best within each of the other objectives.

Improve equity among road users

Queensland Transport's approach to road safety ensures that road safety practice caters for all users of the road transport system regardless of transport mode and geography, and reduces or removes disadvantages where possible. Queensland's approach provides a framework for identifying and improving the safety of at-risk road user groups. This approach to improving road safety for at-risk groups is outlined above under the objective to 'improve road user behaviour'. However, it is also noted that some road users, by their nature (e.g., pedestrians, rural road users), are at a higher risk than other road users. It is the responsibility of initiatives undertaken with regard to roads, vehicles and road users to provide safer travelling conditions for at-risk groups.

Improve trauma, medical and retrieval services

While it is vital to provide countermeasures that assist drivers and riders in the task of manoeuvring through the road transport system, crashes do still occur, sometimes resulting in serious casualties. It is therefore vital that any strategy provide direction to assist in the notification and retrieval of these casualties, and reduce the severity and extent of injuries. As such, Queensland supports the inclusion of this objective in the National strategy.

Queensland's approach to this objective has been to provide for specific strategic priorities within objectives relating to the road user, road environment and the vehicle. For instance, while Queensland is determined to improve road user behaviours and attitudes and prevent crashes, it is also imperative that serious crash casualties are treated with the most suitable medical and emergency procedures. Furthermore, it is important to ensure that at-risk road users, such as those in rural and remote areas, are attended to as swiftly as possible and that the use of medical emergency technology is maximised.

Queensland has also taken an approach that maximises the role of the vehicle in the event of a crash, and ensures that incident management procedures assist emergency personnel and avoid secondary crashes.

Through these specific approaches to trauma, medical and retrieval services, Queensland will further ensure that emergency services are notified of crashes in a swift and efficient manner; the road user is treated in a way that optimises their post crash health outcomes (including their quality of life); and, that crashes are managed in a way that reduces further risk to other road users.

Improve road safety policy and programs through research of safety outcomes

As with the use of technology, this area is a delivery mechanism that supports a number of the objectives rather than being an objective in itself. However, Queensland strongly supports the intent of this objective. Queensland Transport is represented on the Research Coordination Advisory Group (RCAG), which provides advice to Austroads on research priorities for road safety in Australia. It provides a forum in which research in key risk areas can be discussed, and gaps and priorities in research can be identified. In addition, each year RCAG organises the Road Safety Research, Education and Policing Conference, which is a two-day event in which information and research papers on all aspects of road safety are presented and discussed. In 2003 over 300 delegates attended the Road Safety Research, Education and Policing Conference in Sydney.

Queensland supports targeted research that improves policy and program development and as such has identified a number of areas throughout this submission that may benefit from research. These include vehicle incompatibility, consumer purchase motivation, and a better data collection and understanding of injuries other than fatalities.

Encourage alternatives to motor vehicle use

Queensland Transport promotes the safety of all modes of transport for all road users, particularly as the growing number of road users places increasing pressure on Queensland roads and road traffic becomes more diverse. This focus will involve the safe design, construction and maintenance of roads, bicycle facilities and footpaths. Queensland will also promote comparatively safe forms of transport (for example, urban bus transport) while improving the safety of other modes.

In encouraging alternative modes of transport, jurisdictions must be mindful that many of these modes currently have poorer safety records (per 1 million vehicle kilometre travelled) than cars and require improved safety to support the uptake of alternatives. Queensland's integrated regional transport plans provide detailed actions and measures to manage travel demand and design communities that reduce car dependency and support public transport, walking and cycling. Initiatives that influence travel choices and encourage voluntary change in travel behaviour are being implemented in workplaces, schools and activity centres. Education and awareness campaigns play a major role in travel demand management.

Land use actions focus on improving access and services to activity centres, increasing densities in residential areas and around rail and busway stations, limiting rural residential development, and improving planning processes to better integrate transport and land use. Cycling, public transport and walking are integrated into the planning, design and construction of transport projects.

National Road Safety Action Plan 2003-2004

Whilst the National Road Safety Action Plan 2001 and 2002 provided a platform for road safety efforts at that time, Queensland Transport believes that the priority areas adopted in the National Road Safety Action Plan 2003 and 2004 provides a more appropriate and more targeted approach to road safety issues that affect Australia as a whole.

