

PARLIAMENT OF NEW SOUTH WALES



STAYSAFE Committee

ROAD SAFETY: FROM LOCAL TO GLOBAL PERSPECTIVES

Proceedings of the 4th meeting of Australasian Parliamentary
road safety committees, together with supplementary papers
Monday 3 April 2006 and Tuesday 4 April 2006,
Parliament House, Sydney

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Membership & Staff

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Terms of Reference

The STAYSAFE Committee

The general terms of reference of the STAYSAFE Committee are as follows:

- (1) As an ongoing task, the Committee is to-
 - (a) monitor, investigate and report on the road safety situation in New South Wales; and
 - (b) review and report on counter measures aimed at reducing deaths, injuries, and the social and economic costs to the community arising from road accidents.

Without restricting the generality of the foregoing, the following are to be given urgent consideration -

- (i) countermeasures aimed at traffic accidents associated with alcohol and other drugs.
- (ii) traffic law enforcement measures and their effectiveness.
- (iii) a review of human factors affecting traffic accidents, especially those relating to driver and rider licensing requirements and standards.
- (iv) the social and economic impact of deaths and serious debilitating injuries resulting from traffic accidents.
- (v) heavy vehicle safety.

CHAIRMAN'S FOREWORD

In this report, the STAYSAFE Committee provides the proceedings of meetings held around the theme of global road safety initiatives in early April 2006, as part of the 4th meeting of the Australasian Parliamentary Road Safety Committees.

Modern practice for Parliamentary committees allows the conduct of work in various ways. The traditional practice of a narrow focus on formal inquiry submissions, hearings and report is now supported and extended through mechanisms such as seminars, public lectures, workshops, roundtable discussions, and briefings. Often, such activities involve partnering relationships with government agencies and non-governmental and professional organisations. Through these means, Parliamentary committees exercise a number of functions, including:

- a recorded forum for discussion on proposed legislation (law making)
- oversight of the Executive (Ministers, and government agencies)
- promotion of debate and provision of a critical sounding board for new concepts
- a public forum for initiation and discussion of policy
- a public forum for the dissemination of information and discussion of matters of community interest and concern; and
- a platform for political debate

The STAYSAFE Committee has, for over a decade, conducted an extended series of seminars and conferences on road safety themes. These conferences are using held in partnership, with organisations such as the Australasian College of Road Safety, NRMA Motoring & Services, the George Institute for International Health, the Australian French Association of Science and Technology, and many other non-governmental organisations involved in road safety and injury prevention activities.

On Wednesday 7 April 2004, the STAYSAFE Committee released its report on World Health Day 2004—"Road safety is no accident" (STAYSAFE 62, 2004)—a collation of papers given at a forum on road safety held in Sydney, New South Wales. The forum was one of numerous events held on that day around the globe to mark World Health Day, which, for the first time in the history of the World Health Organization, World Health Day was devoted to road safety.

Following World Health Day in 2004, it became apparent to the STAYSAFE Committee that more needed to be done to promote the evolving global effort to improve road safety and reduce road trauma.

The 4th meeting of the Australasian Parliamentary Road Safety Committees at Parliament House, Sydney provided a mechanism for this work. Why the meeting of Australasian road safety committees? In many ways it is the Parliamentary road safety committees who speak or advocate for road safety. We play an important role, as our

work by its very nature is public as, in procedural terms, our function is to report to Parliament and thus to the public domain.

The Parliamentary road safety committees meetings promote sharing and understanding in the field of road safety, covering research, policy, enforcement and education topics. It is the only occasion where the road safety committees of the Australasian Parliaments can gather together at a single event. At these meetings, we also draw upon the knowledge and expertise of road safety professionals—engineers, psychologists, sociologists, and medical and industry representatives. The meetings enable research knowledge and experience to be shared among the road safety committees, and support our inquiry activities.

There have been three previous conferences of the Australasian Parliamentary Road Safety Committees, in Canberra in 1995, in Sydney in 1997, and in Brisbane in 1999. An important development at the Brisbane conference was the idea of integrating the conference of Parliamentary road safety committees with a public road safety conference, in that case, a seminar on tourism and road safety.

This report of the STAYSAFE Committee continues the work of the Committee in the areas of promotion of debate and the dissemination of information about road safety and road trauma.

Importantly, the STAYSAFE Committee also sees the conference of Australasian Parliamentary Road Safety Committees, and the publication of this report, as important events in the lead up to the forthcoming Global Road Safety Week, scheduled for 23-29 April 2007, which has a focus on children and youth. The Committee has recommended that the New South Wales government take action to ensure that Global Road Safety Week is appropriately marked by activities involving community groups, local councils, non-governmental organisations and public sector agencies across the New South Wales community.

Acknowledgments

As ever, I am tremendously grateful for the diligence and care taken by my colleagues on the STAYSAFE Committee.

These meetings were held during the time when the Hon. John Tingle MLC was a member of the STAYSAFE Committee. John served on the STAYSAFE Committee throughout his Parliamentary career, 1995-2006, and was a much valued contributor to the deliberations of the Committee, often offering well reasoned and insightful comment to support the Committee's findings and recommendations.

Finally, on behalf of the Members of the STAYSAFE Committee, I wish to thank my Committee Manager, Mr Ian Faulks, for the exemplary manner in which he has

conducted the administrative, procedural and research activities required of this inquiry, and for the way he, assisted by Ms Annette Phelps, Committee Officer, has prepared the draft report at such short notice. I thank also Mr Jim Jefferis, Senior Committee Officer, and Ms Millie Yeoh, Assistant Committee Officer, for their administrative assistance. I thank also Mr Bjarne Nordin, then a Senior Committee Officer, for his assistance in the organisation of the conferences.

Recommendations

RECOMMENDATION 1

The New South Wales government, through government agencies including the Roads and Traffic Authority, Motor Accidents Authority, Department of Health, New South Wales Police and the Commission for Children and Young People, and involving local councils and non-governmental organisations, support and promote the First United Nations Global Road Safety Week, 23-29 April 2007.

(Para. 1.18)

RECOMMENDATION 2

The New South Wales government sponsor a delegation of young people to attend the World Youth Assembly for Road Safety.

(Para. 1.20)

RECOMMENDATION 3

The Roads and Traffic Authority, Motor Accident Authority and other relevant New South Wales public sector agencies, support and promote actions to improve road safety and reduce road trauma with the Asia-Pacific region particularly, and global efforts to improve road safety and reduce road trauma generally.

(Para. 1.23)

RECOMMENDATION 4

The Roads and Traffic Authority prescribe that a minimum of 10% of the funding for any road project (road construction or renewal project) be given to a road safety component.

(Para. 1.26)

CHAPTER 1—

COMMENTARY

1.1 This report of the proceedings of an international meeting to discuss road safety continues an important aspect of the Committee's work during the 53rd Parliament, which has been to provide a public forum to increase the awareness and understanding by the New South Wales community and New South Wales road safety workers of the global impact of road trauma.

1.2 Since the end of the 20th century, there has been a significant development in international approaches to road safety, including the establishment of the Global Road Safety Partnership, the FIA Foundation for the Automobile and Society and the Commission for Global Road Safety, and the commencement of a variety of actions by the United Nations and the World Bank, amongst others.

A global focus for road safety and road trauma reduction

1.3 In 2004, STAYSAFE released its report on World Health Day 2004—"Road safety is no accident" (STAYSAFE 62, 2004)—a collation of papers given at a forum on road safety held in Sydney, New South Wales, on Wednesday 7 April 2004. The major launch of World Health Day 2004 was celebrated in Paris, France, and was hosted by President Jacques Chirac of France, who delivered a powerful keynote speech calling road traffic collisions an "evil which strikes at the modern world". He stressed the need for political commitment to road safety at the highest level and called for action by all countries to address this crisis.

1.4 The Secretary-General of the United Nations, Mr Kofi Annan, pledging his support to World Health Day and called on all countries to take heed of the growing toll of road traffic collisions and begin implementing preventive action. Mr Annan said:

"Despite enormous improvements in road safety in some countries over the past few decades, nearly 1.2 million people are killed every year in road traffic crashes around the world. Most of these deaths, each of which is a personal tragedy, occur singly and draw no attention from the world's media. About 90 per cent happen in developing countries, most of them among pedestrians, bicyclists, motorcyclists and passengers of public transport. Between 20 and 50 million more people are seriously injured in such incidents every year, often resulting in disability.

Beyond the human suffering they cause, road traffic injuries result in considerable additional costs to societies. Globally, more than half of all victims are between the ages of 15 and 44, the age at which they would be most able to contribute to the livelihood of their families and communities. This loss of breadwinners has enormous implications for the security of families. And estimates show that road traffic injuries cost nations as much as 2 per cent of their gross national product.

Yet most of this loss can be prevented - by tackling dangerous driving, such as speeding and driving under the influence of alcohol; by promoting the use of helmets and seat belts; by ensuring that people walking and cycling are more visible; by improving the design of roads and vehicles; by enforcing road safety regulations; and by improving emergency response services. The key to successful prevention lies in the commitment of all relevant sectors, public and private - health, transport, education, finance, police, legislators, manufacturers, foundations and the media - to make road safety happen.”

1.5 Dr Lee Jong-wook, Director-General of the World Health Organization, called for a concerted effort in road safety, particularly among the public health community, saying that:

“We must now use every day to act on road safety, and implement effective sustainable action to prevent injury and death on the world's roads... Everyone can increase road safety in their private capacity as well - as drivers, passengers and pedestrians, and as members of the public who influence decision-makers. Road deaths and injuries are preventable.”

Variability in road trauma across Australian jurisdictions

1.6 In June 2006, a report released by Luke Connelly and Richard Supangan, from the Australian Centre for Economic Research on Health at the University of Queensland, examined the economic costs of road crashes for each of the Australian States and mainland Territories and for Australia as a whole. The report showed that the costs of road crashes—including medical care, emergency callouts, vehicle damage and lost work time—equate to more than A\$800 for each Australian every year. Nationally, road crashes cost an estimated A\$17 billion annually, or 2.3 per cent of Australia's total economic output each year.

1.7 Figures 1 and 2 summarise the number of road crash fatalities per 100,000 population across the Australian States and mainland Territories, and the total cost per capita of road crashes: across the Australian States and mainland Territories

(expressed in Australian dollars; from Connelly & Supangan, 2006). There are significant variations in the magnitude and regional distribution of road crashes across the Australian States and Territories, and the estimated costs of these crashes range from approximately 0.62 to 3.63% of Gross State Product (GSP) for the jurisdictions.

