

Arriving Safely

Road Safety Strategy for Western Australia 2003-2007:

“Moving Down from a Higher Plateau”

Presentation to the House of Representatives Standing Committee on
Transport and Regional Services

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1. Acknowledgements (slide reference 1)

This paper was prepared by Iain Cameron, Executive Director of the Office of Road Safety, but summarises and reflects the combined and collaborative work by many individuals and organisations within and outside of Western Australia.

The work of Prof Ian Johnston and Dr Narelle Haworth, Monash University Accident Research Centre (MUARC), Chris Batini of NFO Donovan Research, staff at the Office of Road Safety in Perth, WA researchers, including those at the Injury Research Centre at the University of WA, and staff from the member agencies of the Western Australian Road Safety Council is particularly acknowledged.

The ongoing broader support and advice contributing to road safety in Western Australia received from members of the Australian Transport Safety Bureau and road safety researchers and colleagues in other jurisdictions is also appreciated and acknowledged.

2. Purpose (Powerpoint slide reference 1)

Along with other jurisdictions Western Australia is striving to improve its road safety performance for the benefit of the community.

While since 1998, road safety in WA has been improving there are plans to do better over the next five years.

This paper summarises the road safety trends in Western Australia, the major contributing factors and responses, plans for improvement and requests support for priority initiatives at a national level to complement and enhance actions at the State level to contribute to further reducing road trauma.

3. Road Safety Trends in WA (slide 2)

In Western Australia each year during the period 1995-2000 more than 200 people were killed and more than 3,000 were admitted to hospital because of road crashes, causing great personal suffering and financial loss to the community.

It is estimated that road crashes cost the WA community about \$1.5 billion annually.

While the number of people being killed is now about half that in 1970, WA's road safety performance in the 1990's plateaued or stalled. In 1990 the rate of deaths occurring on WA roads per 100,000 population was the second lowest in Australia bettered only by the ACT. But from 1991 to 2000 the rate was greater than the Australian average and by 1998 was the second highest in Australia. WA had not got worse, other jurisdictions had improved their road safety performance while WA plateaued.

Since 1998 road safety in WA has continued to improve while road safety at a national level had plateaued. However WA was coming from a higher baseline or plateau.

4. Improving WA's Road Safety: The Vision and Challenge Ahead (slides 3 & 4)

Western Australia is committed to further improving road safety to continue the trend that began in 1998.

In November 2003 the WA Government endorsed "*Arriving Safely, Road Safety Strategy for Western Australia 2003-2007*" a new five-year road safety strategy developed by the Road Safety Council with the assistance of the Monash University Accident Research Centre (MUARC).

"*Arriving Safely, Road Safety Strategy for Western Australia 2003-2007*" clearly maps out the commitment and actions required from Government, industry and the community to save lives and prevent serious injury on WA roads over the next five years. The Strategy identifies the key road safety issues and major causes of trauma in WA and provides focused, effective measures to address each of these issues in an inclusive way for all road users.

The classes of initiatives in *Arriving Safely* are consistent with the priority areas of the National Road Safety Strategy 2001-2010 and associated Action Plan for 2003/04 and has much in common with the key focus areas of the contemporary road safety strategies in other jurisdictions.

The long-term vision of *Arriving Safely* is to eliminate road crashes as a major cause of premature death and injury in Western Australia. The specific goal of the Strategy is to reduce the rate of fatalities per 100,000 population to a level equivalent to the best in Australia in 2007, estimated to be NSW at 4.9 deaths per 100,000 population.

Arriving Safely notes that there are a number of factors in WA that will put upward pressure on the level of road trauma in WA over the next five years include:

- a strongly growing economy;
- an increase in population by almost nine per cent;
- an increase in distance traveled by vehicles by about 22 per cent (more in rural areas);

- more younger drivers, older drivers and pedestrians. (WA has a younger age profile compared to other jurisdictions and in the next five years will experience the greatest growth in younger drivers as a percentage of population);
- the impact of fuel prices and market forces contributing to an increasingly diverse vehicle fleet with more smaller cars and more bigger cars; and
- the impact of drug use and fatigue on road safety.