Action Area 1 - Speed

Speeding continues to be a road safety issue in Queensland, with fatal crashes attributed to speed, up by 32 percent over the last five years and fatal crashes in high speed zones still accounting for 49 percent of all fatal crashes. Excessive speed is a major contributing factor in approximately 15 percent of fatal crashes each year in Queensland. Speed related crashes continue to be a major contributor to fatalities on our roads. Speed related crashes cost the community approximately $180 million per year in hospital and health care costs, lost productivity in the workplace and the use of emergency services.

Queensland's current Speed Management Strategy aims to review all speed limits throughout the state and make them more consistent and credible, increase the effectiveness of speed enforcement activities by using new technology and better deployment practices, and change community attitudes and behaviour regarding speeding through effective public education campaigns.

Queensland believes that speed reduction should remain as an action area in future national road safety action plans.

Action Area 2 – Road environment

Improving the road environment remains an important priority for Queensland. Our approach to improving the safety of our roads is outlined above.

Queensland believes that improving the road environment should remain as an action area in future national road safety action plans.

Action Area 3 – Driver impairment

Anti drug and drink driving public education are key activities for Queensland because of their significant representation in the state's road toll. In 2002 alcohol contributed to 30% of all fatal crashes in Queensland and 19% of crashes resulting in hospitalisation.

However, it is estimated that approximately 40% of people killed in road fatalities in 2001 have drugs present in their system. Further, Queensland Transport research shows that one in 10 motorists admit driving under the influence of alcohol. Most (73%) did so because they thought they were under the 0.05 BAC. One in seven people surveyed said they risked driving when drunk as they did not have far to travel. Recent research conducted by AAMI showed that 15% of Brisbane drivers admitted driving while under the influence of recreational drugs, and 13% said that they would continue to drive even if their doctor advised them that their medication may affect driving. This would indicate that there is still work to be done in the area of driver impairment.

In response to these issues, Queensland Transport will continue to develop policy and programs to address drink and drug driving through support for the Drug Driving Working Group activities.

In addition, Queensland is reviewing its driver and safety education strategy. The review is aimed at deterring illegal and dangerous road user behaviour in Queensland. Components include the Penalties and Sanctions Review, the Drink Driving Legislation Review and behavioural and education safety initiatives.

Queensland believes that programs and activities to reduce driver impairment should remain as an action area in future national road safety action plans.

Action Area 4 - Vehicles

The national strategy acknowledges that there is little potential for new Australian Design Rules (ADRs) to impact on the outcomes up until 2010. This places more emphasis on consumer advocacy, such as provided by ANCAP, to promote vehicle design that can improve occupant and vulnerable road user safety in the interim. ANCAP has had good success in improving the occupant protection levels afforded by new vehicles above regulatory standards. ANCAP has also accelerated the uptake of advanced safety features such as frontal and side airbags and more recently seat belt reminder alarms.

It should be noted that although large improvements in occupant protection levels have been made in the last decade, improvements in vehicle design for pedestrian protection haven't progressed to the same level. The level of protection offered by the majority of new Australian passenger vehicles is still quite poor. This is of particular concern given that there is no 'pedestrian protection' ADR proposed (or likely in the near future) and the level of pedestrian fatalities remains high.

Queensland believes that programs and activities to improve vehicle safety and occupant protection should remain as an action area in future national road safety action plans.

Action Area 5 – Licensing and driver management

Licensing and driver management underpins Queensland's road transport system and remains an ongoing activity. This area is of particular interest as jurisdictions investigate best-practice approaches to graduated driver licensing.

Queensland is also well into a comprehensive review of penalties and sanctions for illegal road use. Work completed by the review to date includes the introduction of provisions to allow for the blood testing of drivers who are unconscious or unable to communicate and who attend hospital as a result of a road crash (commenced September 2002), and new licence sanctions for unlicensed and disqualified driving (commenced April 2003). New penalties for speeding, learner drivers driving unaccompanied and failure to comply with licence conditions were also introduced in April 2003.

