GOVERNMENT STATUS REPORT – AUSTRALIA

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STATUS OF SAFETY PROBLEMS AND TRENDS

General progress

Australia has achieved substantial reductions in road crash fatalities over the last 30 years, despite a 50 per cent growth in population and a two-fold increase in registered motor vehicles. Between 1980 and 2010, the nation's annual road fatality rate declined from 22.3 to 6.1 deaths per 100,000 people.

The chart below shows the progressive reduction in fatality numbers over that period.

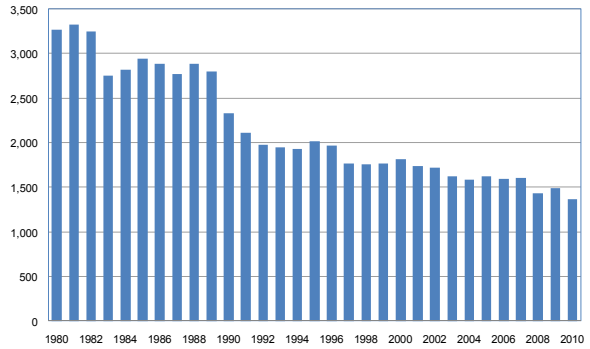

Figure 1. Annual number of Australian road deaths

Trends in Australian road trauma have been characterised by short periods of rapid decrease – large downward steps – followed by longer periods of consolidation and incremental improvement.

Evaluation of evidence indicates that many of these gains can be attributed to specific road safety interventions, some of which have been big and bold enough (such as the introduction of seatbelt laws, random breath testing and occupant protection) to fundamentally change the road safety landscape.

However, the rate of progress has been relatively slow in recent years. Between 2005 and 2010, the average annual reduction in road fatality numbers was 3.3 per cent. Hospital admissions data also point to little, if any, national improvement in the number of people who were seriously injured in road crashes.

National Road Safety Strategy 2001–2010

In November 2000, Australia's transport Ministers endorsed the *National Road Safety Strategy 2001–2010*. The strategy provided a framework for prioritising the road safety activities of federal, state, territory and local governments, as well as other organisations that could influence road safety outcomes. Its target was to reduce the annual road fatality rate by at least 40 per cent over the 10-year period to the end of 2010: from 9.3 deaths to no more than 5.6 deaths per 100,000 population.

Despite significant gains over the decade, the 40 per cent reduction target was not reached (see Figure 2). By the end of 2010 an actual reduction of 34 per cent had been achieved and the fatality rate stood at 6.1 deaths per 100,000 population – some way short of the 5.6 target.

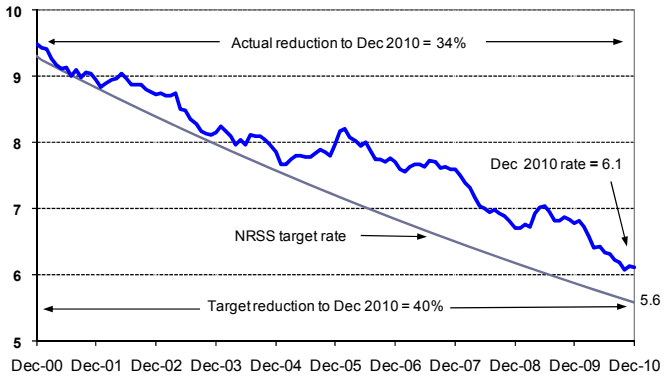

Figure 2. Australian Road Fatality Rate, 2000 to 2010

Note: based on a moving 12-month calculation

Road deaths

Vehicle occupants constitute the large majority of road deaths in Australia, although there are also large numbers of motorcyclist and pedestrian fatalities.