5. Summary of Crashes in WA: Who, Why and Where? (slides 5 and 6)

Analysis of who is being seriously injured and killed on WA roads, vehicle types, crash locations, whether seatbelts were worn and the involvement of speed and alcohol shows:

- the road users most commonly involved in fatal crashes are drivers and passengers, particularly male drivers aged 17 to 59;
- about 37 per cent of drivers and riders involved in fatal crashes are aged 17 to 24 and about 90 per cent of these are male;
- about 30 per cent of all those killed are not wearing a seat belt (sometimes in combination with alcohol);
- the major factors contributing to fatal crashes are drink driving (22 per cent), speeding (35 per cent) and possibly fatigue; and
- the major contributing factors to injury severity are speed and not wearing restraints.

Many of the factors involved in road crashes occur together with drink driving, speeding and not wearing a seatbelt being a fatal combination in a significant number of crashes.

The issue of where road trauma occurs in WA is complex.

Most crashes where people die happen in country areas than in Perth (58 versus 42 per cent) but the pattern is reversed for crashes where people are injured (38 versus 62 per cent).

Serious injury and deaths per 100,000 population outside Perth are markedly higher than in Perth. For example, in 2002 the fatality rate for the Perth metropolitan area was 5.07 deaths per 100,000 (1.2m population base) and the country rate was 21.6 deaths per 100,000 (700,000 population base). Country deaths, made up largely of country people while probably reflecting the higher traveling speeds of vehicles represents a significant concern and challenge in WA.

Road injuries and deaths are not predominantly a highway problem. In WA as a whole, four per cent of serious crashes occur on national highways, 31 per cent on state highways and 65 per cent on local government roads.

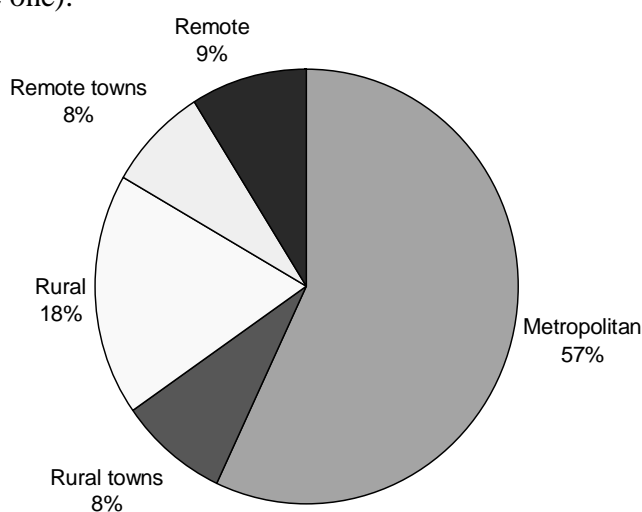
In Perth, more than 70 per cent of serious crashes occurred on local, government roads, comprising some 46 per cent of all serious crashes in WA (regardless of road type).

Although local government roads figure largely in crashes statistics, factors such as the volume of traffic, lower speed limits, predominance of pedestrians and other vulnerable road users such as children, older people and cyclists must also be considered.

Over half of fatal crashes in WA occur on roads zoned 70 km/h or less.

In economic terms, crashes in cities and towns make up 73 per cent of the total cost of road injuries in WA (figure one).

Figure 1



6. Focusing Responses for Maximum Improvement (slides 7, 8 and 9)

The WA Strategy “Arriving Safely” identifies the various behavioural and other factors that cause road crashes, the road user groups involved and the vehicle types and provides for an inclusive approach through a range of responses that will be most effective in addressing these factors.

It provides a framework to focus efforts on proven initiatives that will provide the greatest gains in road safety thereby enabling the best use of finite resources. Coordinated responses by agencies and organisations will further enhance the use of resources for maximum effect.

There are seven classes of initiatives that are proven effective measures that reduce road crashes and address the four behaviours. (Figure two).

All road user groups are addressed and will accrue the greatest benefits by focused efforts and resources in the classes of initiatives and the four behaviours.

The strategy matrix. Filled circles mean that those initiatives are likely to benefit those road safety issues directly. Unfilled circles mean that those initiatives are likely to benefit those road safety issues indirectly.