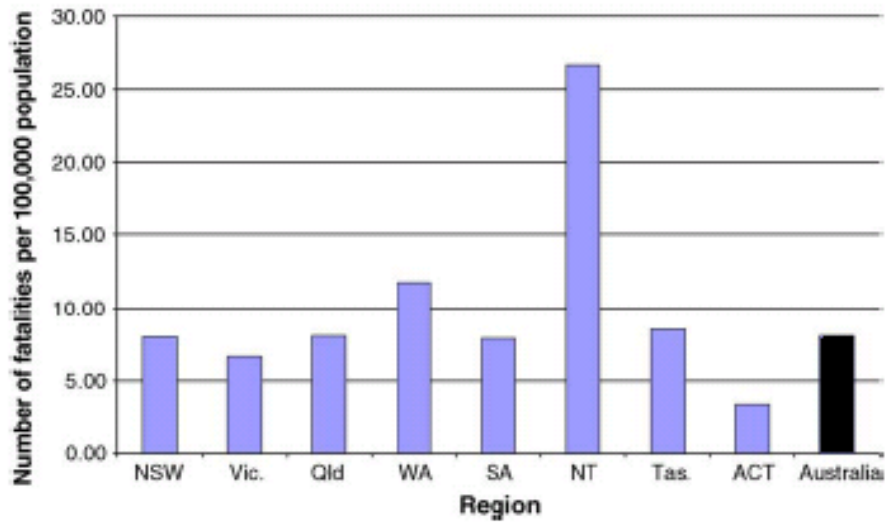


FIGURE 1: Number of road crash fatalities per 100,000 population: Australia, states and territories, 2003. (From: Connelly & Supangan, 2006)

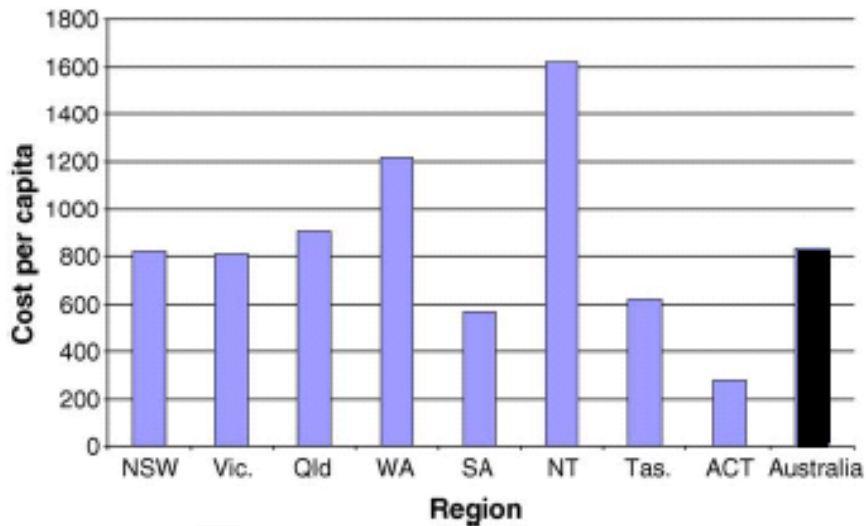


FIGURE 2: Total cost per capita (AUD, 2003) of road crashes: Australia, states and territories. (From: Connelly & Supangan, 2006)

1.8 While Australia has substantially uniform road transport laws and national standards for vehicles and infrastructure, State and territory differences in the rates of road trauma associated with road crashes are likely attributable to a number of phenomena including the quality of roads, safety of road traffic furniture (e.g., guard rails, lamp posts), distance from crash sites to definitive trauma care (i.e., specialist trauma care facilities), emergency response times, law enforcement practices and coverage, road hazards, and individual jurisdiction's variations in specific road transport laws and in the enforcement of compliance with those laws.

1.9 Table 1 provides more detail of the costs associated with road trauma, expressed by degree of injury or damage in a road crash.

TABLE 1: Estimated costs of road crashes in Australia in 2003

Jurisdiction	Fatalities *	Serious injuries	Minor injuries	Property damage only	Total cost	Proportion of GSP or GDP (%) **
NSW	978.61	3,522.98	260.90	925.60	5,697.10	2.15
Victoria	604.66	2,653.15	214.38	673.55	4,145.75	2.14
Queensland	568.02	2,276.80	168.31	584.50	3,597.63	2.80
WA	329.82	1,126.29	158.98	313.30	1,928.39	2.33
SA	285.84	582.80	107.86	189.43	1,165.93	2.32
NT	97.11	172.30	9.63	54.13	333.17	3.63
Tasmania	75.12	156.02	28.52	50.37	310.04	2.37
ACT	20.16	54.79	3.38	15.19	93.51	0.62
Australia	2,968.34	10,545.13	951.97	2,806.07	17,271.51	2.28

* Estimated cost (A\$, millions, 2003). The estimated average costs of road crashes by casualty/crash type, expressed in 2003 Australian dollar values, as follows:

- Fatality: \$1,832,310
- Serious injury: \$397,000
- Minor injury: \$14,183
- Property damage only crash: \$7329

(as derived from estimates by the Bureau of Transport Economics)

** Estimated cost of road crashes as a proportion of either Gross State Product or Gross Domestic Product (%)

(From: Connelly & Supangan, 2006)

1.10 STAYSAFE notes that the work by Connelly and Supangan (2006) provides the first breakdown of road crash costs for Australia on a jurisdictional basis (i.e., by State and Territory). The clear identification of the sub-national variations in the road toll should encourage further research on the causes of the marked differences between road crash outcomes across the States and Territories of Australia.

1.11 This is already occurring. The Northern Territory has a staggeringly disproportionate number of roads deaths, with a road crash fatality rate of more than 25 deaths per 100,000 people in 2003. This incidence of road trauma has been blamed on high alcohol consumption rates, a reluctance to wear seatbelts, a lack of speed limits outside towns, and driver fatigue associated with driving long distances and for extended periods of time. Single vehicle roll-over crashes are quite common. This could be due to a range of factors, including as four-wheel drives being more prone to rollovers. The costs of road trauma equalled \$1,600 per person in the Northern Territory—about double the national average and equal to 3.63 per cent of the territory's economic output.

1.12 The Northern Territory government has recently announced significant reforms of its road transport system, based on recommendations by a Road Safety Task Force. The reforms address drink driving, the wearing of seat belts, graduated driver licensing for novice drivers, programs for repeat traffic offenders, and the imposition of a 130 km/h speed restriction on major highways outside of urban areas (previously with no speed limit).

1.13 STAYSAFE regards this research as a 'wake up call' for all State and Territory road safety agencies. There is an urgent need to boost road safety activities if national, State and Territory road safety targets are to be met.

1.14 STAYSAFE recognises that Australia has a strong reputation for road safety actions, and there is much potential for Australian researchers, legislators and policy-makers to become involved in addressing regional and global efforts to reduce road trauma. Road trauma is recognised as one of the world's biggest public health issues, and Australian experiences can benefit overseas jurisdictions.

1.15 Involvement in the wider regional and global actions to address road trauma can also benefit the Australian States and Territories, through access to research, and new policies and programs developed for communities in other jurisdictions.

1.16 STAYSAFE notes that there are several actions that can be taken to further the links between the Australian road safety effort (or, more specifically, the New South Wales road safety effort) and global activities.

The First United Nations Global Road Safety Week

1.17 The First United Nations Global Road Safety Week was called for in the October 2005 United Nations General Assembly resolution A/60/5 on 'Improving global road safety'. The Global Road Safety Week will focus on young road users. During the Global Road Safety Week, it is expected that hundreds of initiatives—local, national, regional and global—will take place around the world, organized by government agencies, local councils, non-governmental organisations, United Nations and other international agencies, private sector companies, foundations and others working for safer roads.

1.18 STAYSAFE recommends that the New South Wales government, through government agencies including the Roads and Traffic Authority, Motor Accidents Authority, Department of Health, New South Wales Police and the Commission for Children and Young People, and involving local councils and non-governmental organisations, support and promote the First United Nations Global Road Safety Week, 23-29 April 2007.

RECOMMENDATION 1: The New South Wales government, through government agencies including the Roads and Traffic Authority, Motor Accidents Authority, Department of Health, New South Wales Police and the Commission for Children and Young People, and involving local councils and non-governmental organisations, support and promote the First United Nations Global Road Safety Week, 23-29 April 2007.

1.19 The key event for the First United Nations Global Road Safety Week will be the World Youth Assembly for Road Safety, which will bring delegations of young people together from many countries to discuss and adopt a youth declaration on road safety and define ways to better serve as road safety advocates in their countries.

1.20 STAYSAFE recommends that the New South Wales government sponsor a delegation of young people to attend the World Youth Assembly for Road Safety.

RECOMMENDATION 2: The New South Wales government sponsor a delegation of young people to attend the World Youth Assembly for Road Safety.

1.21 The First United Nations Global Road Safety Week will be marked in all countries and by many communities. It is hoped the events during the Global Road Safety Week will serve as launching points for new and effective road safety initiatives in the years ahead.

Action in the Asia-Pacific region to improve road safety and reduce road trauma

1.22 STAYSAFE has noted the international call for G8 countries to support a global campaign to bring down the number of road deaths worldwide—some 1.2 million deaths a year. The call for greater involvement of the G8 nations to support a \$300 million, 10-year action plan in developing countries was made by the Commission for Global Road Safety. The Commission—which is chaired by former NATO Chief Lord Robertson of Port Ellen and includes seven times Formula One world champion Michael Schumacher—released a major report highlighting the numbers of road deaths globally and calling for the United Nations to co-ordinate an international approach to road trauma prevention.

1.23 STAYSAFE believes that there is a particular need to promote and support road safety actions in the Asia-Pacific region. STAYSAFE therefore recommends that the Roads and Traffic Authority, Motor Accident Authority and other relevant New South Wales public sector agencies, support and promote actions to improve road safety and reduce road trauma with the Asia-Pacific region particularly, and global efforts to improve road safety and reduce road trauma generally.

RECOMMENDATION 3: The Roads and Traffic Authority, Motor Accident Authority and other relevant New South Wales public sector agencies, support and promote actions to improve road safety and reduce road trauma with the Asia-Pacific region particularly, and global efforts to improve road safety and reduce road trauma generally.

A requirement that 10% of any road project be given to a road safety component

1.24 The World Bank has agreed to establish a facility, which is like a trust fund basically within the World Bank. It is headed up by someone you probably know quite well, Tony Bliss from New Zealand, and for us it is a very important platform because we want to try to encourage other donors and to get enough resource that you can talk seriously to countries to stimulate them into action to implement more or less the world report, and we have given them US\$5 million to get going and they have unlocked US\$5 million from within the World Bank and then they are going to go around to the other major donor, governments, and also big foundations like the Bill & Melinda Gates Foundation and those sorts of people. The working ambition is to have something like \$US30 million a year in this facility. We thought that if we could get to that scale of resource, it has got to have a big impact. That is a pretty ambitious goal, but we have started anyway.

1.25 The interesting thing about road infrastructure investments is as long ago as 1979 the World Bank identified a guideline which we were supposed to follow which

said that for every single road sector project that we fund, and it has a very substantial program, as it is the world's largest source of such investment, that 10 percent of each project should be given over to a road safety component and that should be not just engineering measures, but a broader sense of overall assessment, including things like broader societal involvement in project evaluation performance monitoring and so on as part of that 10 percent. The bank has never really succeeded in applying it. They did some work in the nineties and they estimated that about three percent of most of their projects are to some extent applicable to road safety but they do not have any consistent coherent way of measuring this. It is a bit random how it is done.

1.26 STAYSAFE recommends that the Roads and Traffic Authority prescribe that a minimum of 10% of the funding for any road project (road construction or renewal project) be given to a road safety component. Implementation of this recommendation would have a particular impact on local councils. There has been recent media comment highlighting research conducted by the Property Council of Australia that showed that local councils in the Sydney metropolitan area have amassed a total of A\$603 million in unspent so-called Section 94 funds. The Environmental Planning and Assessment Act 1979 Section 94 enables local councils or other consent authorities to levy contributions for public amenities and services required as a consequence of development. Local councils are meant to use the funds to build or improve infrastructure such as roads. The trend in accumulating Section 94 funds has triggered calls from community, property and business groups for the New South Wales Government to introduce a "use it or lose it" policy with deadlines for funds to be spent. In 2005, legislative amendments were introduced to widen the scope for projects where Section 94 funds could be spent.

RECOMMENDATION 4: The Roads and Traffic Authority prescribe that a minimum of 10% of the funding for any road project (road construction or renewal project) be given to a road safety component.

A final remark

1.25 As a final remark, STAYSAFE notes that the FIA Foundation for the Automobile and Society has put forward a proposal for introducing a United Nations Road Safety Task Force. This proposal was tabled at the July 2006 meeting of the Traffic Safety Working Party of the United Nations Economic Commission for Europe. This meeting, which brings together road safety experts from governments across Europe and includes delegates from the United States of America, Japan and Russia, also heard from Oman's Ambassador to the United Nations, Fuad Al-Hinai. The Ambassador recently secured a General Assembly resolution recognising the scale of the road safety crisis facing the developing world, and is pressing for greater concerted action by the international community.

