



# NATIONAL ROAD SAFETY ACTION PLAN

2001 and 2002



Australian Transport Council

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The National Road Safety Strategy 2001–2010 and the Action Plan 2001 and 2002 have been adopted by the Australian Transport Council. The Council comprises Federal, State and Territory Ministers with transport responsibilities and includes an observer from local government. The Strategy provides a framework which complements the strategic road safety plans of State, Territory and local governments and other stakeholders in road safety.

The target of the Strategy is to reduce the annual number of road fatalities per 100,000 population by 40%, from 9.3 in 1999 to no more than 5.6 in 2010. This target is to be achieved by individual governments with the support of the community:

1. continuing the existing road safety initiatives that have caused the fatality rate to drop from 30.4 in 1970 (per 100,000 population);
2. focusing on the Strategic Objectives identified in the Strategy and identifying and pursuing suitable Action Areas and measures from this Action Plan to achieve those Objectives; and
3. adopting other initiatives that address local imperatives.

The range of action areas and their applicability will change over time. In this Action Plan the Australian Transport Council has identified a menu of Action Areas that are available for implementation in 2001 and 2002. Also listed are some measures that contribute to these Action Areas.

# 1

## STRATEGIC OBJECTIVE

# Improve road user behaviour

## 1.1

### Action Area: Reduce the incidence of drink driving.

While the incidence of alcohol related road deaths has reduced both in total numbers and as a proportion of all road deaths, alcohol remains a major factor in 27% of fatal crashes nationally.

#### POSSIBLE MEASURES:

- Extend integrated publicity and enforcement campaigns. <sup>S,P</sup>
- Apply penalties for serious cases of drink driving that are commensurate with the danger posed. For example, recent New Zealand regulations provide for drivers caught with more than twice the permissible blood alcohol limit to have their licenses suspended immediately, on the road side, for 28 days. <sup>P</sup>
- Implement appropriate measures arising from the Austroads' Optimal Rural Drink Driving Enforcement Program (NRS 9701).
- Work with the alcohol service industry to promote safer drinking through the promotion of non/low alcohol drinks and through 'responsible serving' and server intervention programs.
- Introduce alcohol ignition interlocks as a sentencing option and/or administrative sanction, especially as a re-licensing requirement for repeat drink drivers. <sup>S</sup>
- Promote voluntary fitment of alcohol interlocks. These might require the driver to submit to a breath testing only when the system senses alcohol near the driver.
- Continue development of intelligence based enforcement practices.

Note: S denotes significant measures which have been conservatively estimated by experts to be capable of reducing fatalities by at least one per cent when fully implemented. Many other measures may also qualify if applied intensively.

P denotes measures the benefits of which have been proven.

## 1.2

### Action Area: Drugs other than alcohol.

Illicit and prescription drugs can affect a driver's performance. This effect will vary according to the combination and quantity of drugs used, including alcohol. Education and enforcement measures are needed to address these effects.

#### POSSIBLE MEASURES:

- Continue research into the relationship between these drugs and road crashes.
- Enact legislation to enable effective testing and prosecution of drivers impaired by drugs.
- Conduct public information campaigns to alert drivers to the effects of some drugs and medications have on the ability to drive safely.

## 1.3

### Action Area: Improve compliance with speed limits.

Travel speed affects the severity of crashes, as well as the risk of involvement in a crash. Coroners' reports indicate excessive speed is a major contributing factor in 24% of fatal crashes. Research indicates that in a 60 km/h speed limit area the risk of involvement in a casualty crash doubles with each 5 km/h increase in travelling speed above 60 km/h. <sup>1</sup>

Overseas experience has found significant crash reductions resulting from modest changes in speed. The European Transport Safety Council has estimated from studies carried out on various types of road in Europe and the US that a 1 km/h decrease in mean traffic speed will result in a 3% crash reduction.

#### POSSIBLE MEASURES:

- Extend integrated publicity and enforcement campaigns targeting speeding. <sup>S,P</sup>
- Encourage the fitment of in-vehicle systems that warn a driver when exceeding the speed limit.
- Evaluate in-vehicle systems that prevent a driver exceeding the speed limit.
- Amend the Australian Design Rules for motor vehicles to prohibit speedometers from indicating a speed slower than the true speed of the vehicle.
- Use the media to assist in further repositioning public attitudes on speeding.
- Identify and implement best practice speed enforcement, including measures arising from Austroads project (NRS9702). <sup>S</sup>

<sup>1</sup> C. Kloeden, A. McLean, V. Moore & G. Ponte, *Travelling Speed and the Risk of Crash Involvement*, CR172, University of Adelaide Road Accident Research Unit report to the Federal Office of Road Safety, FORS, Canberra, 1997.