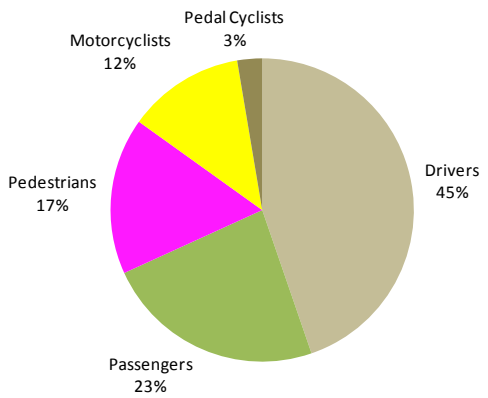

Figure 3. Australian Road Fatalities 2009

There has been significant fluctuation in the number of multiple vehicle occupant fatalities, single vehicle occupant fatalities and pedestrian fatalities across years. However, there has been a clear upward trend in the percentage of fatalities occurring in single vehicle crashes in the last decade.

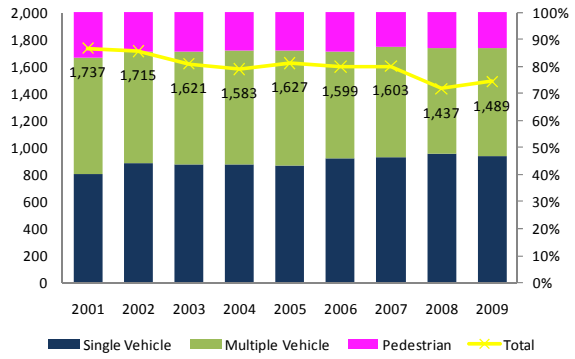

Figure 4. Australian Road Fatalities 2001-2009

National Road Safety Strategy 2011–2020

The Australian Transport Council (comprising federal, state and territory transport Ministers) has agreed to establish a new National Road Safety Strategy for the period 2011 to 2020. The new strategy is expected to set an ambitious long-term vision for road safety improvement, supported by national targets for reductions in the number of deaths and serious injuries over the decade.

On 1 December 2010, a draft of the new strategy was released for a period of public consultation, which ended on 18 February 2011. The draft strategy was developed by senior road safety officials from all Australian jurisdictions and was informed by research and modelling work undertaken by the Monash University Accident Research Centre (MUARC):

- It proposed targets of a 30 per cent reduction in the annual numbers of both deaths and serious injuries by the end of 2020.
- It included a wide range of interventions grouped into the categories of: safe roads, safe speeds, safe vehicles and safe people reflecting a "Safe System" approach.

During the public consultation period, nearly 700 submissions were received from peak industry bodies, road safety interest groups and members of the general public. A revised version of the strategy is now being prepared and is expected to be considered by transport Ministers for approval and release in May 2011.

The consultation draft of the strategy can be accessed from: <*www.infrastructure.gov.au*>. It contains detailed statistical analysis of the road safety situation in Australia.

Australia's ESV presentation will update progress on the strategy.

FUTURE RESEARCH IN FINDING SOLUTIONS TO THE SAFETY PROBLEMS IDENTIFIED

Innovative Research Ideas and Emphasis – Pole Side Impact

In recent years, over 20% of all Australian road fatalities have occurred in side impacts.

- Half of these fatalities have resulted from impacts with narrow objects, principally poles and trees (pole side impacts).
- The experience of a number of other countries with side impacts is similar.

There is current variation in pole side impact crash tests (regulation in the US; NCAP testing in some other countries) and concerns over the biofidelity and injury measurement capabilities of the crash dummies being used.

Australia believes the current progress on WorldSID provides a unique opportunity to improve the international crash test regime for pole side impacts. It also believes that a pole side impact standard is likely to produce significant benefits for other side impacts by driving improvements in head protection and may also have some benefits in stopping ejections in rollovers.

Accordingly it proposed development of a Global Technical Regulation on Pole Side Impact (PSI GTR) at the June 2010 meeting of the World Forum for Harmonization of Vehicle Regulations (WP.29). WP.29 endorsed this proposal and Australia is currently chairing an Informal Group of contracting parties and industry representatives.