Figure 2

	Classes of initiatives						
	Improved enforcement	Public education	Lower speeds	Safer roads	Occupant protection	Safer modes of travel	Planning a safer system
Behaviours							
Drink driving	●	●		●	●	●	
Speeding	●	●		●	●	○	
Restraint non-use	●	●		○	●	○	
Driver fatigue		●		●	●		
Drugs				●	●	●	
Road user groups							
Young drivers	●	●	●	●	●	○	●
Older drivers	○		●	●	●	○	●
Aboriginal road safety	●	●	●	●	●	○	
Motorcycles	●	○	●	●	●	○	
Bicycles	○	○	●	●	●	○	●
Pedestrians	○	○	●	●	●	??	●
Heavy vehicles				●	●		

The predicted outcomes for 2007 depend upon the extent to which the classes of initiatives can be successfully implemented involving a combination of refocused effort using existing resources and new resources by the principal agencies. Figure three below summarises the range of improved road safety outcomes estimated depending the level of implementation achieved.

Figure 3

Measure	1998-2000	2007	
		Low Estimate	High Estimate
Fatalities	218	130	92
Fatality rate (per 100,000 popn)	11.7	6.1	4.3
Persons hospitalized	2,500	1,801	1,449
Hospitalisation rate (per 100,000 popn)	134	84.5	68.0

The contributions made by the various classes of initiatives to the reductions in serious injuries and fatalities are estimated in figure four below. Again, the estimated provided depend upon the extent of implementation and results achieved.

Figure 4

Component	Reduction
Road Improvements <ul style="list-style-type: none"> ▪ safety-focused road improvements (Black Spot) ▪ safety components of Road Enhancement Programs 	26.8 to 42.7%
Road User Behaviour <ul style="list-style-type: none"> ▪ continued improvements to enforcement (“anywhere, anytime” – random, unpredictable, radars, cameras) ▪ increased resources to coordinated public education ▪ continued enforcement and promotion of restraint use ▪ improvements to GDT&L programs 	20.0%
Reducing travel speeds in urban areas	Low reduction: 9%
Vehicle Safety Features <ul style="list-style-type: none"> ▪ increase in vehicles complying with ADS’s 69, 72, 73 ▪ voluntary fitting of further improvements 	8.5%

7. Road Safety Issues, Achievements and Challenges

7.1 Speeding (slides 10, 11 & 12)

Speeding continues to be a major contributing factor to road trauma in WA, being a significant factor in about 35 per cent of fatal crashes. From 1990 to 1999, speeding was identified in about 21 per cent of serious injury crashes.

The primary responses to reducing speeding include enforcement and community education using mass media and supporting community activity. The aim of the police enforcement is to become more unpredictable to contribute to drivers’ perceptions of being caught “anywhere, anytime”.

Speed cameras are being used effectively in areas with high traffic volumes such as cities and towns and in country areas other approaches such as hand held and mobile radars are being used where traffic volumes are lower. Additional road safety enforcement programs funded

externally to Police from the Road Trauma Trust Fund such as the Strategic Traffic Enforcement Program (STEP) are using road safety data and approaches such as the Queensland Random Roadwatch to maximize the road safety benefits of traffic enforcement in metropolitan and country areas.

In WA, the number of vehicles passing through speed cameras increased from a little over four million in 1994/95 to just under 19 million in 2000/01. The increase in the use of speed cameras has been accompanied by a 70 per cent reduction in the percentage of drivers exceeding the posted speed limit.

Community education campaign tracking results conducted weekly with random samples of metropolitan and country people shows that attitudes towards speeding are improving. On a social proof scale, about 40 percent of young males aged 17-39 years agreed in September 2003 that they believe speeding is completely or largely unacceptable an improvement on the February 1998 baseline of about 30 percent. In the same period young males agreeing that it was morally unacceptable or wrong to drive 10km/h over the limit in a 60km/h zone improved from a baseline of 48 per cent in 1998 to 76 percent in 2003.

While 60 per cent of young males surveyed between July 2000 and August 2002 admitted they exceeded the speed limit on an occasional basis, an encouraging finding in self reported behaviour has been noted with more drivers limiting their speeding to lower infractions of 1-5km/h over the posted limit, rather than higher 6-10 km/h levels.

However, the proportion of 17-39 year old males who report exceeding the posted limit by 11 or more km/h has not significantly been impacted on in a sustained manner and in fact was increasing between February and August 2002 which led to the “Ghost “ campaign in WA targeting for the first time the higher end of speeders, about 11 per cent of young males who say they regularly drive 11 or more km/h above the posted limit.

Despite increased enforcement and education about a third of drivers still do not believe that speeding by more than 10km/h increases crash risk and about half do not believe they will be booked if they drive up to 10km/h over the limit. Educating drivers about the potential results of speeding, particularly on vulnerable road users such as pedestrians, cyclists, motorcyclists, children and older people is an important component of the WA Strategy.