## 1.4

### Action Area: Improve the matching of speed limits to conditions.

Urban travel speeds are a significant factor affecting the incidence and seriousness of crashes, especially for pedestrians and cyclists. A number of evaluations have shown that reducing speed limits on local residential streets can reduce serious crashes significantly, with little impact on overall travel times and a significant net economic saving to the community. There is also a case that a clear hierarchy of speed limits, matched to road design and function, can increase the overall public credibility of the speed limit system, and may improve compliance. <sup>2</sup>

Australian rural roads have high speed limits by international standards. Typically two-lane, two-way roads have speed limits of 100 or 110 km/h in Australia, even when built to low standards. In Europe and America, 80 or 90 km/h is typical.

#### POSSIBLE MEASURES:

- Introduce 50 km/h or 40 km/h speed limits on local urban streets. <sup>S,P</sup>
- Provide speed limits in school zones that are lower than for the surrounding road network. <sup>P</sup>
- Provide speed limits in areas of high pedestrian activity that reflect the risk present in these environments, possibly through the use of variable speed limit signs. <sup>P</sup>
- Use Local Area Traffic Management Schemes to help manage speed. <sup>S</sup>

<sup>2</sup> A. McLean, R. Anderson, M. Farmer, B. Lee Et C. Brooks, *Vehicle travel speeds and the incidence of fatal pedestrian collisions*, CR 146, FORS, Canberra 1994. See also Austroads *Urban speed management in Australia*, Austroads, Sydney, 1995.

1.5

### Action Area: Increase measures to reduce the incidence and risk of driving whilst fatigued.

The contribution of fatigue to serious road crashes is difficult to quantify, but some estimates suggest that fatigue may approach alcohol as a factor in serious crashes.

#### POSSIBLE MEASURES:

- On highways and major roads where fatigue is a risk, progressively seal shoulders to a minimum width of half a metre and provide audio-tactile edge lines. <sup>S,P</sup>
- Develop and implement strategies for the provision of roadside driver rest areas, including cross border cooperation on interstate corridors.
- Continue public education campaigns warning of the dangers of driving whilst fatigued.
- Improve management of roadside hazards – see Action Area 2.1.

1.6

### Action Area: Increase the use of restraints.

Occupants wearing seat belts are more likely to survive the forces of a severe crash. Wearing rates in Australia are very high – at around 95% – however one third of occupant fatalities are unbelted. User groups for whom seatbelt wearing rates are low include residents of rural and remote areas, youth travelling in back seats, and recidivist drivers. Halving the current non-usage rate would save 100 lives per year.

#### POSSIBLE MEASURES:

- Extend use of integrated publicity and enforcement campaigns targeting non-use of restraints. <sup>S,P</sup>
- Through the Australian Design Rules for vehicles (ADRs), require in-vehicle systems that encourage the use of seat belts, such as sensors which detect the non-use of seat belts and trigger responses such as an intrusive audible signal. <sup>S</sup>
- Reduce use of load space by passengers.
- Extend education programs promoting the safety benefits of using seat belts.

## 1.7

### Action Area: Increase deterrence of unlicensed driving and motor cycling and enable police to confirm the identity of drivers and riders.

Licence suspension is an important general deterrent but many recidivist drivers continue to drive without licences. Among drivers and motorcycle riders involved in fatal crashes at least 5% of drivers and 19% of motorcycle riders are unlicensed. In addition, some drivers charged with traffic infringements are escaping prosecution because police cannot positively identify them at the road side.

#### POSSIBLE MEASURES:

- Apply penalties for unlicensed driving or riding that are commensurate with the danger posed. <sup>5, P</sup>
- Mandate carriage of driver licences or provide police with roadside access to the image of a specified driver's licence through electronic systems.
- Conduct intensive and well publicised campaigns of licence checks together with information to the public on the need for these actions.
- Conduct research to determine the rationale for unlicensed driving and assess measures that may be successful.
- Monitor initiatives to address unlicensed driving including the recent New Zealand regulations that provide for the seizure and impounding of vehicles driven by unlicensed or disqualified drivers at the road side.