Penalties for failure to wear a seat belt, use of mobile phones, unsafe overtaking, failure to stop/give way and other high-risk behaviours will also be covered in a further stage of the review.

Queensland believes that programs and activities to improve licensing and driver management should remain as an action area in future national road safety action plans.

Action Area 6 – Special groups and issues

As discussed above, the capacity to deliver safety outcomes for at-risk groups is a high priority in Queensland. For instance, young drivers and riders are one of the at-risk user groups identified by Queensland Transport. Queensland Transport will continue to investigate how key road safety issues, such as alcohol and drug driving, fatigue, speed, seat belts, inexperience and inattention will apply to this group and other at-risk groups. Specific initiatives for young drivers and riders will be developed as part of the Queensland Road Safety Action Plan 2004-2005.

As another example, crashes involving motorbikes have also risen significantly over the last two years raising particular concern for this group of road users. A total of 53 motorbike riders were killed in 2002, which represents an 83% increase compared to 2001 and an increase of 55% on the annual average of the preceding 5 years (1997-2001). Hospitalisation also increased by 16% on 2001 and by 27% compared with the preceding 5 years (1997-2001). The largest increase in fatalities were in the 30-39, 40-49 and 50-59 age groups, compared with their respective five yearly averages. For every billion kilometres travelled motorbike riders have 20 times more fatal crashes than people travelling by passenger vehicle.

Queensland Transport is currently engaging a consultant research company to provide a more in-depth picture of contributing factors to motorbike crashes, trends in crash data, current best practice in countermeasures for motorbike safety and recommendations to address the Queensland motorbike crash problem. The consultant's report, with recommendations, is expected to be finalised by mid-2004. Queensland Transport will then examine the recommendations with a view to implementation of agreed recommendations in 2004-05. However, targeted public education campaigns are being planned to raise awareness of motorbike safety issues.

Queensland Transport believes that this action area is important and should be included in future national action plans.

2. Additional measures or approaches that may reduce road trauma

Queensland offers the following information on potential additional approaches to reducing road trauma in relation to the following objectives and priority areas of the national strategy and action plan: behaviours and attitudes, vehicle compatibility, technology, licensing and the road environment.

Road safety and safe behaviours and attitudes

Queensland Transport views the improvement of road user attitudes and behaviours as a priority. However, rather than only focussing on the methods by which road safety agencies can deliver or influence safer attitudes and behaviours, QT has chosen to also focus on those groups who remain at-risk on the road transport system.

Like other states, this approach provides for the strategic identification of groups such as young adults and older road users, motorbike riders, Indigenous peoples, and those living in rural and remote communities. However, QT will further investigate these at-risk groups to determine what factors complicate or contribute to their increased risk, where crashes occur, and why. It is this strategic investigation that will allow Queensland to focus countermeasures in a targeted manner.

Furthermore, QT is also better utilising community engagement and consultation to better understand the issues involved, and inform the community. As such, this detailed and combined information will be drawn from an alliance of government, industry, researchers, and the community.

Road safety and vehicle compatibility

Population growth, changing vehicle purchasing patterns and the increased freight task are impacting on the types of vehicles entering the transport system resulting in increasing numbers of small passenger vehicles, 4WDs and light commercial vehicles. The vehicle mix will lead to vehicle incompatibility and the potential for greater injuries for small vehicle occupants in the event of a crash with a larger vehicle.

Small cars such as those built by the Korean car manufacturers, are the largest growing segment of new car sales (including light and small classes). This increase in the number of smaller cars, and the increase in sales of large 4WDs mean that our vehicle fleet has bigger differences in vehicle mass, stiffness, and height and dimensions. This has the potential for greater injuries in small car occupants in the event of a car to car crash.

While this difference in vehicle size has so far not resulted in increased levels of road trauma, the sales of small to medium commercial vehicles are also increasing rapidly. Freight transport predictions indicate that this will continue and that a major portion of travel for these vehicles will be in urban routes, areas traditionally used by smaller cars. It is therefore anticipated that the mix of vehicles on Australia's roads will be much more incompatible by 2011, with a greater proportion of small passenger vehicles on the one hand, and large 4WDs and light commercial vehicles on the other hand.