Data from specific sites on country highways in the last five years shows that between 20 and 30 per cent of cars, four wheel drives and utilities passed at more than the 110km/h limit with no signs of reduction over this period. This, and current attitudes towards speeding shows that enforcement and education needs to be enhanced and more strategic.

MUARC have calculated that there is the potential for a further reduction in total fatalities in WA of about 10 per cent (without reducing speed limits) through enhanced enforcement and coordinated, supporting publicity.

7.2 Reducing Traveling Speeds (slide 13)

Reducing traveling speed is regarded as probably the most powerful instrument to reduce road trauma and is a very cost effective measure. US studies have shown that an increase in mean speed of 3-6 km/h across the road network results in an increase in the number of deaths of 19-34 per cent. On the other hand a slowing by 10 per cent reduces deaths by approximately 36 per cent.

MUARC estimated that based on the results achieved in Qld, NSW and Victoria, the introduction of 50km/h speed limits in WA could be expected to achieve a reduction of between 12 and 22 per cent in the number of casualty crashes on local roads. Given that 22 per cent of fatal crashes occurred (1994-98) on local roads zoned 60km/h, an overall reduction in deaths of between 2.5 per cent and five per cent was predicted.

50 km/h speed limits were introduced on local roads in urban, built up areas on 1 December 2001. Preliminary results from Main Roads WA studies show that MUARC estimates have been very accurate. Between 1 December 2001 and November 2002, drivers have slowed down on 50, 60 and 70km/h roads by between one and three per cent in the main and that fatal crashes on 50km/h roads had reduced by 36.8 per cent and injury crashes have reduced by 20.6 per cent (figure five below summarises preliminary results).

A preliminary report prepared by MUARC for the Office of Road Safety which must be interpreted with caution until preliminary data can be validated reports a statistically significant (at 0.05) crash reduction estimate of 25% for serious casualty crashes on 50km/h zones relative to crashes on 60km/h roads. A full review and report is currently being finalized by MUARC for the Road Safety Council and the WA Government.

A range of education, enforcement, engineering, planning and community promotion and advocacy initiatives are identified in the WA Strategy to contribute to further reductions in traveling speed across the WA road network.

Figure 5

	50 km/h	60 km/h	>= 70 km/h
Fatal	36.8%	11.7%	9.1%
Injury	20.6%	10.5%	6.9%
Damage	10.2%	3.6%	-1.0%

7.3 Drink Driving (slide 14)

Drink driving is a contributing factor in about one quarter of fatal crashes in WA and while this has been improving in recent years, down from about one third and community attitudes towards drink driving are also improving, there is more work to be done.

WA is seeking to create the experiences of other jurisdictions such as Victoria where a rigorously enforced, highly visible, sustained and strategic approach to random breath testing (RBT) has been highly effective. The message is clear if drivers drink and drive they will get caught.

There are about 1.25million licensed drivers in WA and the WA Police Service conducts about 1 million random breath tests per year. While the testing rate is at least equal to that in Victoria, there has not been a similar reduction in serious casualty crashes. RBT in WA is highly visible (at least in the metropolitan area) with 73 per cent of drivers (the same as Victoria) reporting they had seen RBT in operation in the past six months.

However, while the community perception of getting caught has increased, it still remains relatively low, with rates of testing and perceptions of the likelihood of getting caught much lower in the country than in Perth. Country drivers, particularly young males are also more likely to believe they are safe to drive at higher BAC levels compared to city drivers. These attitudes and behaviours are more common in the far northern and eastern regions of the State where alcohol consumption per head of population is higher.

Responses include enhanced and more coordinated enforcement and supporting publicity, particularly in regional areas, community promotion and advocacy, and legislative, education, health counseling (including alcohol interlocks) and enforcement options to more effectively deal with recidivist drink drivers and those with higher BAC readings.

Currently about 25 per cent of drivers killed have a BAC of more than .05 per cent. The long-term outcome is to reduce this figure to 15 per cent. MUARC has estimated that if implemented effectively these measures would make it possible to reduce deaths by 10 per cent by 2007.

7.4 Restraints (slide 15)

Not using seatbelts remains a major contributor to road trauma in Western Australia despite their proven effectiveness in preventing deaths and serious injuries and despite the fact they have been compulsory for over 30 years.