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THE NATIONAL MEETING OF
AUSTRALASIAN PARLIAMENTARY ROAD
SAFETY COMMITTEES,
MONDAY 3 APRIL 2006

Chapter One—

OPENING SPEECH WELCOMING DELEGATES TO THE 4TH MEETING OF AUSTRALASIAN PARLIAMENTARY ROAD SAFETY COMMITTEES

Paul Gibson MP
Chairman, STAYSAFE Committee

Good morning, on behalf of the STAYSAFE Committee, I welcome the delegates to the 4th meeting of the Australasian Parliamentary Road Safety Committees at Parliament House, Sydney.

Why the meeting of Australasian road safety committees? In many ways it is the Parliamentary road safety committees who speak or advocate for road safety. We play an important role, as our work by its very nature is public as, in procedural terms, our function is to report to Parliament and thus to the public domain.

The Parliamentary road safety committees meetings promote sharing and understanding in the field of road safety, covering research, policy, enforcement and education topics. It is the only occasion where the road safety committees of the Australasian Parliaments can gather together at a single event. At these meetings, we also draw upon the knowledge and expertise of road safety professionals—engineers, psychologists, sociologists, and medical and industry representatives. The meetings enable research knowledge and experience to be shared among the road safety committees, and support our inquiry activities.

There have been three previous conferences, in Canberra in 1995, Sydney in 1997, and Brisbane in 1999. An important development at the Brisbane conference was the idea of integrating the conference of Parliamentary road safety committees with a public road safety conference, in that case, a seminar on tourism and road safety.

It has been now six years since the last conference. This has been an unfortunate delay.

It seems that over the past decade, the various Australian governments, and the government agencies involved in road safety in Australia, are less likely to publish research reports and other documents than in the past.

We continue to have the annual road safety, enforcement and education conference and the biennial ARRB conferences. This year, the safety, enforcement and education conference is on the Gold Coast, Queensland, over 25-27 October 2006, and the 22nd ARRB Conference returns to Australia's capital, Canberra, a couple of days later, from 29 October – 2 November 2006. These conferences are an essential part of the communication of road safety. They allow discussion of issues relevant to the transport industry, and new research being undertaken on the local and international scene, but they are not specific to the interests and work of the Parliamentary road safety committees.

Another mechanism for communication is through the road safety strategy processes, but this tends to be an administrative rather than public process, and evaluations are not necessarily a part of the process. Here in New South Wales, the Road Safety 2000 strategy had to all intents and purposes collapsed some three years before it was due to be completed, and there has been no evaluation of its success. On one primary measure, achievement of a target of less than 500 road deaths on New South Wales roads in a calendar year, it manifestly failed. What of the New South Wales Road Safety 2010? To date, there has been little public comment or debate, but progress reports must be being completed as part of the New South Wales involvement in the national road safety strategy. These progress reports, however, are not made public.

Well, what is happening concerning road trauma in Australia?

The total number of road deaths in Australia in February 2006 was 124 people. This is an increase of just over 4% compared with the February 2005 figure.

The number of road deaths in Australia for 2006 to the end of February is 279 people. This is more than 21% over the same two month period in 2005.

If you look at the percentage change in road fatalities over the past 12 months, New South Wales, Queensland and Tasmania have seen about a 10% increase, South Australia has seen an increase of almost 20%, and Victoria and Western Australia have seen a very slight percentage reduction. The figures for the Australian Territories, such as the Northern Territory, Australian Territory, and Norfolk Island, are too low to allow for comment, but are indicative of the general rise in road trauma.

The rise in road trauma involves, drivers, other vehicle passengers, pedestrians, and motorcyclists. Bicycle riders are the only road user category where a continued reduction is recorded. Both males and females are involved more or less equally in road trauma. The increase in road deaths is not associated with freeways and highways, but has occurred on other roads (that is, on main roads, secondary roads, and unclassified roads). The rate of involvement in fatal crashes of trucks,

specifically semitrailers and B-double combination trucks, is increasing over the past 12 months.

But if we look beyond the immediate past 1-2 years, then the picture we get is one of general success in reducing road trauma, with strong progress towards achieving the national road safety target of 5.6 deaths per 100,000 people by 2010. Nonetheless, the data from the short term is worrying, with a failure to meet the interim 2005 road trauma reduction targets.

That is why it is timely and appropriate to hold the meeting of the Australasian Parliamentary Road Safety Committees.

I noted earlier that over the past decade, the various Australian governments, and the government agencies involved in road safety in Australia, seem less likely to publish research reports and other documents than in the past.

I will go further, and suggest that road safety seems to be in the doldrums. There seems to be a form of ennui that is affecting those who work in the road safety area. When I look at the work of the New South Wales agencies, their efforts are frustratingly slow, even tedious in nature.

When the STAYSAFE Committee looked at the need to lower the general urban speed limit to 50 km/h, it took seven years for this major recommendation to be implemented. The Committee recommended that flashing lights be installed outside schools to indicate to motorists that the special school speed limit of 40 km/h was in force. This speed limit applies only for a limited time in the morning and afternoon on school days. We have been waiting five years for the implementation of that major recommendation.

Looking internationally, I note that the Parliamentary road safety committees played important roles in World Health Day 2004, which was devoted to the issue of reducing road trauma. Here in New South Wales, for example, the STAYSAFE Committee hosted the launch of World Health Day 2004 through a public seminar here at Parliament. We were all involved, but in terms of the road safety effort here in New South Wales, what has happened in response? I suggest that little, if nothing at all. We are approaching the first United Nations Global Road Safety Week, to be held on 23-29 April 2007. Will this event affect us in any meaningful way?

When I spoke at the World Health Day 2004 seminar, I commented on the immense changes that had occurred in the road transport system over the past 10-15 years, particularly with regard to vehicle and road technologies. We need to be able to respond and react to what is going on around us, not the least in responding appropriately to technology change, but also in terms of global changes in political organisation, in business and in commerce.

The core challenge, I suggest, is to have the structures to enable us to move forward, structures that enable us to have timely, appropriate and well organised data about the road safety situation. Bureaucratic structures that enable us to respond and develop needed policies and programs as the road transport system evolves and changes, and to evaluate the effectiveness of those policies and practices and communicate that research knowledge publicly. And we need to have the political structures to lead, foster and support the road safety effort.

I look forward to the discussions today, and the presentation from our eminent speakers and the comments of the Committees and other representatives attending. We have tried, in particular, to showcase some of the New South Wales activity, and there is a special session this afternoon on New South Wales research organisations, including the George Institute for International Health, who are one of our partners in organising the meeting.

I make a particular welcome to our partners, the Australian Automobile Association, and NRMA Motoring & Services, our national and New South Wales motoring organisations respectively, who have a direct connection to the FIA Foundation for the Automobile and Society.

And I welcome the Australasian College of Road Safety, who make up the complement of our partners for these two days of meetings.

We have a two-day program, as is outlined in the agenda papers that have been distributed.

We have the private meeting today, which allows us to look at what is going on from State or Territory and national perspectives. The technical program, which will be delivered in a public seminar tomorrow, will deal with a variety of key issues in road trauma and the development of appropriate countermeasures.

The key focus of the meeting are the presentations by David Ward, Director-General of the FIA Foundation for the Automobile and Society, who was very kindly agreed to present and discuss international aspects of road safety at today's private meeting and again at tomorrow's public seminar. I must say that I, for one, look forward to this outline of the work of the Foundation and other global activities such as the Commission on Global Road Safety. I thank my Committee Manager, Mr Ian Faulks, for putting in place the arrangements for David to make these presentations at these meetings.

I acknowledge the continuing relationship between the Federation Internationale de l'Automobile and road safety initiatives. It is worthwhile, I think, to note that here in New South Wales, one of the architects of today's road safety efforts was Dr Michael Henderson, who was the director of the Traffic Accident Research Unit through the 1970s. Michael was, and remains, a keen motor racing enthusiast, and was involved

in the development of seat belts for Formula One racing cars in the 1960s. This early work had an immediate benefit in saving lives in motor racing, and the mandatory wearing of seat belts has, since the early 1970s, saved thousands of lives on Australian roads. Last year, the STAYSAFE Committee combined with Renault and the French government for a seminar on safer vehicle technology immediately following the 2005 Australian Grand Prix, which was won by Renault as was the 2006 Australian Grand Prix yesterday.

I also extend a warm welcome to Professor Ian Johnston, Director of the Monash University Accident Research Centre, who will provide a national perspective on road safety matters, and to Mr Iain Cameron, head of the Office of Road Safety in Western Australia, who will comment on a particular international activity, the OECD Working Group on Setting Targets.

But first, I am delighted to welcome David Ward, and invite him to present the first keynote presentation to the meeting of Australasian Parliamentary road safety committees.

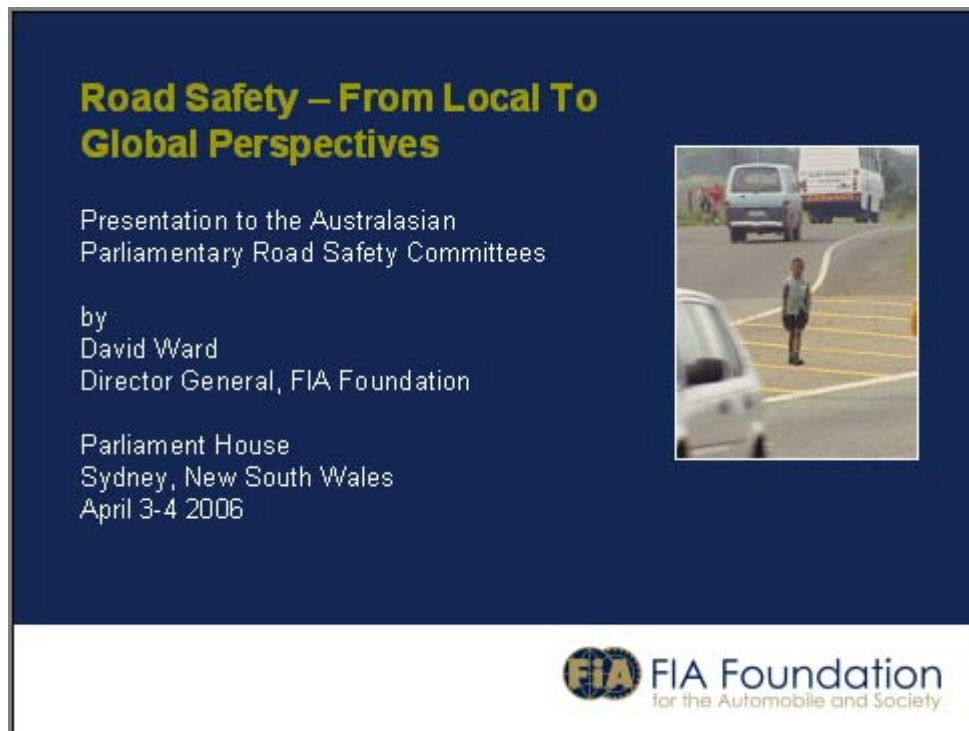
Chapter Two—

A GLOBAL PERSPECTIVE ON ROAD SAFETY

Mr DAVID WARD

FIA Foundation for the Automobile and Society

Ladies and gentlemen, thank you very much for the invitation to be able to speak to you today. It is an honour for me to be able to participate here in the New South Wales Parliament, and it is a wonderful opportunity for me actually as it is my first visit both to Sydney and also to Australia.