Considerable synergy, and a consequential reduction in fatalities, is likely from programs combining the licence identification, publicity, enforcement, and penalty initiatives canvassed above. <sup>5</sup>

## 1.8

### Action Area: Improve the safety of work related road use.

Legal liability and increasingly stringent community expectations of Occupational Health and Safety create a greater need to improve the safety of employees as road users and the opportunity to better promote road safety through employers. For drivers of trucks and some fleet cars there are special issues of fatigue, seatbelt wearing, speed and alcohol use.

#### POSSIBLE MEASURES:

- Develop resource material to support training on safe road use within workplaces.
- Develop and achieve significant adoption by business and government of a safe fleet policy comprising appropriate vehicle safety features.
- Develop safe driving policy for business and government employees including recommended approaches to avoiding speeding, drink driving, fatigue and drug-taking.
- Foster sponsorship arrangements for road safety initiatives.
- Progress the Third Heavy Vehicle Reform Package approved by the Australian Transport Council in May 2000, including:
  - adoption of a performance based system of regulation in addition to, not in replacement of, the current prescriptive measures;
  - a comprehensive approach to improving the management of heavy vehicle drivers' health and fatigue; and
  - development of a Code of Conduct for the trucking industry.
- Monitor the safety of long distance heavy vehicles through development of a national database recording the incidence of high severity truck crashes.
- Develop a national heavy vehicle road safety strategy.

## 1.9

### Action Area: Working with the community.

Mobilising potential advocates of road safety in communities can achieve benefits not readily available by other means. Local government and schools are well placed to support local advocacy and other road safety initiatives within communities.

#### POSSIBLE MEASURES:

- Encourage greater local government involvement in road safety through
  - increasing use of road safety officers by local government
  - encouraging development by local governments of road safety strategies/action plans
  - encouraging regional cooperation and planning for road safety by local government
  - conducting annual regional road safety forums
  - identifying and promoting good local government practices based on evaluation and adaptation of proven programs from other local governments, states and international agencies.
- Identify and involve local advocates on issues and initiatives that will make a difference, especially public education and enforcement strategies.
- Continue work with schools to provide educational programs targeting safe pedestrian behaviour.
- Increase use of workplaces to provide leadership and training in safe road user behaviour.

# 2

## STRATEGIC OBJECTIVE

# Improve the safety of roads

## 2.1

### Action Area: Improve the safety of existing roads.

Black spot programs have been found to reduce fatalities by over 20 lives per annum per \$100 million and produce high average benefit/cost ratios. Further investment in black spot programs therefore offers excellent returns in both human and economic terms over the period to 2010. Road safety audits provide a means of identifying black spot locations before serious crashes occur. <sup>3</sup>

#### POSSIBLE MEASURES:

- Continue and expand black spot programs by Commonwealth, State, Territory and local governments. <sup>5,P</sup>
- Conduct road safety audits of the road network, taking into account the needs of all road user groups, giving priority to sites with a crash history and identifying significant remedial opportunities.
- Ensure road design standards and road management practices are consistent and reflect world best practice in the provision of safe road infrastructure (road signs, pavement marking, lane arrangements, intersection design, traffic islands etc).
- Provide rural local governments with guidelines for construction and maintenance of road types which reduce the incidence and consequences of crashes.
- Identify, assess and evaluate potential treatments for roadside hazards including measures to prevent cross median crashes and substitution of frangible roadside furniture using a risk management based methodology. Prioritise and implement treatments using benefit cost analysis assessment. <sup>5</sup>

<sup>3</sup> P. Vulcan Et B. Corben, Prediction of Australian road fatalities for the year 2010, paper presented to the 1998 National Road Safety Summit, Canberra, 1998.

## 2.2

### Action Area: Improve the safety of new roads.

General road improvements have been found to reduce fatalities by two lives per annum per \$100 million invested.

#### POSSIBLE MEASURES:

- Foster investment in new roads and road improvements. <sup>5,P</sup>
- Improve the estimation of the cost of serious injury and fatal crashes used in the economic evaluation of road improvement options to provide an optimum investment in road infrastructure in terms of both economic return and safety.
- Make road safety audits a requirement for major road projects, land use planning and development approval processes for large projects, with the threshold for requiring audits being progressively lowered over time.
- Review road design guidelines relevant to older drivers' reduced performance levels, especially with regard to placement, legibility and night-time reflectivity, adopting best practice where different standards exist.