In 2002 (preliminary data) about 21 per cent of drivers and passengers killed in road crashes were not wearing seat belts and in a further 12 per cent it was not known whether seatbelts were worn.

In rural areas the percentage of drivers and passengers killed not wearing seatbelts is higher. In 2002 (preliminary) 23 per cent of those people in country crashes were not wearing seatbelts compared to 13 per cent in the Perth metropolitan area.

Community education campaign tracking results show that the percentage of drivers and passengers not using restraints is higher than in the metropolitan area. About 80 per cent of country road users say “they always wear a seatbelt”, compared to 95 per cent in the Perth metropolitan area. However the large urban population means that the actual numbers of people traveling unrestrained is similar in the city and country.

Young men (particularly young country males) are less likely to wear a seatbelt at all times compared with other sections of the community. About 60 per cent of those killed and not wearing a seatbelt are men and of these 68 per cent are aged 17 to 39.

The WA Strategy identifies enhanced enforcement and supporting publicity (particularly in rural areas) together with engineering changes to introduce seatbelt interlocks or at least more aggressive seatbelt reminder systems as standard fitment in all new cars as the most effective responses to improve seatbelt wearing rates. Reducing the incidence of drink driving through improved enforcement and education will also contribute.

Of concern is the 2003 Rural Restraints Community Education Campaign tracking results which showed for the first time in WA that all (100 per cent) of those surveyed during the campaign in country areas did not believe they would ever get caught and penalized for not wearing a seatbelt. This suggests that education and enforcement needs to be more effective while acknowledging the difficulty of identifying and enforcing seatbelt offences on high speed country roads.

A number of other jurisdictions have similar issues in regional areas with seatbelt wearing.

The *National Road Safety Action Plan for 2003 and 2004* states “**Introduce an ADR for intrusive seat belt warning devices**” as a priority action. The support of other jurisdictions and the Federal Government in mandating seat belt interlocks or at least more aggressive seatbelts reminder systems is sought.

Open Load Space Results:

Open load space restrictions preventing the carriage of passengers in the open tray compartments of vehicles were introduced in Western Australia on 1 January 2001. While definitive results are yet to be obtained, preliminary monitoring of Police fatal crash reports by the Office of Road Safety for 2001, 2002 and 2003 (to date) indicate that a total of three deaths have occurred as a result of crash with passengers traveling in the open load space of vehicle compared to the previous pattern of six to eight deaths per year. If these estimates are proven, the Open Load Space initiative will have potentially saved a total of between 15 and 21 lives over the past three years.

7.5 Improving Road User Behaviour through the Effectiveness of Enforcement: (slide 16)

Effective enforcement is an essential factor along with coordinated education in encouraging and maintaining safer road user behaviour. An investigation of Crash Outcomes in Western Australia in 2001 (Harrison, June 2003) showed that increasing the level and effectiveness of enforcement in the following areas was likely to be associated with improvements in safety:

- RBT activity focusing on testing as many drivers as possible;
- Speed camera activity focusing on detecting as many speeders as possible;
- General speed enforcement focusing on detecting speeders; and
- Red light camera operations.

There is a clear need to sustain and maximize the effectiveness of enforcement in WA, especially in rural and remote areas where the current low perceived level of enforcement contributes to speeding, drink driving and the non-use of seatbelts.

The Strategic Traffic Enforcement Program (STEP) gives Police at district level more opportunities to target specific road safety problems using a more strategic approach to enforcement. STEP does this by providing additional road safety specific funding (from the Road Trauma Trust Fund) upon application to districts for enhanced enforcement. District police traffic coordinators are provided with additional training, a support manual and local road safety data to enable them to analyze road safety problems in their region, identify the most effective enforcement methods and to prepare a funding and operational plan for specific enforcement activity. STEP is assisting Police to utilize the theory of improved enforcement for road safety and apply it effectively through operations.

Maximising the unpredictability of detection is the main principle underlying the Random Roadwatch Enforcement Program which is based on the successful model used in Queensland. It is currently being tested in WA as part of STEP.

Programs like STEP and Random Roadwatch increase the actual and perceived levels of enforcement in both metropolitan and country areas.

The initiative aims to provide start up support for best practice approaches to be incorporated into mainstream traffic enforcement practices.

The *National Road Safety Action Plan for 2003 and 2004* includes two priority action areas relating to developing best practice guidelines for speeding and drink driving enforcement including rural areas. WA would be pleased to share the work of STEP with its associated best practice enforcement manual with other jurisdictions.