The Informal Group is developing a safety need case, taking account of the impact of Electronic Stability Control (which is reducing pole side and rollover crashes), and assessing the merits of various crash tests procedures.

Australia conducted a series of pole side impact crash tests in 2010 in support of the PSI GTR, which are reported in the proceedings of this ESV conference. This research effort is continuing and a further series of tests will be conducted in co-operation with Transport Canada in mid 2011.

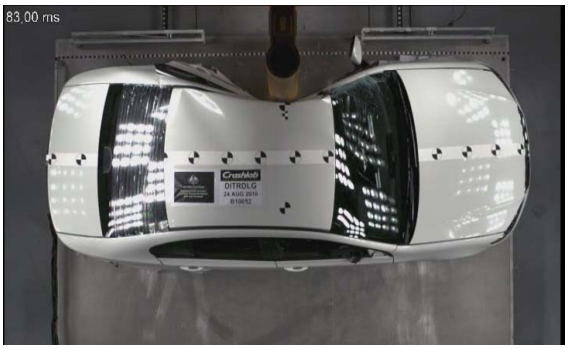

Figure 5. Australian Pole Side Impact Testing

Australia is also commissioning further data analysis in support of the PSI GTR proposal. This is intended to include further detailed analysis of domestic data and relevant international data.

New approaches being tried – improved consultation and increased emphasis on non-regulatory measures

The federal government sets standards for new and used imported vehicles entering the Australian markets. These standards are being harmonised with the regulations developed by WP.29, where practical. However, as in service vehicle standards are regulated in Australia by state and territory governments, cooperative and collaborative approaches to vehicle safety regulation are essential.

Australia, like many other countries, is also placing increased emphasis on non-regulatory interventions including consumer information programs, purchasing guidelines and codes of practice. These measures complement the existing regulatory activity and provide encouragement for the early supply of safer vehicles with leading edge technologies.

During 2010, the Australian Motor Vehicle Certification Board, a forum including federal and state and territory road transport agencies was reconstituted with a focus on whole of vehicle life regulation, particularly in relation to safety. The Strategic Vehicle Safety and Environment Group (SVSEG) was also formed, including federal, state and territory road transport agencies and vehicle industry and community organisations, to consider regulatory and non-regulatory options for improving vehicle safety and environmental performance. One of SVSEG's key roles is to provide direction and coordination for vehicle safety research activities in Australia.

In May 2010 the Australian Government became a member of the Australasian New Car Assessment Program (ANCAP) and is now represented on ANCAP's Board of Directors. The Government is providing funding for a significant expansion of the ANCAP test program and for research into use of results from NCAPs in other countries to rate vehicles in Australia. This will increase the percentage of the vehicle fleet for which an ANCAP safety rating is available.

In Feburary 2011 ANCAP released a Road Map for 2011 to 2015. This document provides for a steady increase in the requirements to achieve each safety rating as well as building additional tests into the overall rating. The roadmap will encourage manufacturers to fit a range of "Safety Assist Technologies", both optional and mandatory for particular star ratings. The new ratings systems will also include minimum results for pedestrian impact, roof crush and whiplash prevention within the overall star rating.

Research on Advanced Technologies – IVART

Together with state and territory agencies, the federal Department of Infrastructure and Transport has participated in the In-Vehicle and At-Roadside Technologies (IVART) Project managed by the Queensland Government. This has included a number of project streams including sponsorship of research such as:

- "Analysis of crash data to determine benefits associated with emerging vehicle technology" – identifying likely beneficial technologies for promotion and/or intervention.
- "Cost Benefit Analysis for Intelligent Speed Assist (ISA)" A study of the benefits of introducing Intelligent Speed Adaptation (ISA) in the Australian context considering the type of ISA, vehicle and driver.
- "Capability of Radio Frequency Identification (RFID) for vehicle identification and speed detection". - investigating whether RFID could be used in conjunction with speed cameras to identify speeding motorcycles.
- "Heavy Vehicle Stability Safety Technologies" - identified by the first study above as likely to provide a positive road safety outcome, this study looks in greater detail at new technologies to prevent heavy vehicle roll-over crashes and whether government intervention is warranted. Completion is due in due July 2011.