As mentioned, the increasing number of 4WD drives entering the transport system raises particular concerns for road safety. One possible measure, canvassed, to reduce the number of 4WDs entering the market is a change to the current tariff arrangements to bring tariffs on 4WDs into line with tariffs on passenger vehicles. A change in the tariffs would increase the purchase price of a 4WD. However, there has been no attempt to determine the consumer purchase motivation or attempt to verify if a potential price increase will slow 4WD purchases or change the composition of the fleet. It would therefore be appropriate to further research the potential effects of a tariff change.

It is also important that ANCAP is sufficiently funded and continues to have an impact on vehicle safety improvements ahead of regulatory change. ANCAP could improve its impact by improvements to:

- Communications strategies - current successes have been made despite a very low public awareness of the program.
- More needs to be done to promote good performing ANCAP vehicles through fleet strategies i.e. governments only purchasing high performing ANCAP vehicles and encouraging other private fleets to do the same. This would have a strong filter down effect on the vehicle fleet.
- Expanding the scope from purely passive safety to cover active safety aspects including ITS applications.

The ANCAP program also needs to monitor the vehicle compatibility question and consider what programs could be put in place to improve the compatibility of the vehicle fleet ahead of a regulatory solution.

Further, Queensland Transport supports federal efforts to provide a compatibility standard for passenger vehicles but urges that interim measures to monitor and influence the compatibility of the vehicle fleet are also vital. More research into the effects of increased polarisation of the fleet is having on crash statistics is recommended.

Finally, consumer information on the aggressivity of new vehicles should also play a role. However, the effectiveness of this approach will be limited unless regulatory steps also occur.

Road safety and technology

The development of the Multi-modal ITS Strategy for Queensland has provided Queensland Transport and Queensland Main Roads with a great deal of experience. The strategy is currently being prepared for final consultation before launch early next year, and is offered to the inquiry for consideration in how to best manage the issue of road safety and technology.

Queensland is also developing an ITS architecture based on the data flows and functionality of existing ITS systems in Queensland. This project was well received by the chair of the National ITS Architecture Working Group as "world best practice". The framework for the e-transport II also closely reflects the approach to the Multi-modal ITS Strategy for Queensland. This is seen in the strategic themes of the national strategy covering off the same issues as the user services of the Queensland strategy and the enabling themes of the national strategy parallel the enabling issues of the Queensland strategy.

The development of both the National Strategy and the National ITS Architecture needs to be given a higher sense of priority. Vehicles containing a wide variety of technology continue to enter the Australian new car market. There is a concern that regulation of this industry is insufficient and may lead to distracting systems that will adversely affect efforts to reduce road trauma. The best way to regulate this technology is through the introduction of the National ITS Architecture and the development of appropriate standards for the operations of new devices. As such, there is a need to mobilise the debate on the development of the architecture and standards as a matter of urgency.

Furthermore, the strategic themes of the national ITS strategy need to be aligned with the user services of the national architecture. This will allow for better coordination of managerial, operational and technical issues associated with ITS development and deployment. It will also provide the framework for informed debate and ownership of the development of ITS across the country.

Road safety and licensing

With the driver licence widely used within the community for identity purposes, the stated purpose of a driver licence is evidence of authority to drive a vehicle. As such, Queensland Transport has a road safety responsibility for ensuring tight controls over the process for establishing identity, to ensure that only correctly licensed persons are on the road. QT also has a social responsibility to ensure tight processes with the wider use of the licence within the community, as a de-facto identity card. However, there are significant public perception risks in widening the purpose of the licence, as well as potential liability issues.

The new Queensland driver licence project aims to introduce a smartcard driver licence that improves the integrity and security of the driver licence, provides a platform to improve service delivery for Queenslanders and maximises the value from government investment in driver licensing. As electronic service delivery penetration increases, a smartcard licence platform in the pockets of 2.5 million Queenslanders would be a powerful tool to deliver a vast array of new opportunities.