The WA Government announced in November 2003 that the ability of WA Police to detect and prosecute drug impaired drivers will be enhanced. Legislative changes will enable WA Police to conduct road side behavioural tests, require blood tests and utilize an expert medical panel to prepare briefs more effectively to prosecute under a new provision to be called driving while impaired.

7.6 Improving the Safety of Roads (no slide)

Regardless of other factors, improving the safety of roads has the potential to reduce the incidence and severity of crashes for all road users, not just vehicle occupants. This is particularly important in rural areas where higher speeds exist, contributing to increased risks of death and serious injury.

The Strategy identifies Black Spot treatments with their 100 per cent road safety focus and the safety components of road enhancement programs in WA by Main Roads and local government as key initiatives to improve the safety of roads.

During 2001/02 to 2004/05 it is estimated that a total of about \$95 million, made up of \$15 million a year from the State Government (an increase of \$2m annually), \$3.75m from local government annually and assuming \$5m annually from the Federal Government will be spent on Black Spot safety treatments in WA.

In November 2003, the Government announced at the launch of Arriving Safely that a total of \$17m of State funds would be spent on Black Spot treatments in 2003/04 on a cash flow management basis by bringing forward the additional \$2m from 2004/05 to enable more works to commence sooner.

Evaluation of the WA State Black Spot program has commenced.

In addition to these programs, the Strategy identifies promotion and advocacy initiatives that consider the possibility of rating the relative safety of roads in a way that parallels the safety ratings for vehicles for consumer information.

8. Progress: Moving Down from a Higher Plateau (slide 17)

Road safety in Western Australia is improving and moving down from a higher plateau evident in the 1990's.

Between 1989 and 2000 there has been a 34 per cent decrease in the age standardized rate of transport injury death in WA. (Gillam et al, 2003). Data from different sources and including indicators such as the number of fatal crashes, number of fatalities, deaths per 100,000 population, deaths per 10,000 vehicles, deaths per 1,000,000 kms traveled and third party insurance claims data all show improving patterns in WA. (slide 17)

However, the level remains unacceptably high, transport related injury is still the most common cause of injury death in ages 5-24 and 60-69 years in Western Australia. (Gillam, 2003).

9. Supporting Effective Implementation (slide 18)

The achievement of the road safety improvements in WA calculated in Arriving Safely will only be achieved through effective implementation of the priority initiatives by Government agencies, organizations and the wider community working in partnership.

Building community support for road safety, promoting consumer demand for safer road use, determining priorities for action and working together are identified as the key considerations for effective implementation.

Community initiatives in local and regional areas supporting the Strategy priorities, coordination of effort by agencies in regions, community based initiatives (including an internet based clearing house for sharing of resources to support community road safety and a road safety community development manual) for Aboriginal and Torres Strait Islander people and specific initiatives for other at risk groups such as young drivers (including school education and graduated driver training and licensing initiatives) are also required and being implemented.

Continued liaison and support with other jurisdictions and the implementation of national level road safety initiatives are valued and will contribute to road safety outcomes in WA.

WA is committed to supporting the implementation of the priority areas contained in the National Road Safety Action Plan for 2003 and 2004, including

- introduction of an ADR for seatbelt interlocks or at least more aggressive seatbelt warning devices for at least the driver and front passenger seats in all new vehicles;
- encouragement of the voluntary uptake of Intelligent Speed Adaptation in both light and heavy vehicle fleets;
- the development of national guidelines to support best practice in speed enforcement; and
- mandatory display of occupant protection safety ratings on new and used vehicles at point of sale (where ratings are available for the relevant model).

Assistance in the development of the development of a system rating the relative safety of roads in a way that parallels the safety ratings for vehicles for consumer information would also be appreciated.

Much is known about “what works” in improving road safety and a comprehensive road safety strategy has been prepared for WA to tackle the actions known to make the biggest contribution to improving road safety as a matter of priority.

The challenge in WA is to effectively implement on the ground the actions contained on paper in *Arriving Safely Road Safety Strategy for Western Australia 2003-2007* to the extent to which the anticipated benefits for the WA community can be realized.

The effective implementation of “what works”, through developing partnerships with other organizations and building community support and ownership will be the focus of efforts in WA. Continued collaboration with other jurisdictions will also be essential.

Effective implementation of the WA Strategy will contribute significantly to improved road safety in WA and make a proportional contribution at the national level.

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