IVART has also developed a national policy and technology framework document to provide the foundation for government to work closely in partnership with stakeholders in implementing guiding principles that can be applied to the assessment and future deployment of new vehicle safety technologies. It includes strategic priorities and recommendations to move forward.

PUTTING SAFETY TECHNOLOGIES TO WORK

There are three main areas in which vehicle safety technologies are being put to work in Australia:

- Australia is harmonising and will continue to harmonise with international vehicle regulations developed under WP.29, wherever practical. Active safety technology will increasingly come to the fore in these regulations, but it will also be important to ensure approaches to passive safety take full advantage of technological developments and design initiatives.
- As mentioned, ANCAP's Road Map established an approach that will encourage uptake of the latest vehicle safety technology.
- Australia is also engaged actively in technology development and in this regard it is particularly worth noting a trial of Intelligent Speed Adaptation (ISA) conducted in 2010 by the New South Wales (NSW) Centre for Road Safety.
  - Results from the trial indicate that ISA is an effective tool to reduce speeding. When ISA was installed, 89% of vehicles (94 out of 106) reduced the amount of time they spent exceeding the speed limit compared to pre-fitment.
  - Modelling suggests that if all vehicles in the NSW fleet were equipped with the advisory ISA system trialled, then road deaths would be reduced by 8.4% and the number of people injured would be reduced by 5.9%.
  - On this basis, the NSW Government has committed to installing ISA in the NSW Road Transport Authority's fleet of vehicles and to commence the development of an integrated electronic logbook with ISA.
  - NSW is also involved with other jurisdictions in a project called ISA Connect, which aims to develop a national speed zone mapping and management system so that ISA can reliably operate on all Australian roads.

IDEAS FOR POTENTIAL COLLABORATIVE RESEARCH INTERNATIONALLY

Australia remains committed to sharing of international research in support of harmonised international vehicle standards and improvements in vehicle safety.

The current collaborative work being undertaken on WorldSID provides a model for work to proceed on a particular issue. However, it also desirable to further develop cooperative structures for research that can function on an on-going basis and provide advice on priority issues.

In the context of developing a GTR on Pole Side Impact, we have commissioned research drawing on mass data bases in Australia, as well as seeking to utilise international data wherever possible.

This has highlighted the primacy of having good quality data as soon as possible on key issues.

We see significant value in current efforts to establish systems for meta analysis drawing on mass and in-depth data in a number of countries. This allows much earlier evaluation of the

effectiveness of new technologies than could be undertaken in single countries.

This is particularly important, as a major challenge facing all parties with an interest in vehicle safety, is the proliferation of new technologies and other vehicle safety initiatives. Whether these provide benefits and, if so, the scale of those benefits are critical questions for regulation and promotion in non-regulatory approaches.

CONCLUSIONS

There have been significant road safety gains in Australia in the period 2001-10.

A draft National Road Safety Strategy for 2011-20 has been circulated for public comment and a final document is currently being prepared for consideration by Australian Transport Ministers.

The Strategy embodies a "Safe System" approach and it will be crucial for improvements in vehicle safety to make a strong contribution in reducing the road toll over the next 10 years.

Australia is committed to WP.29 processes and the development and adoption of international vehicle regulations where practical and is sponsoring development of a Global Technical Regulation on Pole Side Impact.

Non-regulatory approaches are also a key factor in vehicle safety in Australia with manufacturers, fleet managers, research institutions, industry and consumer organisations all having roles to play.

Advances in vehicle technology and design will provide major benefits, but also present major challenges in ensuring the right technologies are mandated and/or or promoted.

This emphasises the need for collaborative research and for meta-analysis, so that the success of innovations can be identified as soon as possible.