Road Safety – From Local To Global Perspectives

Presentation to the Australasian
Parliamentary Road Safety Committees

by
David Ward
Director General, FIA Foundation

Parliament House
Sydney, New South Wales
April 3-4 2006



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Anyway, as it says in the title, it is from local to global and I would like to give a very global perspective today. What I thought I would begin with is briefly explain what the FIA Foundation for the Automobile and Society is. It was set up in 2001 as an independent charitable foundation. It is registered in the United Kingdom and in fact it is entirely independent of the Federation Internationale de l'Automobile, which is the non-profit federation of motoring organisations and the governing body of world motor sport.

We managed to persuade the Federation Internationale de l'Automobile to give us a permanent endowment of \$300 million, which constitutes a major part of the proceeds of deals on television rights of Formula 1. We have managed to take quite a large amount of money from the sport and put it to good use elsewhere.



**The FIA Foundation
for the Automobile & Society**

Established in 2001 with a US\$300 million donation by the FIA, the worldwide association of motoring organisations and the governing body of international motor sport.

Registered as a UK charity with the aim to promote:

- Road safety
- Environmental protection
- Sustainable mobility
- Safety in motor sport

 **FIA Foundation**
for the Automobile and Society

We have four main objectives which are:

- to promote road safety,
- to promote environmental protection,
- do work on mobility problems, and
- do work on motor sport safety as well.

The kind of work we are doing varies but we do work in awareness campaigns, vehicle crash test programs, road assessment programs, and in particular on global road safety advocacy.

The FIA Foundation & Road Safety

Road Traffic Injury Prevention is the most important area of the Foundation's work and includes:

- Support for Awareness Campaigns
- Support for New Car Assessment Programmes
- Support for Road Assessment Programmes
- Support for Global Road Safety Advocacy



Road safety has been the major area of work for us since we were set up in 2001. We decided to concentrate on road safety because we felt that was the area where we could make the biggest impact. In other areas, such as environment, a lot of other people have bigger resources than us. That gives you an indication of some of the things we have been doing.

Support for Awareness Campaigns

Seat Belt 'Good Practice' Manual providing an A to Z guide covering legislation, enforcement, awareness campaigns – winner of Prince Michael International Safety Award

Costa Rica 'Por Amor' pilot campaign in 2003-4 raised wearing rate from 26% to 83% - winner of Prince Michael International Road Safety Award

'Think Before You Drive' global campaign with Bridgestone focusing on seat belt, child & head restraints and tyre safety, involving 60 countries worldwide.



On the awareness campaign, just to highlight some of the things we have done, we have introduced a kind of A-Z manual on good practice in seatbelt wearing. That covered everything and was designed for policy makers in low to middle income countries, more middle income countries that are currently experiencing quite rapid levels of car based motorisation and it is a complete kit for anyone, right back to the basic legislation that you would need for vehicles and then through to a lot of advice on how to run successful enforcement campaigns and so on. It has been quite well received and we are very pleased to have received the international award and other road safety awards. The manual has been taken into the United Nations and it is going to produce a series of manuals and it will update and republish it.

We also supported a pilot project in Costa Rica, because we wanted to try to prove that the manual would work so in collaboration with our local automobile club and the National Road Safety Council and in a lot of dialogue with the Government we ran a campaign in Costa Rica, which has a population of about four million people, so it is quite a small country, but that is useful because you can really test and prove what you are trying to do. In Costa Rica they had lost the seatbelt law. They had a seatbelt law and some civil libertarians were in their National Assembly and challenged it and they lost it in the High Court of Costa Rica and the government were very frustrated by this and they wanted it reintroduced and so we supported them in the campaign and ran a big public awareness campaign with television advertising and a legislative issue to get the law back into place. We followed that by police enforcement and it proved to be a really substantial success with wearing rates going from a low base to quite a high base and that was a good success, we think, in a rather typical developing country and we will be back there later this year and hopefully seeing how they are going to sustain those rates. As you well know, wearing rates can drop back unless you sustain the campaign.

We are also involved in a global issue with the Bridgestone Corporation in a campaign Think Before You Drive campaign and there was launched in Melbourne, and there was one in Invercargill in New Zealand. It is a fairly straightforward driver awareness campaign. I would say that the Costa Rica one was much more intensive than the Think campaign. We think all of these things are worthwhile.

Support for New Car Assessment Programmes

The Foundation supports a number of consumer crash test programmes.

Member of the Euro NCAP

Member of the Australian NCAP

Member of NPACS – Assessment of Child Restraint Systems



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The Federation Internationale de l'Automobile was a founding member of the EuroNCAP and we have taken on that role. We are a member of both the Australian New Car Assessment Program (ANCAP) and the EuroNCAP and for us the improvements in occupant protection in these kinds of crash programs have driven forward to a quite substantial degree the levels of occupant protection. We think it is an interesting combination of a legislative platform, combined with consumer information that can really create a competitive market for industry to compete in, to demonstrate safety products and it has worked extremely well in Europe and I know that here Lauchlan and others have played a key role in the Australian program.

We are developing a new program, which is really to do the same sort of thing for child restraint technologies. So far there has not been a full crash test program for child restraints and we are supporting that.

A new and important area for us, probably now becoming a major activity, is road assessment programs, or RAPs. We would like to do with the road sector what EuroNCAP and ANCAP and others have done to car manufacturing. We want consumer information rating systems to really encourage road authorities and the public to be much more aware of the prevailing level of safety in road infrastructure.

Support for Road Assessment Programmes

The Foundation is a major contributor to the International Road Assessment Programme **iRAP**.

iRAP is developing a global approach to road infrastructure safety rating and assessment. It brings together **EuroRAP**, **AusRAP** and **USRAP** and will be developing programmes for Asia, Latin America and Africa.



We are supporting the international road safety program, which is constituted out of programs like AusRAP and EuroRAP and USRAP and our next most ambitious phase will be to spread this into other parts of the world like Latin America and Africa. I will come back to that later.

Support for Global Road Safety Advocacy

The Foundation is a member of the United Nations Road Safety Collaboration and the Global Road Safety Partnership

Supports the World Health Organisation's Five year Strategy for Road Traffic Injury Prevention

Supports the World Bank's Global Road Safety Facility

Has Observer Status at the United Nations (ECE) World Forum on Vehicle Standards and the Working Party on Road Traffic Safety




Global road safety advocacy has been a major area of work for us. When we got going in 2001 it became evident that road safety as a global issue was not really on the agenda properly and so we have become involved in working with key partners, with the World Health Organisation, and also the World Bank and the United Nations in general, in trying to promote road safety as an issue on the international agenda. We are directly participating in some of these United Nations bodies.



**The Hidden Epidemic
Global Road Traffic Injuries**

- **1.2 million people worldwide are killed each year on the roads**
- **50 million people worldwide are injured in road crashes each year, 15 million seriously**
- **By 2020 road traffic injuries are predicted to rise overall by about 65%;**
- **Low and middle income countries account for more than 80% of global deaths from road traffic crashes.**



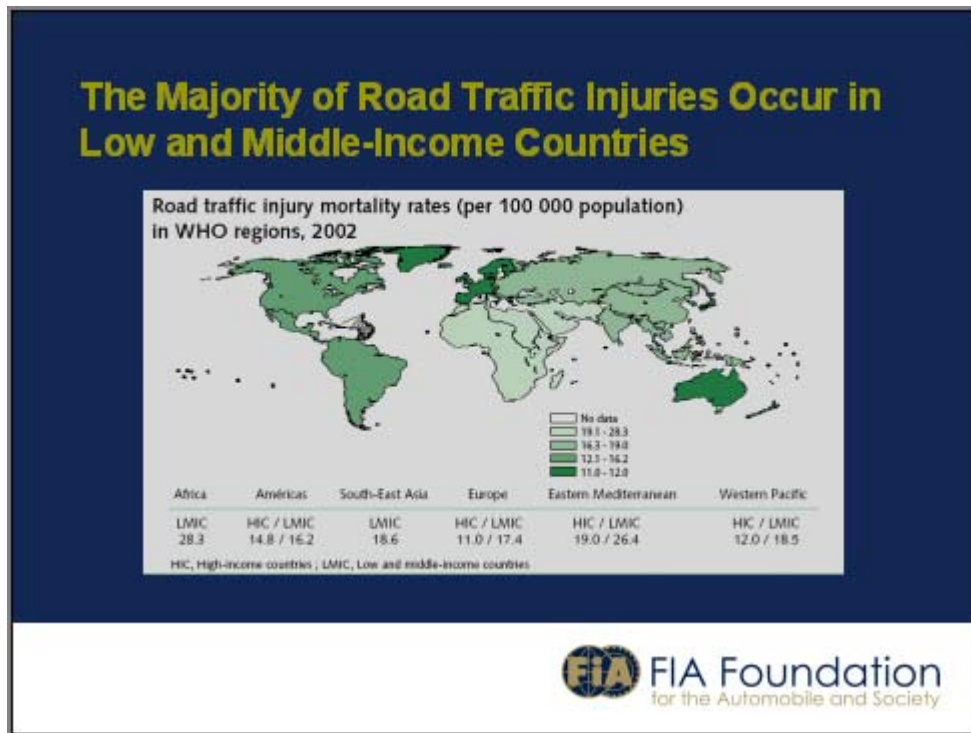
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The sheer scale often staggers people but every year—and this is probably a quite significant underestimate—1.2 million people are killed in road traffic crashes on the road. A further 50 million people are injured, and I would say it is a safe guess to say that this is a significant underestimate. Many of you would be aware that there is a very big problem of under-reporting of road traffic deaths and injuries. In most industrialised countries they apply a 30-day rule for defining when a traffic fatality has occurred. In many low and middle income countries if you are dead by the roadside you may be counted as a road traffic death, but if you die a few weeks later in hospital you will not be recorded at all as a road traffic death. You will be recorded as whatever ailed you as a result of the crash. There is a significant problem of under-reporting and also under-reporting from a lack of adequate systems in place, starting at the scene kind of reporting, right through to hospital admissions and so on, so it is a major problem.

The World Health Organisation and the World Bank have worked hard at coming up with a number which they will stand behind, but they stand by, the figure of 1.2 and it is quite though provoking when you think about it because it is 3,000 people a day.

It is a '9/11—Twin Towers' type incident happening day in and day out, so it warrants a lot more attention.


That is what we believe, and the alarming thing is the predictions of what is going to happen in the future. The World Health Organisation and the World Bank have projections showing that the problem is going to rise by 65 percent up to 2020. Low and middle income countries are the primary area where this is happening.



This chart, which I have borrowed from the World Health Organisation, shows the regional spread measured by mortality rates per 100,000 of population. The dark is good and the light is very bad, and what comes out from this chart is that Africa has the world's most dangerous roads. In sheer numbers of fatalities it is not that great but per kilometre driven they are by far the most dangerous roads. The greatest number of fatalities are in the Asia Pacific region.