# 3

## STRATEGIC OBJECTIVE

# Improve vehicle compatibility and occupant protection

## 3.1

### Action Area: Develop design standards for vehicle compatibility.

Vehicle safety standards and vehicle design can be improved to further increase the protection provided to occupants and minimise the hazard to non-occupants struck by a vehicle.

#### POSSIBLE MEASURES:

- Introduce Australian Design Rules for rear and side under-run protection on heavy vehicles.<sup>P</sup>
- Develop ADRs for passenger vehicle compatibility.

## 3.2

### Action Area: Improve occupant protection through regulation and consumer demand.

Consumer demand can complement design standards in encouraging manufacturers to improve the safety of new vehicles.

#### POSSIBLE MEASURES:

- Continue existing Australian Design Rule (ADR) program and complete current ADR review.<sup>S,P</sup>
- Promote crashworthiness ratings of vehicles from the New Car Assessment Program, the Buyer's Guide to Used Car Safety Ratings and other sources.
- Develop public information programs to encourage increased consumer awareness of vehicle safety features.

# 4

## STRATEGIC OBJECTIVE

### Use new technology to reduce human error

4.1

#### Action Area: Monitor and encourage adoption of emerging Intelligent Transport Systems.

Emerging technology, commonly known as Intelligent Transport Systems (ITS), can be used to improve road safety by assisting the driver and by enforcing compliance with road regulations. This technology will typically involve engineering systems built into the vehicle and/or the road that provide information to drivers and intervene when drivers suffer lapses of concentration or make unsafe decisions. <sup>4</sup>

#### POSSIBLE MEASURES:

- Monitor and assist implementation of in-vehicle systems that automatically notify emergency services of the location of a serious crash and, if practicable, details of the crash and number of occupants.
- Monitor development of and, if appropriate, bring to the market vehicles equipped to monitor the driver for symptoms preliminary to sleep and to respond with suitable warning alarms.
- Encourage adoption of systems that maintain safe following distances between vehicles.
- Evaluate in-vehicle systems that prevent a driver exceeding the speed limit.
- If safety benefits are demonstrated, encourage adoption of in-vehicle systems that intervene to enhance vehicle stability during cornering, braking and acceleration.

<sup>4</sup> Austroads, *e-transport – The National Strategy for Intelligent Transport Systems*, Austroads and ITS Australia, Sydney, 1999.

# 5

## STRATEGIC OBJECTIVE

### Improve equity among road users

#### 5.1

#### Action Area: Develop and implement programs targeted at road user groups for whom road safety is a particular concern.

Not all road users enjoy the same level of safety. Statistics indicate that young adults, indigenous people, older people and international tourists have much higher fatality rates than the general population. Pedestrians, motorcyclists and cyclists are exposed to a high risk of death or serious injury if a crash occurs, and require specific consideration in safety planning; safety initiatives affecting other road users, such as speed management, alcohol controls and vehicle design improvements, are also important to these groups.

#### YOUTH

- Implement programs to increase the amount and variety of supervised driving practice for learners.<sup>5</sup>
- Conduct comparative evaluation of novice driver initiatives including school-based pre-driver training, programs focusing on cognitive skills such as hazard perception and conflict prediction, and competency-based graduated licensing and training programs.
- Implement Austroads' National Action Plan for Youth Road Safety.
- Review road rules applying to scooter riders including helmets requirements.

### **ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE**

- Develop and implement appropriate measures arising from the Aboriginal Road Safety Working Group.
- Conduct an annual Aboriginal and Torres Strait Islander Road Safety Forum.
- Investigate the feasibility of formally recording road safety outcomes for indigenous people in all jurisdictions to enable development of more effective programs.
- Develop culturally appropriate road safety programs.

### **OLDER ROAD USERS**

- Work with general practitioners to improve the assessment of older drivers' fitness to drive and to encourage use of Austroads' national health guidelines.
- Implement improved assessment and management procedures relating to the on-going licensing of older drivers, possibly including issuing restricted licences such as only for driving in day-light, non-peak and/or urban conditions.
- Develop, trial and evaluate education and training programs and materials for improving older drivers' safety and mobility.

### **INTERNATIONAL TOURISTS**

- Complete the development of a Road Safety Strategy for International Visitors by the working group established under the direction of the Australian Transport Council. Implement appropriate measures arising from the work of this group.