Introduction of a smartcard driver licence presents many opportunities to deliver a range of benefits and operational efficiencies. Many transactions currently conducted by the Queensland Police Service officers would become quicker and easier through the introduction of a smartcard licence. For example:

- rapid verification of the validity of the driver licence, including information on curfews, restrictions or past traffic offences – enforcement officers can become immediately aware of a fraudulent licence

- there is significant potential for some roadside traffic offence ticketing procedures to become either completely or partially electronic

- as technology becomes more widely deployed and enforcement agencies incorporate mobile data capability across a number of business processes, policing will become more effective. The result will be more active and responsive policing and an improved sense of personal security and safety for the community

- the ITS Strategy also proposes an investigation of warrants to install speed limiting technology for drivers infringing the speed limit. This may be done using an ignition interlock that requires the driver's licence to be installed in the interlock. This may then interact with the vehicle to limit the

speed only for this driver. Such a process would need to be part of a broader system where the vehicle communicates with infrastructure for awareness of the speed limit throughout the network.

Customer research indicates strong support for the new licence proposals (80% of licence holders value increased licence security). Full stakeholder consultation is planned during 2003.

The road environment

The identification and improvement of sites or road lengths with poor crash records remains an important focus for delivering road safety. The national black spot program and Queensland's 'safer roads' program are fundamental in the treatment of high risk areas. What also remains important is that while the fatalities per 100,000 population have decreased, hospitalisations have increased. Road crashes are a major cost to Queensland and all Australians every year. The Black Spot programmes specifically target those road locations where crashes are occurring. Programmes of this sort are very effective, saving the community many times the cost of the relatively minor road improvements that are implemented.

Black spots in Queensland are being addressed to some extent under the national black spot program and the state's safer roads program. However, although funding is provided through the Safety and Urgent Minor Works program, road locations where crashes are occurring on national highways do not currently receive the same safety priority as roads eligible for black spot program funding.

Extending the national black spot program to include a specific focus on locations where crashes are occurring on national highways would help to reduce crashes resulting in fatalities and hospitalisations.

Queensland also endeavours to plan and work proactively, undertaking road safety audits and mass application of remedial measures. Although these activities are effective in reducing crashes they are potentially costly to implement. Often, road authorities can only afford to implement some of the higher priority road safety audit findings, due to the lack of funds. Similarly, road authorities can only afford to apply, to a limited extent, mass applications such as shoulder sealing, audible edge lines, and utility pole treatment. Solutions to these matters need to be found.

3. Factors impeding progress in reducing road trauma

Queensland Transport has identified 4 key areas which, at a strategic level, are currently impeding road trauma reduction in Australia. These are outlined below:

1   Poor understanding of injuries other than fatalities

Australia has experienced substantial success over recent decades in reducing the number of deaths on our roads. For example, over the last decade in Queensland the fatality rate has been reduced by 40% from 12.7 per 100,000 persons in 1992, to 8.06 as at 30 September 2003. A similar trend has been occurring within other jurisdictions.

Graph 1: Road safety initiatives and their effect on fatalities and hospitalisations

Fatalities & hospitalisations per head of population Queensland, 1993 to 2002
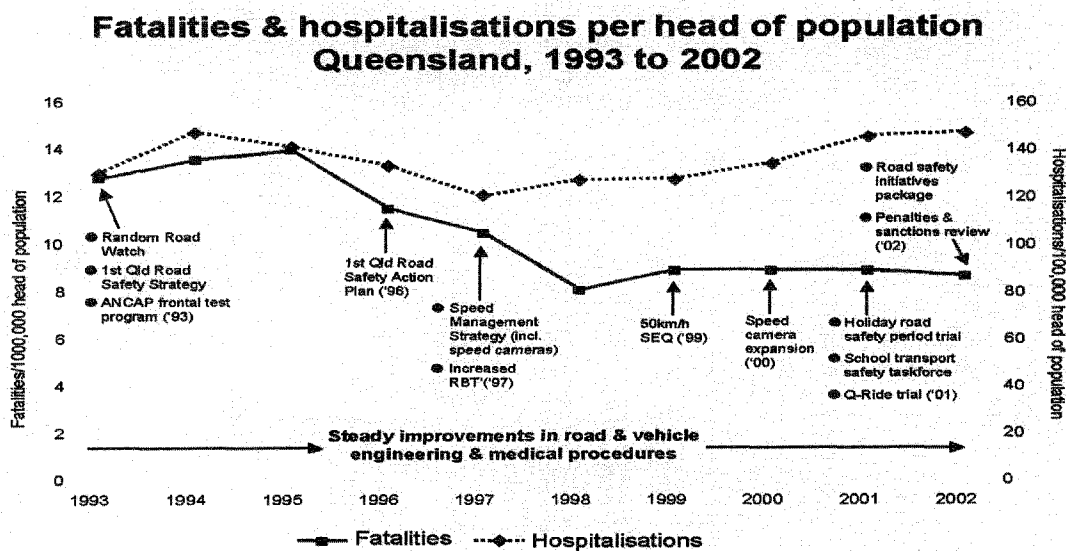
Source: Queensland Transport Road Crash Database