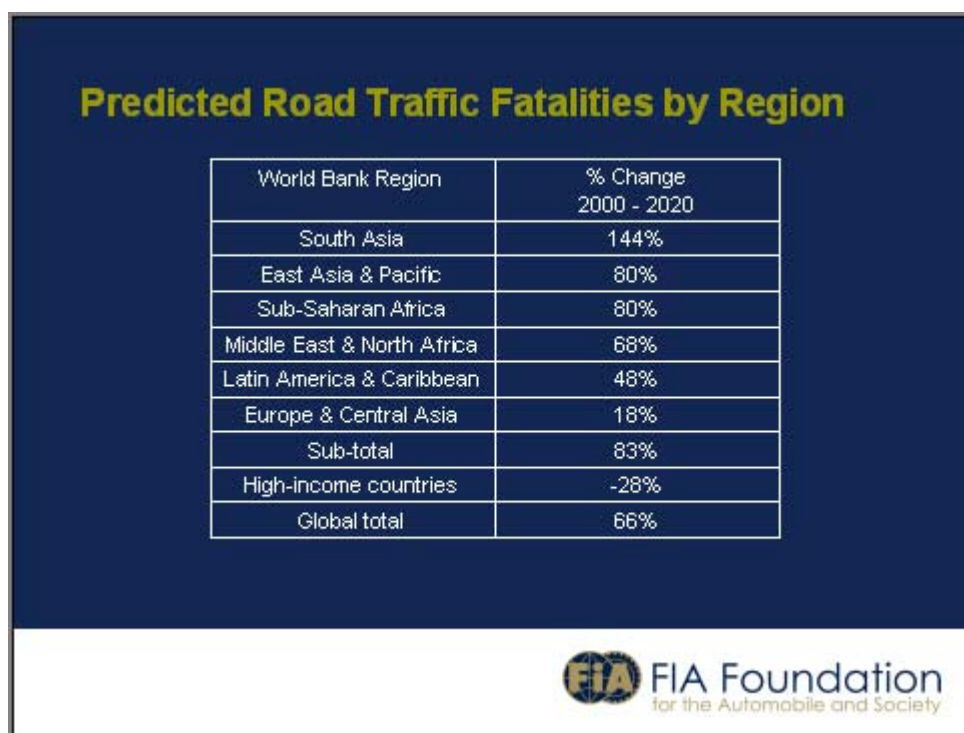
The Cost of Road Traffic Injuries is Enormous

Region	Regional GNP 1997	Estimated annual crash costs	
		GNP (%)	Costs
Africa	370	1	3.7
Asia	2 454	1	24.5
Latin America and Caribbean	1 890	1	18.9
Middle East	495	1.5	7.4
Central and eastern Europe	659	1.5	9.9
Subtotal	5 615		64.5
Highly motorized countries	22 665	2	453.3
Total			517.8

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This figure gives you the economic costs, a very high degree of the costs in all these regions and we can ill-afford to throw away that kind of resource, quite apart from the human costs of all of this.

The next slide is the World Bank projection of the percentage changes. You will see, despite the slightly alarming figures—I had not appreciated the problems you had in the last few months here—but the trend in industrialised countries has been positive and looks to remain positive with the trend heading consistently downwards.



But in developing regions you have a huge potential increase clearly related to growing numbers of motorisation.

There has been quite a breakthrough in global recognition of road safety and this in many ways started around 2004 when the World Health Organisation agreed to designate their annual world health day to road traffic injuries. It is the first time that any UN agency of any kind had decided to make road traffic injuries a global issue.

We played a part in that because we were funding the World Health Organisation's five-year strategy on road traffic intervention. It is quite interesting that the World Health Organisation more or less 'traded' the World Health Day—so we sponsored the World Health Day and got it for road traffic injury prevention. I think it was very worthwhile. That day, from the World Health Organisation's point of view, was rather interesting. It was by far their most successful work in terms of global response. They had more activities, more action worldwide than a lot of their other activities on these annual days, which always happen on 7 April each year.

The other interesting thing is that there was a huge amount of response from the transport sector and the health lot that normally respond to World Health Organisation activities was rather taken aback by all these transport people saying, "Yes, yes, we're interested in this", so it was really impressive. The World Health Organisation produced a sort of book of all their activities and events. You can be quite cynical about these days, but it certainly was an interesting and effective thing and it mobilised quite high level political support with heads of Government supporting it. In some ways, even more important, was the publication of the world report on road

traffic injury, which happened on the same day, and one week later there was the first ever debate in the United Nations General Assembly on road safety, so it was a significant breakthrough in global recognition of road safety.

The world report I think is really for us the key platform for future action on global road safety. There was a lot of work that went into it, a lot of experts—Ian Johnston and others were heavily involved in working on it—and the important thing about it is that it achieved I think quite a remarkable degree of consensus, both about the scale of the problem but also what is needed and what advice could be offered to, in particular, low and middle income countries.

The key recommendations, which are set out below, are really quite straightforward for many of our industrialised countries, we have more or less followed all of this, but for many low and middle income countries this is still new and they have still got a lot to do. The key points are there, the lead agency identifying some part of the public administration that takes on the key coordination role is very important and then doing appropriate assessment, data monitoring, performance monitoring, plus of course developing overall strategy and applying a multi-sectoral approach, I think that is one of the most key elements of this.

Road Safety: A Global Response

World Health Day April 7th 2004 – first ever global day of action on road safety.

Launch in Paris by President Jacques Chirac

Publication of World Report on Road Traffic Injury Prevention


UN General Assembly April 14th 2004 – first ever debate on global road safety

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Good road safety management must mobilise a whole broad spectrum of engagement, which in many low and middle income countries is a big challenge, given the structure of government available to them. Then there is this safety systems approach, which I will come to.

Safety Systems – Haddon's Matrix for Crash and Injury Prevention

		People	Vehicle	Environment
Phase 1	Pre-crash Crash Prevention	Education/ training Impairment Attitudes/ behaviour	Road-worthiness System (lights, brakes, tyres etc.)	Road design Signs, markings Maintenance
Phase 2	Crash Injury Prevention	Use of restraints	Restraints Crash-worthiness	Protection (barrier) Pedestrians crossing
Phase 3	Post-crash Life sustaining	First aid skill Access to medics	Ease of access Fire risk	Rescue facilities Congestion

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I am sure this is very familiar to many of you. Having this matrix is a quick way of discussing the so-called safety systems approach. This is obviously very familiar territory for most people in road safety management in industrialised countries, but it applies just as much in low and middle income country contexts and the emphasis is on the holistic approach. To take one spectacular example of a crash, the crash that killed Princess Diana in Paris, a lot of people will blame the driver, the driver was clearly not fit to drive, but actually when you analyse the whole crash in an holistic way using a matrix like this you will see that there was a big problem with the road infrastructure in that particular tunnel, the passengers were not wearing seatbelts - or at least one was, the only one who survived was - and probably in the conditions the vehicle stood up pretty well given the nature of the crash, but it is quite an interesting simple one case example of how, if you apply this holistic approach, you get a different set of policy responses. I have to say that the tunnel in Paris still does not have a barrier, which if it did have then all would have survived.

I think the other important development of this approach, which is embedded in the idea of safety systems, is that we should consciously design the road infrastructure with a very clear idea of what the limits of human tolerances are in terms of how much energy the human body can face in a crash situation. We need to try to ensure that, whether it is through the vehicle or through road infrastructure, in almost all conditions survivability is the key design and kind of have that built in. I think even in low and middle income countries that philosophy is still relevant.

Another key recommendation, which is also blindingly obvious to many of us but nevertheless worth highlighting, is that the world report identified those key risk factors where you could really make progress, things like seatbelts, helmets and so on, drink driving, curbing excessive speed plus low-cost infrastructure improvements.



The 2004 WHO/World Bank World Report on Road Traffic Injury Prevention

Supports Priority Action on Key Risk Factors & Countermeasures:

- Use of Seat Belts and Helmets**
- Curbing Excessive Speed and Drink Driving**
- Low Cost Infrastructure Improvements**
- Enforcement and Awareness Campaigns**
- Data Systems and Performance Monitoring**

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They come across as key measures that governments should take and encourage in multi-sectoral development. The last point I think is also worth highlighting, that is, data systems and performance monitoring. You have to apply your counter-measures making sure you are doing it on the basis of good science and an evidence-based approach.

The response to all of this has really been quite encouraging at the United Nations level. The General Assembly of Debate in April 2004 took an important step forward in that it authorised establishing a United Nations collaboration, which is the first time ever at a global level there is a sort of interagency action going on in the subject area. It involves the World Health Organisation, the World Bank and the five main United Nations regional commissions—the United Nations divides itself into five regional areas—and it also has non-governmental organisations and other civil society action groups playing role in it. The United Nations collaboration is starting on some fairly basic simple things like good practice manuals and so on in a number of key areas, but for the first time ever it is beginning to harness the common agenda of those organisations.

The other thing, at a more political level, is that the General Assembly has adopted a series of resolutions, the most recent one being in last October, which became I think

probably the most important of all because it sets very clearly the full recommendations of the world report.

The Response of the United Nations - 1

UN General Assembly April 14th 2004 adopts resolution 'Improving Global Road Safety' and creates the UN Road Safety Collaboration involving:

- the World Health Organisation
- the UN Regional Commissions
- the World Bank
- Civil Society, Foundations, NGOs, etc.



The Response of the UN System

UN General Assembly October 26th 2005 adopts resolution calling on Member states:

To use the World Report as the framework for their national road safety efforts and to focus especially on the major risk factors and lack of infrastructure

To provide technical and financial support to build road safety related capacity in developing countries

The GA also supports first ever UN Global Road Safety Week to be held from 23rd – 29th April 2007 – on the theme of young road users.



What is quite striking about all of this work at the United Nations is how consensual this has all been. When this process started in 2003 we started talking to various people about doing it with the United Nations and I thought it was going to be hopeless, you would get the Americans objecting and the Europeans putting it forward, and it will all get caught in the usual sort of politics and grind to a halt. But quite the opposite happened, and right in the middle of it, at the most controversial time for the Iraq war, there were three lead countries on this. One was France, the other was the United States, and the other was the middle eastern country Iran. It was an interesting combination of countries when in fact on other issues they could not disagree more. I thought it was quite encouraging, the way that we could get this kind of consensus around this subject.

The General Assembly has also mandated the Global Road Safety Week, the first ever week planned for next year, 23-29 April 2007, and obviously those involved, which is the World Health Organisation and the rest of the United Nations, hope that it will replicate the kind of high level of mobilisation that took place around World Health Day. The theme is going to be young road users because it is a key target group all around the world.

In November 2005 another piece of the institutional jigsaw which fell into place is that up until now there has not been any single funding mechanism for global road safety at all and funding is a key issue here if we are going to mobilise the kind of technology transfer, knowledge transfer, to low and middle income countries.



The World Bank Global Road Safety Facility

In November 2005 announces the creation of the Global Road Safety Facility

The first ever funding mechanism at a world Level for Road Traffic Injury Prevention

The Facility aims to:

Generate increased funding and technical assistance for global, regional and country level initiatives designed to enable low and middle income countries to implement their own road safety plans and programmes.

The Global Facility receives an initial donation of \$5 million from the World Bank, \$5 million from the FIA Foundation and €1 million from the Dutch Government.



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The World Bank has agreed to establish a facility, which is like a trust fund basically within the World Bank. It is headed up by someone you probably know quite well, Tony Bliss from New Zealand, and for us it is a very important platform because we want to try to encourage other donors and to get enough resource that you can talk seriously to countries to stimulate them into action to implement more or less the world report, and we have given them US\$5 million to get going and they have unlocked US\$5 million from within the World Bank and then they are going to go around to the other major donor, governments, and also big foundations like the Bill & Melinda Gates Foundation and those sorts of people. The working ambition is to have something like \$US30 million a year in this facility. We thought that if we could get to that scale of resource, it has got to have a big impact. That is a pretty ambitious goal, but we have started anyway.

I wanted to just touch on the connection of road safety as a development issue because this is, in a sense, the next step as far as we are concerned.



Global Road Safety as a Development Issue

Road safety has not yet been recognised as a development issue

There is no link between road safety and the Millennium Development Goals (MDGs)

In fact, road traffic deaths and injuries share a comparable 'burden of disease' when compared with Malaria or TB – which are included in the MDGs



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We have succeeded in getting road safety on the international agenda, on the radar screen of the United Nations and so on. What we have not really yet succeeded in is to make people see that it is part of any sensible view of sustainable development in low and middle income countries and, of course, the whole agenda for development has been set over the last five or six years or so by the Millennium Summit in the year 2000 and the eight millennium development goals.

The problem is that road safety has never been part of this and in some sense the road safety community, being quite transport oriented, have slightly missed the boat, but

other issue groups have got on the bandwagons. In 2002, I think it was, there was a big summit in Johannesburg and all sorts of different issue groups were there, lobbying away, and unfortunately the road safety people were not really there at all. If you were absent from this agenda, you miss the boat and you also miss, frankly, the money in this area, which is sort of what has happened.