### **PEDESTRIANS**

- Work with local government and the public to identify and remedy high-risk locations, especially in the vicinity of schools, through measures including speed limits and traffic engineering treatments.
- Work with local government to further development of pedestrian areas in central business districts, suburban shopping and commercial precincts, through measures including widening footpaths and reducing road space.
- Develop promotional material highlighting the road safety dangers for intoxicated pedestrians and distribute through licensed premises.



### **CYCLISTS**

- Implement the road safety components of Austroads' Australia Cycling – The National Strategy.
- Promote increased use of helmets among low use groups, eg teens, tertiary students.
- Continue programs in schools to teach children bicycle skills and safe practices.
- Increase bicycle paths and lanes and develop and implement bicycle plans in conjunction with local government.



### **MOTORCYCLISTS**

- Evaluate and, if appropriate, improve motorcycle rider training and licensing schemes.
- Promote improved interaction between motorcyclists and other road users through targeted public education campaigns.
- Ensure that road safety audits take into account motorcycle-specific safety issues.

# 6

## STRATEGIC OBJECTIVE

### Improve trauma, medical and retrieval services

The steady advances in medical technology can be expected to improve outcomes for people seriously injured in road crashes. In addition, improving communications and transport systems can deliver medical attention to crash victims more rapidly.

#### POSSIBLE MEASURES:

- Provide better training of doctors and paramedics in early management of severe trauma.
- Improve training of the general public in first aid.
- Conduct joint planning with emergency services and health agencies to improve planning of trauma management systems.<sup>5</sup>
- Utilise new technology to enable earlier notification of serious crashes.<sup>5</sup>
- Develop and implement systems to provide reliable and timely data on serious injuries that systematically links crash types with injury and treatment outcomes in order to underpin research and decision making.

# 7

## STRATEGIC OBJECTIVE

# Improve road safety programs through research of safety outcomes

## 7.1

**Action Area: Conduct a targeted research program to improve understanding of the causes and consequences of serious road crashes and to help develop and assess counter measures.**

Evidence from road safety outcomes must be collected and analysed so that more effective road safety programs and policies can be developed. Since the easier gains in road safety will tend to be made first, future gains may become increasingly hard, and require a more informed approach.

### POSSIBLE MEASURES:

- Establish multi-disciplinary teams to undertake investigations of road crashes involving a fatality or serious injury, taking into account all issues including enforcement, road design and driver behaviour.
- Expand the annual Research, Policing and Education Conference as the premium annual forum on road safety policy and practice.
- Improve procedures used by the Research Coordination Advisory Group for coordinating research activities and developing recommendations on research priorities.

## 7.2

### Action Area: Improve the process through which State, Territory and local governments learn from each other and from overseas practices.

Road safety can be assisted by improving the process through which State, Territory and local governments learn from each other and from overseas practices.

#### POSSIBLE MEASURES:

- Improve the coordination and benchmarking role of the National Road Safety Strategy Panel.
- Increase the effectiveness of the Austroads Road Safety Program, possibly through greater utilisation of the potential of the OECD.
- Ensure systematic evaluations are conducted of road safety initiatives to enable sound decision making in respect of the retention and/or expansion of initiatives.

# 8

## STRATEGIC OBJECTIVE

### Encourage alternatives to motor vehicle use

Reducing motor vehicle use reduces exposure to road trauma and can provide significant environmental, health and amenity benefits. While this principle is well accepted, potential exists to increase the effectiveness of its application and a number of State governments have committed to targets for limiting total vehicle travel.

#### 8.1

**Action Area: Utilise land-use planning to reduce the amount of transport necessary for people and goods.**

##### POSSIBLE MEASURE:

- Support the enhancement of regional and key suburban business centres which are focused on public transport nodes.
- Support urban renewal in areas well served by public transport to meet changing population needs.

#### 8.2

**Action Area: Reduce motor vehicle use through promotion of public transport, walking and cycling.**

##### POSSIBLE MEASURES:

- Implement Austroads' Australia Cycling – The National Strategy.
- Develop education programs for older drivers promoting the availability of alternative transport options.
- Improve travel speed of buses and taxis by providing bus corridors, bus lanes, high occupancy vehicle lanes and priority signal systems.
- Allocate appropriate road space and lanes for freight vehicles, buses, bicycles, light rail and other high occupancy vehicles.
- Review parking policies to ensure travel demand management principles are taken into account, especially in terms of limiting the growth of all-day parking.



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