However, similar reductions have not been experienced in hospitalisations. For instance, in 2002 the rate of hospitalisations in Queensland as a result of a road crashes was up almost 14% from 1992 levels. This includes those hospitalised as a result of catastrophic injuries such as amputations, brain injury, quadriplegia and paraplegia, and represents an economic and social cost over the past ten years measured in billions of dollars.

This scenario may have resulted from a number of factors, including the following:

- There is often little understanding of the effect of many countermeasures on serious injuries as a result of a crash. While these countermeasures may reduce fatal crashes at the one hand, they may increase hospitalisation crashes on the other.

- Therefore, while many of our road safety initiatives (such as airbags and ABS brakes) are successful in preventing death, serious injuries can still be sustained. The consequence is that more people are hospitalised.

The rise in hospitalisations may also be a reflection of:

- Improvements in medical and emergency procedures, and hospital and trauma centre treatments which result in more lives saved.

- Changes in reporting or recording procedures (for example, by hospitals) that may change what is considered a 'hospitalised' injury.

There is a need for road safety efforts to focus not only on fatalities, but also on hospitalisations. However, shedding light on this situation is difficult given the following factors:

- Jurisdictions are reliant on police reports. As such, some hospitalisations such as those resulting from bicycle-vehicle crashes may not be included in police reports due to the uncertain nature of these types of crashes.

- There is no nationally consistent coding of injuries, and as such, injury levels are not coded in the same way across jurisdictions. Furthermore, road crash data systems are often not linked between jurisdictions.

- The hospitalisation category while including catastrophic injuries also includes less serious injuries, such as those referred for observation. This makes the definition of serious injuries more difficult, and also makes it difficult to monitor and evaluate the effectiveness of countermeasures on serious injuries.

The result is a situation where serious injuries appear on the increase. To address this situation, Queensland proposes that the issues outlined above be considered at national level through either the National Road Safety Strategy Panel, or through the formation of a group representing road crash data managers throughout Australia.

2   A community that values road safety as a priority

Death and injury on the road is often considered an inevitable part of participating in the transport system (Cowan, 2003). This acceptance and a culture of risk taking on the roads may be a factor that has impeded progress in further reducing road trauma. Promoting a culture where risk taking on the roads is not acceptable and that death and injury is not inevitable is a key direction of our approach in Queensland.

Queensland Transport has adopted community engagement as a way of building both individual and collective responsibility for road safety through the sharing of information and ideas. The premise for adopting this approach lies in Queensland government principles that an informed community can make better choices and accept responsibility for a road and transport system that includes safe road user behaviour. From this, we believe that harnessing the alliance of the community, government, researchers and industry will create greater ownership of road safety.

Promoting a culture that has safer, more responsible attitudes to road use on a national basis has the potential to reinforce appropriate driving practices throughout Australia. For instance, including cultural change in a national approach will have additional benefits for Australians travelling interstate.