What is interesting is that if you look at the scale of the problem of road safety it actually compares with problems that are acknowledged like battling malaria and tuberculosis (TB).

The millennium development goals are very, very ambitious. They are supposed to be met by 2015. Some of them—eradication of extreme poverty and hunger—everyone hopes that is a plausible goal, but nevertheless a lot has been done to try to meet it, but further down there are much more precise things like eliminating malaria and tuberculosis.



The effect of the millennium development goals has been to generate really substantial resources behind some of these things and just a few weeks ago in Switzerland Bill Gates and various others were announcing huge contributions, \$US800 million, for tuberculosis, and so on. There is really a lot of effort going behind these.



This chart is interesting, it is a current estimate based on 2002 figures of the major causes of death and disability. We have done some work to estimate the global amount of effort in the aid and development scene for road safety and we think that bilateral donors, that is the main governments who are members of the OECD group that give development assistance, probably the total amount that they give is certainly less than US\$10 million and probably about US\$5 million. It is not even counted by the main monitoring body of the so-called global assistance committee of the OECD, but look at these numbers: Tuberculosis is just a little bit above road traffic injury. Malaria, which is getting hundreds of millions devoted to it, is below road traffic injury. I am not in any way criticising the effort of trying to tackle malaria or trying to tackle tuberculosis, it is just an extremely interesting comparison in terms of the amount of resources, political mobilisation and awareness of an issue. Why is road traffic injury not on the agenda when it is killing and injuring on a comparable scale?

A key subject is going to be road infrastructure. What has happened in the development agenda over the last decade or so is that there was quite a significant move in the early 1990s away from infrastructure investment in low and middle income countries. Partly this was a sort of fashionable trend, if you like, there was a shift towards so-called soft measures of health and education, and also there was an expectation that the private sector would take over from public sector in big infrastructure projects and actually that has not really happened and it is not surprising in a way that private sector investors are very nervous about large-scale infrastructure in markets that are pretty difficult.

So this whole area is now being reappraised and various bodies—the OECD, the World Bank and others—are realising that infrastructure is going to come back and has got to come back in quite a big way if they are going to meet these millennium development goals. Again, for those in the transport sector, it has always been obvious that good roads create all sorts of economic and social opportunities and they will directly link to millennium development goals because if you can get to your health centre, if you can get to your schools and so on, then you will raise participation rates, improve access and social inclusion.

The United Nations itself has now acknowledged, again a very ambitious sort of target, the so-called 'millennium development goal (MDG)-compatible' goal of all-weather road access for rural villages, a road not being more than two kilometres away. In some parts of Africa it is about ten or eleven kilometres. Those are the kind of distances that we are talking about. So if this trend is reversed over the next decade or so we are going to see a substantial increase in infrastructure investment in low and middle income countries and there will be a lot more activity improving, upgrading, rehabilitating and building new road infrastructure. Of course, what that does is it increases exposure to road traffic injuries, so our argument will be that you have to, in parallel to this welcome shift back towards infrastructure investment, put road safety into the whole of this policy mix from the beginning, as a design element from the beginning, not as an afterthought. There is a nice image. I am not sure if that is Thailand or Vietnam but here is a typical example of a family vehicle and an SUV and family carrier on two wheels.

Road Infrastructure and the MDGs

Today, more than 1 billion people in the world have no access to roads.

Road investment brings 'pro-poor' benefits of facilitating access to markets, job opportunities, educational and health facilities, rural development and social inclusion.

The UN Millennium Project has proposed an "MDG compatible" target for rural areas access to an all weather road should be just two kilometres.

But road investment increases exposure to risk of traffic deaths and injuries



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The interesting thing about road infrastructure investments is as long ago as 1979 the World Bank identified a guideline which we were supposed to follow which said that for every single road sector project that we fund, and it has a very substantial program, as it is the world's largest source of such investment, that 10 percent of each project should be given over to a road safety component and that should be not just engineering measures, but a broader sense of overall assessment, including things like broader societal involvement in profit evaluation performance monitoring and so on as part of that 10 percent. The bank has never really succeeded in applying it. They did some work in the nineties and they estimated that about three percent of most of their projects are to some extent applicable to road safety but they do not have any consistent coherent way of measuring this. It is a bit random how it is done.

Making Roads Safe:
The World Bank 10% Guideline

The World Bank has internal guidelines (agreed in 1979) on the road safety component that should be included in road infrastructure investments:

Traffic safety funding should constitute 10 per cent of total project costs, not to exceed US\$ 10-12 million per project.

But this guideline is not being systematically applied by the Bank or by the Regional Development Banks (ADB, AfDB, EBRD, IDB etc).






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None of the other major lending institutions—of course the regional development banks like the Asian Development Bank and the European Bank for Reconstruction and Development are—but none of the others are systematically doing this. I have been looking at this in detail in the European Bank for Reconstruction and Development. They are one of the main lenders with about US\$1 billion worth of road projects. They are building a lot of new roads and upgrading roads. If you look at their web site you can go to each project and can download information about each project including environmental impact assessments for each project. Because of the effort over decades of the environmental movement in making environment impact assessments, which are absolutely mandatory, and it is a fairly tough regime, each one has its own environmental impact assessment (EIA) document and they cover noise, flora and fauna, and all of these sorts of things. I was struck by a bypass in Russia where they are making a great play of the little tunnels they have built for rare Russian


hedgehogs to ensure that they can cross the road safely using these tunnels. The same road network had not done any assessment of the pedestrian risk whatsoever. It was very reassuring for Russian hedgehogs but not so much for the Russian population. This is the procedural gap we face in the road infrastructure side.

Road Safety and the MDGs in Africa

Last year African Transport Ministers adopted MDG related road transport goals that include:

- halving the proportion of rural population living beyond 2 kilometres of an all season road by 2015
- to reduce the rate of accident fatalities from road and other transport means by half by 2015

The New Partnership for Africa's Development (NEPAD) has a road investment programme at a total cost of US\$1.2 billion with a road safety component of \$20million. But this amount should be \$120 million according to the World Bank guidelines



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To take one example of this and how this can be translated into a region, Africa has the world's most dangerous roads. In fact, African transport ministers have become quite active. In April they had a ministerial meeting and they adopted two very ambitious bills and they followed the United Nations idea of two-kilometre distance to all weather roads, a remarkably ambitious goal to cut road deaths by half by 2015. Nevertheless, that is what they adopted. The ministers came and signed and said they would do it. The new partnership plan for development, which is the main regional body looking at overall development assistance in the region, backed by the major donors, they have identified US\$1.2 billion worth of road rehabilitation projects. The road safety component that they have published in this plan is only US\$20 million. Even in that US\$20 million they have combined some other research, so it is in fact less than US\$20 million, but if you apply the 10 percent figure that the World Bank said should have been applied it should be something like US\$120 million. There is a structural gap shortfall being brought in from what is currently a very low infrastructural investment in Africa.

Last year at the Gleneagles G8 meeting there was a lot of agreement about Africa about debt relief and so on. They set up the Africa Infrastructure Consortium. That was precisely agreed to in order to put some big weight behind this short-term action plan for this infrastructure effort and at the same time aid levels to the region are

doubling over the next decade or so. It is quite clear, whether or not they get all the road program built, there is a lot more money available and there will be a lot happening.

The 2005 Gleneagles G8 Meeting and Infrastructure in Africa

The Gleneagles G8 Summit agreed to launch the 'Infrastructure Consortium for Africa' which will support the implementation of the NEPAD Short Term Action Plan.

Official development assistance to Africa will increase by \$25 billion a year by 2010, more than doubling aid to the continent compared to 2004. So new roads in Africa can also be safer roads if G8 leaders make safety a priority.



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The big question is what is going to be the road safety implications of all this activity. To try to raise again the profile of all of this and do it in a more political way than has been done by the World Health Organisation and World Bank as major public bodies they cannot really do that.

The FIA Foundation for the Automobile and Safety decided, slightly presumptuously to set up its own commission on road safety and we invited Lord Robertson, the former Secretary of NATO, to chair this initial meeting. George is someone I have known for a long time because I used to work in British politics. He is an old friend from way back, and he has always been interested in road safety. As a young man he had a very bad car crash where he was very lucky to survive. At the time he was elected to Parliament he helped set up something called a seatbelt survivors group. He has always championed road safety. His father was a policeman and his brother is a policeman in Scotland and his son is a policeman, so he understands traffic enforcement as a sort of family business. We are delighted that he is willing to chair this group.



The Commission for Global Road Safety

Chairman: Lord Robertson of Port Ellen
Former NATO Secretary General

Members from the G8 Countries:

Rosario Alessi, (Italy) Chairman, FIA Foundation
Andrei Kortunov, (Russia) President, New Eurasia Foundation
John Llewellyn, (UK) Chief Economist, Lehman Brothers
Mark Rosenberg, (USA) Exec Director, Task Force for Child Survival
Gérard Saillant, (France) Doyen de Médecine, Pitié-Salpêtrière Hospital
Michael Schumacher, (Germany) 7 x F1 World Champion
Jayne Wakefield, (Canada) Chair, Global Road Safety Initiative
Shigeo Watanabe, (Japan) President, Bridgestone Corporation

 **Commission for Global Road Safety**

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We have one person from each G8 country and we have deliberately chosen not to have necessarily typical road safety experts but have a spread of experts around different sectors. We have non-governmental organisation leaders, industrial leaders, a top doctor from France and we have a German who is quite good in racing cars, Michael Schumacher, who actually has been doing a very good job in a number of areas for us in road safety promotion. We think it is an interesting, rather eclectic group.

A report will be published on 8 June 2006. I will give you a foretaste. What it will propose is an action plan, which is really taking forward the world reports program of recommendations but it will put some numbers behind this and suggest resources and suggest what kind of level of contribution major donor governments should be giving and it is really trying to advocate the kind of resources that we are talking about for the World Bank facility and unless we start to get in that order of magnitude of something like US\$30 million we are not going to make any great impact.

It will also very heavily press this button called the 10 percent guideline. That was an internal bank guideline but everyone involved in this report thinks it should become an absolute rule established, that with all road safety projects a minimum of 10 percent should be applied, and all of the regional development banks, including the World Bank and others, should be allied and they should just as rigorously as they do an environmental impact assessment, they should do the same for road safety. That would capture for road safety a huge amount of resource.

The Report of the Global Road Safety Commission – ‘Make Roads Safe’

Will propose an Action Plan for Global Road Safety to encourage low and middle income countries to implement the recommendations of the World Report on Road Traffic Injury Prevention

Will recommend that the World Bank and all major bilateral & multilateral donors rigorously apply the 10% guideline to all road investment projects in low and middle income countries

Will urge the international community to recognize road safety's importance to the achievement of the Millennium Development Goals and call for a major UN Ministerial Conference

 **Commission for Global Road Safety**

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At the moment if you take all of the regional banks together and the World Bank together, you are talking about something like US\$4 billion worth of road investment going on at any one given moment and if we could have 10 percent of that for road safety that would be quite an achievement.

We want explicit links with the millennium development goals and they will be hosting a ministerial conference on road safety at some point in the near future. Although it is a rather procedural thing, the millennium development goals are reviewed by the United Nations periodically and by around 2010 the whole role of transport is going to be reviewed in the context of the millennium development goals, so there is an opportunity there to push hard on the road safety agenda.

Unless on the transport side people who are interested in road safety get involved in this debate, you do not get to the right place when development assistance money is being shared out. That is the key thing that this report is trying to do. It is trying to advocate looking back at that in comparison with TB and malaria, an equivalent degree of effort for road safety.

In coming to a conclusion, what about Australia? For me Australia has been one of the pioneer countries in road safety. Although I was impressed by Mr Gibson's frustration with progress that he expressed at the beginning, to many of us Australia has been a world leader. You are a world leader in seatbelts and other enforcement measures and so you have got an awful lot to offer on a global level, and particularly in the Asia Pacific region. But I think, like many other development agencies, AusAid is not active very much in road safety. I am not an expert, but I looked at the web site



of AusAid, hunted around and looked under themes and issues and I could not find road safety. I did find infrastructure. That is not unique at all.

Global Road Safety - A Role For Australia?

Australia has been a world leader in road traffic injury prevention among industrialised countries – for example pioneering compulsory seat belt use.

Through Australian Development Agency (Aus Aid) you could also play a leading role in road traffic injury prevention in low and middle income countries and especially in the Asia-Pacific region.

In March 2007 Australia will host the Transport Ministers of the Asia Pacific Economic Community in Adelaide. An ideal moment for Australia to take a leading role in implementing the World Report on Road Traffic Injury prevention in the APEC region?

In the United Kingdom, for instance, the Department for International Development is spending a very small amount of money on road safety. The specific road safety part of a budget that is now nearly UK£2 million in development assistance is about UK£200,000. It is peanuts. The foundation that I am involved in is spending far more, so there is a challenge here to the development ministers from the industrialised countries, particularly in this infrastructure sector, and that is where we could make a big impact.

Global Road Safety – The Time for Action is Now!

We know that a rising toll of road deaths and injuries in the developing world is predictable and that many are preventable.

We now have a mandate for action from the UN, a strategy for road traffic injury prevention in the World Report, and a funding facility from the World Bank.

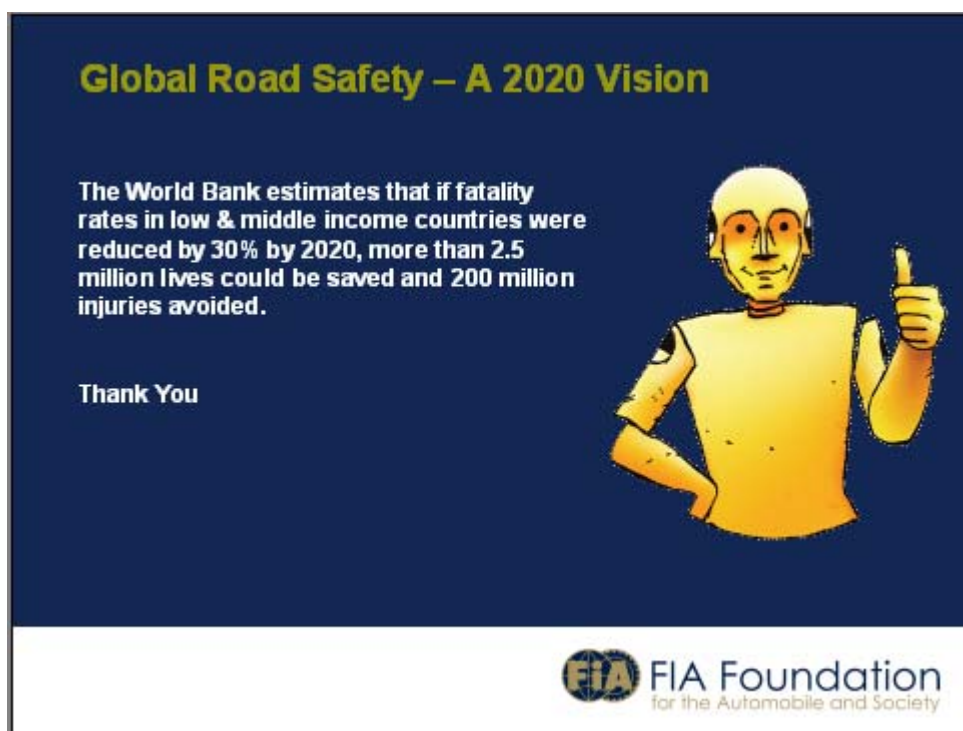
The missing ingredient is political and financial commitment to support an Action Plan that will reverse the rising trend of traffic deaths and injuries and make our roads safe.



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Next year, in March 2007, you will be hosting in Adelaide the Asia-Pacific Economic Cooperation (APEC) group ministerial meeting of transport ministers. It seems to me that will be a fantastic opportunity to take this agenda of global road safety further. The Asia-Pacific Economic Cooperation group is a very interesting group because it combines all the different countries. You have China, you have Russia, countries of Latin America. It is a very interesting mix. The Asia-Pacific Economic Cooperation group is beginning to do a bit on road safety. There is an auto industry dialogue group that is doing some work on road safety but not on the kind of scale that is warranted. Since you will be hosting it in Adelaide there will be a great opportunity for Australia to punch above its weight, as it does in a number of areas, and we are obviously very keen and willing to help in any way, together with our colleagues and associates here, like Lauchlan McIntosh, to come up with some ideas around the Adelaide meeting.

To summarise, we think that the situation now is quite interesting in road safety. We know there is a problem coming. It is a predictable problem. To a very large degree it is a preventable problem. We have an official mandate from the United Nations and we have the green light in terms of what should be happening. We have a plan in the sense of the world report on a consensual basis, identifying what could happen and we even have a financing facility, not with enough money in it but we have a facility where donors can put money in, but the missing ingredient is the political will to really address the issue seriously.



Finally, the World Bank estimates that if we could get a 30 percent reduction by 2020 we would be saving 2.5 million lives and 200 million injuries, which is a significant contribution and they think that is achievable if we can mobilise the kinds of resources that I have been speaking about this morning.

QUESTIONS

Mr Ian FAULKS (Manager, STAYSAFE Committee, in the chair).

Professor Ian JOHNSTON (Monash University Accident Research Centre): David, that was a very good global perspective, but I did not hear the word "drugs" mentioned once. You talked about alcohol and other things and road infrastructure. Could you enlighten us on where you think the drug-driving scene will be? We have had a pilot scheme in Victoria, which I suspect will be extended, and it will be in Parliament this week.

Mr WARD: I think those kinds of issues are for industrialised countries that have already got all of the sort of measures in place, which so many low and middle income countries have not, those are definitely the kinds of issues that we have to look at and whether it is legitimate drugs or illegitimate drugs, it is a really serious issue. It is quite right that that is highlighted and becomes an area of action because clearly the impact of drugs can be just as bad as alcohol on driving. I fully support what you are doing. I think the problem that we face, the biggest challenge for low and middle income countries, is to get in at the starting point where those countries - some

people are familiar with Vision Zero. For some of these countries that we are concerned about it is like years in terms of road safety.

A few years ago I was in Armenia, next to Turkey, a former Soviet republic, where there were zero seatbelt wearing rates. A European government gave the Armenian government a fleet of vehicles. When the vehicles arrived, they went into the government car pool and the mechanics took the seatbelts out because they said, "We don't need these". So awareness raising, if you start raising things like drugs in a country like that, you are way up the sophistication chart there. I think the really important thing is that at each level of development, if you like, in the road safety situation you can calibrate the appropriate policy response and it is clearly right that, in countries like the United Kingdom and Australia and so on, these are the sorts of issues you have to be addressing and broadening the scope of enforcement and awareness to make people aware of these issues.

Professor JOHNSTON: I was delighted that you were talking about the fact that there is now a mandate out of the United Nations and a funding source. I guess what troubles me most is that, if the action stays at the multi-lateral level, we are going to miss an opportunity and I think what is really needed is to run demonstration projects or pilot countries. I mean if it is going to work it is going to be because you have a couple of models really going in, whether it is Vietnam or the Sudan or whatever, but is there much developing at that level that has a specific target with a specific country?

Mr WARD: Nothing like enough, and you are 100 percent right, that is what the challenge is now. In fact we tried it in a modest way, that Costa Rica thing was an example of that. We wanted to prove the manual thing that we did, we sort of said to the Costa Ricans, "We will give you some support for this, please follow this manual", and they did, they did a very thorough job, except it was quite funny, they did not want to do the evaluation at the end. They said, "No, we know it is brilliant", but they did not want to spend the last bit of money like that, so we had to encourage them, but I think the really important step with this facility if it works right with the World Bank is that if we can get - and that is why we need something like a US\$30 million figure. That is a very small amount of money in global terms compared to things like tuberculosis and malaria. It is actually not a big amount of money to ask for, but it is enough to change the dynamic in various countries to run proper pilot projects and also to do something else very, very significant. If you look at the World Bank, for example, it is the largest source of road investment anywhere in the world. All of these countries have usually five-year loan agreements with the World Bank, and also with other donors, it is a similar sort of process they are in. Up until now there has been no sort of signal to a developing country that road safety matters at all, so it simply does not appear in any discussion. The finance minister is sitting there and he does not think to ask and the bank people do not think of saying, "Well, would you be interested in some road safety activity?" So it is just gets missed completely.

If we can create some good pilots and also make it feasible that when this process of discussion goes on the countries can actually start to understand what they could be asking for and how it could impact on them, it comes down to very basic stuff. If you are a country borrowing for a major upgrading of your road network, you have some basic economic choices: Are you going to have roundabouts or cross-roads with traffic lights? We know that roundabouts are considerably safer, but they cost more. The question is: Are you going to go for that extra element, are you going to put that road safety component in there? If you are not measuring the number of deaths right and you are not recording what is going on in the hospitals, the finance minister is blind to the problem, so what we need is this investment to start to improve the capacity of countries to analyse the problem in front of them and to come up with this kind of cost benefit evaluation and then, country by country, as they have these discussions with bodies like the World Bank, they can start to put road safety in its proper place. It is like moving a big tanker around, but if we can succeed in redirecting a lot of that discussion then we will start to have the country level action, which is clearly where it happens, that is where road safety exists, at a local level, but what we have been trying to do is get in at the global level to get all the systems in place to let this happen.

Mr Paul GIBSON MP (Chairman, STAYS SAFE Committee): Say in South Africa, with the amount of HIV/AIDS for argument's sake even in the police force - 67 percent of police have HIV/AIDS - how do you overcome that problem and get them interested in road safety?

Mr WARD: That is huge. Somebody recently actually from the AA in South Africa was talking to me about professional truck drivers. Most of the people driving in Africa are not private motorists. Almost everybody in a car or a motor vehicle, it is their work in some sense, and truck drivers are now spectacularly inexperienced. He was talking about southern Africa. The reason is that all the experienced ones are dead. It sounds horrible, but they cannot find experienced drivers. Then the problem with people travelling long distances along with sexually transmitted disease and so on - it is a huge problem, there is no getting away from that, they have really severe problems - not only in Africa - in this area. Despite that, there are countries doing things. Ghana has got quite an interesting program on road safety; Uganda is doing various things. I think all you can do in a situation like that is try in a systematic way to make sure - what I am worried about is that the infrastructure investment that is going to happen over the next decade might paradoxically make things worse. I was talking to a person who knows Africa very well and he was saying "We all get used to out-of-town shopping centres" and he said, "In rural African villages the out-of-town shopping centre is the temporary market on the outskirts of the village where people come and trade". This is not a tarmac road, but if you upgrade the road and you widen it and make it better for the passing trucks and things, the out-of-town shopping centre will be right in the middle of all of this, and it does not cost that much more to create, on the outskirts of a village, a designated area where the market can take place in a sheltered safe environment. It is just a matter of planning it into the design of the

road infrastructure, but again if we are not making that a requirement when these projects are being financed - and this is a criticism of the road infrastructure community, that too often they start with an economic imperative and they have not really done the proper evaluation or even got the numbers right, and that is really the big opportunity now and I think over the next decade in this infrastructure we have to really shift that.