For example, the 'driving holiday' represents a significant segment of the tourist experience in Australia. For the twelve months ending December 2002, Australia had 48.1 million domestic drive market visitors, representing 64% of all domestic visitors in Australia (The Drive Market, 2003). However, interstate travellers also represented 5.7% of all fatal crashes in Queensland and 6.1% of all hospitalisations (Queensland Transport Road Crash Database). As such, crashes involving interstate travellers present each jurisdiction with a challenge. A national approach to education on driving attitudes would therefore benefit the whole of Australia.

Further reinforcement of appropriate driving attitudes on a national basis could also be gained through a credible approach to motor vehicle advertising.

Queensland Transport is an active member of the National Road Safety Strategy Panel and a member of the working group currently monitoring and assessing the Federal Chamber of Automotive Industry (FCAI) Voluntary Code of Practice for motor vehicle advertisement. As such, Queensland Transport is examining a proposal that would scientifically evaluate motor vehicle advertising over a period of ten years: A random sample of advertisements for the 9 years prior to the Code and every advertisement since the introduction of the Code.

This type of evaluation would provide important information on whether the Code is effective. If the Code is found to be ineffective the evaluation could inform the development of mandatory standards for advertising. Queensland Transport also believes that the Code, mandatory or otherwise, should cover other advertising material (including the internet and billboards) and that the Advertising Standards Board's role be strengthened in its assessment of complaints.

3 Suboptimal integration of road safety solutions

It is widely accepted that an optimal level of road safety can only be achieved by an integrated approach that includes behavioural and attitudinal initiatives, and road and vehicle engineering countermeasures. In fact, it has been suggested that more focus should be placed on the latter, to ensure that road users are assisted as much as possible with the driving task, and in the event of a crash, are protected as much as possible by both the vehicle and a forgiving road environment.

Crashes are complicated events. They involve behavioural, road and vehicular factors before a crash, during the crash event as well as after the crash. As such, Queensland utilises the Haddon Matrix as the underlying basis for understanding and questioning what factors influence road safety.

The Haddon Matrix, named after the epidemiologist William Haddon Jr., provides a basis for analysing and integrating road safety initiatives in relation to these three phases: Pre-crash, crash and post-crash. For example, random breath testing provides a preventative measure to reduce the instance of crashes involving alcohol; a forgiving road environment attempts to reduce energy exchange, and therefore limit the injuries sustained by vehicle occupants during a crash; and, intelligent vehicle initiatives such as post crash notification systems, as well as improved medical and emergency procedures ensure that crash casualties are extricated and treated as swiftly as possible to reduce the extent and severity of their injuries.

Queensland has sought to further reduce casualties and improve road safety through the epidemiological approach detailed within the Haddon matrix. This underlying approach ensures that responses to road safety issues will be fully explored so that initiatives are developed to enhance the road safety benefits across the three phases.

It is therefore suggested that future approaches more clearly delineate between preventative initiatives and countermeasures that reduce crash and injury severity. It is also imperative that road safety be included in the agendas of other government agencies in order to ensure that road safety is approached from all levels and areas of government. In this way, road safety could be approached in a more integrated way that reduces the likelihood of crashes, and reduces the consequences (for example, optimal health outcomes, rehabilitation, etc) when crashes do occur.

4 Analysis of future issues and trends

Road safety is often focussed on current issues as they present themselves in crash data. However, in understanding road safety and in developing initiatives to combat road related safety issues, insight into the challenges and trends that shape road safety in the future are critical to our planning. Some of the factors that we are investigating in Queensland are listed below:

- Queensland is one of the fastest growing states in Australia, and it is predicted that this will continue through to 2011. However, Queensland's population is getting older. By 2011 the numbers of those over 60 years of age will increase by almost 40%, and will account for almost 20% of the state's population. Many local communities will become significantly more senior over the coming years.

- This therefore, provides Queensland with significant demographic, logistical and lifestyle issues. For instance, the balance between mobility and safety, driver competency and licensing options for older drivers, alternate travel modes including public transport and in-vehicle safety will need to be considered.

Projected population growth for 2011 (medium series)
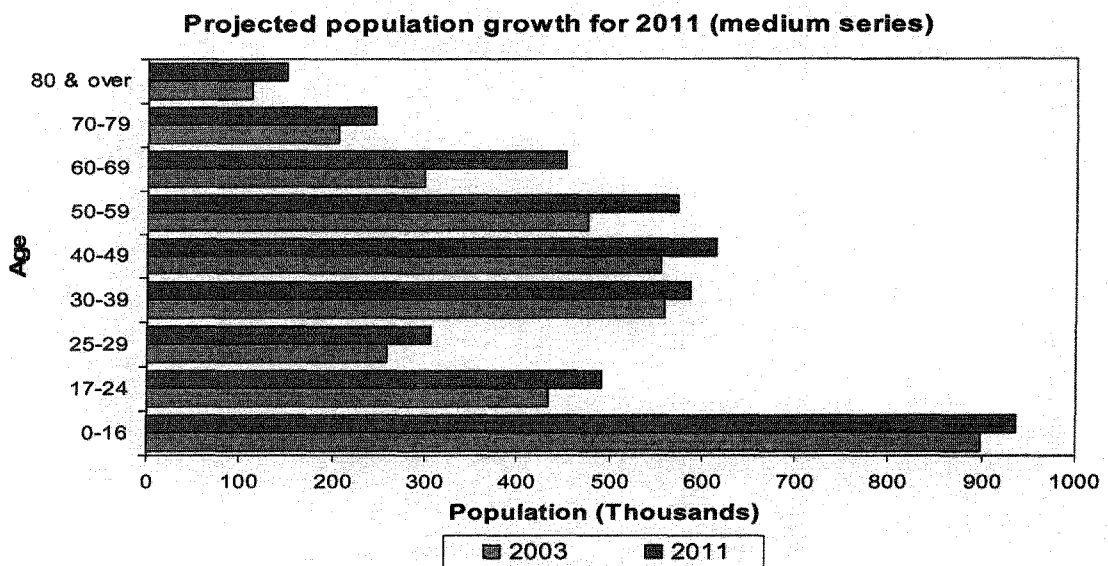
Source: **Office of Economic and Statistical Research, Queensland**

- Given current growth patterns in licences, and registration, there will potentially be 3.1 million licensed drivers and 3.8 million vehicle registrations by 2011. Additionally, while public transport continues to attract new users, year on year growth has not matched the growth in licence holders and registrations. Furthermore, urban development is not always conducive to the scheduling of cost effective public transport services, and rural areas develop with limited public transport services.

- Queensland has the most road freight dependent economy in Australia. Population growth and increased economic activity is expected to double the freight task over the next 15 years. Freight movement is projected to grow faster than the economy resulting in:
  - Truck traffic increasing at a faster rate than car traffic
  - Increased noise and air pollution

- In April 2000, the Australian Government made a commitment to comply with the United Nations' Economic Commission for Europe vehicle standards, by agreeing to the international agreement on harmonised automotive safety and emissions standards. The effects of this commitment on road safety are yet to be determined.

By investigating these issues, road safety agencies can determine road safety strategies and attempt to influence road safety in the future. More attention is required to look at these issues from a national perspective and build them into the way road safety is investigated and planned for. Queensland suggests that this be a priority issue considered by the National Road Safety Strategy Panel in the lead up to the 2005-2006 National Road Safety Action Plan.

Conclusion

Despite significant gains in road safety over recent decades, the number of road fatalities in Australia has plateaued and serious injuries are increasing. The challenge will only be greater in the years ahead. Technological advances, societal attitudes and resourcing all remain extremely important factors in improving road safety. The World Health Organisation estimates that by 2020 road safety will be the third highest cause of years lost through injury/disease. While this in part reflects the motorisation of lesser developed countries, places such as Australia should also take note. Queensland believes that the best way to proceed is through a strategic process at a national level, supported by jurisdictional and local strategies. This 'seamless delivery' of road safety will ensure consistent identification and treatment of core road safety issues across the country.

References

Cowan, R. (February, 2003). Editorial. War Without End. The Road War. *Truck&Bus, Vol. 67, no. 2. Australia.*

Hansard Extract, Parliamentary Sitting on 15 October 2003.

Tourism Queensland (August, 2003). The Drive Market Fact Sheet.