Mr Lauchlan McINTOSH (Australian Automobile Association): I think the point you make about the projects is really what is important. There are actually some Australian projects: VicRoads is doing some work in India at the moment and I think just recently the Australian New Car Assessment Program and EuroNCAP have supported the Chinese New Car Assessment Program, so there are some things happening. The real trick for the Australia-Pacific Economic Co-operation transport ministers, I think, will be to get it on the agenda because the mixed nature of the traffic across the Australia-Pacific Economic Co-operation community is more than probably anywhere else, you have so many cycling and walking groups in some countries and so many sophisticated car groups in Japan and Australia and the like, so what is it that the transport ministers do? If we can find a way to encourage them into some more projects that actually can do something, I think that is prudent.

Mr Brian WOOD (Motorcycle Council of New South Wales): You did mention pedestrians as a problem in developing countries, but you did not mention motorcyclists, although you did have a slide of family transport. Does the Fédération Internationale de Motocyclisme (International Motorcycling Federation, or FIM), which is the motorcycle equivalent of Fédération Internationale de l'Automobile (FIA), have any involvement? Do they have a road safety committee? Do they have any involvement with the FIA Foundation for the Automobile and Society?

Mr WARD: That is an interesting point. The Fédération Internationale de Motocyclisme does have a road safety policy group. It has not benefited from being able to obtain US\$300 million funding from Formula One. Unfortunately for them, they have not managed to generate those kind of television revenues for the Moto GP series, so we are very fortunate since it is, I think, quite remarkable for a sport to have generated a lump sum like that which we can devote to these kind of issues. But we do have contact with the Fédération Internationale de Motocyclisme, they participate in the United Nations working groups and there are some collaborations there. I think you are 100 percent right, I was remiss not to highlight it really, but for many low and middle income countries it is two-wheeled transport that is one of the most serious problems. In places like Vietnam, helmet wearing is the issue. We are involved. We supporting through other partners some of the action that is going on there. One of the things where we are supporting the World Health Organisation in is a helmet initiative that they are running. There is no doubt at all that in many of these countries the problems that you get a very diverse traffic mix is one of the biggest challenges of all and this is where one has to be very cautious about trying to transfer some of our experience. I am sure those of you who have visited places like India would be

familiar with finding bullocks, pedestrians, trucks, bikes, bicycles and cars all wheeling around together. It is a huge challenge, but there is a lot to be done and helmet wearing is probably the number one, which is why it is identified by the World Health Organisation in the world report. The FIA Foundation is not limited to cars, we are not car obsessed, we are interested in the whole system.

Mr WOOD: I do notice in your annual report that you are funding research at the John Hopkins University into motor cycle safety in developing countries.

Mr WARD: Yes.

Mr WOOD: Is there anything coming out of that?

Mr WARD: It is always awkward when someone has read the background papers. It is too early to say. That project is still under way and we have not had any evaluations yet. I am sure it will be very good when we get to see it.

Associate Professor Raphael GRZEBIETA (Australasian College of Road Safety): Excellent, David, you have given me a lot of good ideas and I think we will certainly be publishing some of those ideas in the college journal with regard to the Australasian College of Road Safety. The question I was going to ask you is: It seems to be that we are fairly unique in Australia, but I gather there is a body in the United Kingdom, and likewise in the United States, although not as prominent, of a college of road safety where what we do is within the sort of grassroots community, we try to build up a cultural change and also an exchange of information going between the professionals in road safety to the community and getting them all involved and looking at the whole big picture issue and also making sure that there is information that comes across through the web site and through journals. Have you had a look in your report at other countries where these sorts of possibilities may exist where you could actually have something similar to the college where they could fire up and take ownership of the road safety issue from within the community itself? We are getting overtures from Saudi Arabia, we have had some from Fiji and Malaysia and a bit from China, but I am just wondering whether you have looked at that in your report?

Mr WARD: This business of, if we succeed in getting US\$30 million, what kind of things would it be spent on, what projects, that sort of thing would be a very key area. A lot of countries, even low income countries, do have their own resource base for road safety interventions and it is not a question of a hand-out, expecting us to as it were pay for their road safety. What really is needed is to enable them to actually assess the problem accurately and to develop the in-house capacities and what you are describing, global road safety training colleges, is a very good idea. There are not that many. I know in India there are some discussions about things like this, but what is interesting is that there is a lot of growing awareness I think. If you go back maybe 10 or 15 years, the issue of road traffic safety was not just off the international radar screen, it was off the radar screen of many of these countries. I think that is

changing. You get the feeling in places like China and India, where they are really experiencing rapid motorisation, they are beginning to realise that they have a serious problem and they are much more open to having some discussion about what needs to be done. What I think we hope will be achieved by this World Bank facility is that it will offer the possibility of quite in depth training for road safety professionals in countries.

Coming back to the infrastructure issue, at the moment all of the road infrastructure lending fits into five year type agreements that a body like the World Bank negotiates at a very high level with recipient governments, so typically a country officer of the World Bank will be having discussions with finance ministries about the whole portfolio of their loan program and it is an open discussion about what is in there. It is up to the recipient to say, well, we would be interested, these are our priorities and so on. The problem at the moment is that very often there is no local input into this discussion at all from a road safety point of view because they are not collecting the data accurately. They have not measured the problem and there is no ability to influence, for instance, very often the finance ministry over priorities in road investment. So if you do not measure the deaths and the injuries, you are not interested in the merits of roundabouts as opposed to intersections even though we know that roundabouts, though they are more expensive, are much safer, nobody is making the request, nobody is putting it on the agenda, and unfortunately probably the World Bank guys know. What we have to do is change all that and part of it is procedural if you can get your 10 percent rule much more firmly established as a bank policy. This also applies to the other lending banks. A certain amount of conditionality applies here where they often say: We will invest in your road networks and we will rehabilitate them but we want you to do this and similarly, that they not just do that as a sort of gun point, but they actually say we have this facility available to help with training and development of some of your expertise in-house, so you can start to own these issues. I think that is the way forward.

I think that the colleges that you are describing in the major countries concerned, and in regions, would be a very sensible initiative and it can also help a lot of the cross-fertilisation of ideas because I think there is a lot that industrialised countries have to offer and with all the caveats about culture and ownership, it seems a crying shame that so much of the knowledge is locked away.

There is another major problem which is that in industrialised countries development ministers lack road safety experience. The United Kingdom development agency does not have a road safety professional. They have one guy who is a civil engineer who vaguely knows about infrastructure. They had one some years ago but he retired. The best knowledge is locked up in the Department of Transport. The Department of Transport people's mandate is to make British roads safer. If they start disappearing abroad the question will be asked, where are the road safety officials? We have this problem. Even in industrialised countries we have this problem of a mismatch of resources.

One of the reasons road safety is not a development issue is because people who are involved in development are not involved in road safety. Those of us who are road safety advocates have a job to do in training and in putting into these key institutions people who know what they are doing. The reason that the World Bank is now in a safe pair of hands is that we have Tony Bliss, a guy who worked here in New Zealand, running the facility. He is a first rate professional who knows his stuff. The quality of the bank's work is improving. We need to replicate Tony Bliss's work in all the major developing countries. If we could get this going we would have a lot more money available and a lot more potential to build up.

Mr FAULKES: I think it is an issue that faces the Australasian College of Road Safety in terms of starting to look at what kind of outreach or regional perspective it might like to pick up and run with, given that a number of our corporate members in the college are actually involved in activities in India and China and so on.

While David was speaking I was musing about a relationship that the STAYSAFE Committee has with a private organisation in South Africa called Arrive Alive. If you put road safety in Africa into a Google search you won't end up with the official agencies, you will end up with Arrive Alive. That is a privately funded organisation that addresses road trauma issues that are affecting South Africa, across all provinces.

Mr WARD: A lot of what you have been talking about is official support. The other is private. We will have to batter on the door of the Bill & Melinda Gates Foundation, but compared with the Bill Gates of this world, supporters are very small. There is a hell of a lot that could be done with those kinds of foundations and also the private sector. If you talk to companies like BP and Shell, their number one health and safety issue in their own company is road traffic, so they are very committed and I think we can probably do a lot with private sector engagement and get them as advocates on this agenda.

Mr FAULKES: We need to get private sector and governments involved but to also develop personal relationships as well across those countries.

I would like to give my very strong thanks to David for his presentation. Thank you very much. It is an indulgence—this is the first time David has been in Sydney and we have managed to keep him in Parliament House for most of that time, for which I do apologise.

Chapter Three—

ACTIVITIES OF THE NEW SOUTH WALES PARLIAMENT'S STAYSAFE COMMITTEE, 2000-2005

Mr PAUL GIBSON MP
Chairman, STAYSAFE Committee

Introduction

The STAYSAFE Committee has existed as a Joint Standing Committee of the New South Wales Legislature since 1982. Its terms of reference have remained unchanged. With regard to the work of the Committee, I cannot think of anything that we have recommended that eventually has not been given the green light by the Parliament. There are things that we are still waiting on, such as flashing lights at schools as I mentioned before, but overall we have a very good track record. I believe committees such as ours can make a major difference if we are prepared to stick to our guns and do what should be done as far as road safety is concerned.

I must admit that I have a very competent Committee made up of both Houses of Parliament: Opposition members as well as Government members. Any committee is only as good as its members and, as I say, I have a wonderful committee and staff.

The terms of reference for the STAYSAFE Committee provide for the oversight of what we term the road safety effort in New South Wales, with specific requirements to:

- Monitor, investigate and report on the road safety situation in New South Wales; and
- Review and report on countermeasures aimed at reducing deaths, injuries, and the social and economic costs to the community arising from road crashes.

For the STAYSAFE Committee, the conduct of these activities necessarily requires a process of investigation, contrast and comparison with other jurisdictions, not only in Australia but internationally.

Inquiries

The STAYSAFE Committee, like all Parliamentary committees, exists to conduct inquiries into matters of road safety importance.

In the previous Parliamentary term, from 1999-2003, the STAYSAFE Committee held two major inquiries into road safety outside schools, and the safety of railway level crossings.

In this Parliament, the STAYSAFE Committee is holding or has held major inquiries into:

- better means for drivers to monitor, manage and control their vehicle speed;
- railway level crossing safety;
- the organisation of road safety administration in New South Wales;
- car surfing and the carriage of unrestrained passengers on motor vehicles;
- driver distraction; and
- motor vehicle insurance and the smash repair industry.

The Committee has also held the first international conference into driver distraction, as well as a number of other conferences and seminars on motorcycle safety, older driver licensing, vehicle safety issues, and street furniture.

Better control of vehicle speeds

Speeding is, in the STAYSAFE Committee's view, the remaining factor of the traditional mix of alcohol, seat belts, and fatigues (or tiredness) to be adequately addressed. What is, frankly, amazing is that while it is the motor vehicle itself that is designed and built to permit a driver to choose to drive at speeds well in excess of the maximum speed limit of 110 km/h in Australia (excepting the Northern Territory). In years gone by, Volvo put out an ad at one stage that said if you buy one of these motor cars you can go from 0 km/h to 100 km/h in three and a half seconds. That was their selling point. We complained about that and that was taken off the air. A little while ago, as we do with most manufacturers, I said to Ford in Detroit: "The situation about road safety is that back in Australia we have a maximum speed limit of 110 km/h, apart from the Northern Territory, and the question I often pose is why do we, as State Governments and Federal Government, let manufacturers sell motor cars that will do 220 km/h when we know the maximum speed is only 110 km/h?" It is a very good question from a road safety point of view. Ford could not give us an answer, like most manufacturers, apart from the sexy angle of selling a motor car by emphasising speed and acceleration. I suppose when it comes down to road safety, if we can fix that initial problem of motor cars being able to do 200-250 km/h when the maximum legal speed limit is only 110 km/h, we would save a lot of lives and a lot of injuries. There is no mention of vehicle speed limiting initiatives in the road safety strategies that have been developed. The focus of speeding countermeasures is on speed limits, on

enforcement, and on public education about the dangers of speeding. But it is the vehicle technologies that provide for excessive speeds, and there is a need to examine better means for drivers to monitor, manage and control their vehicle's speed. It is common today to have vehicles fitted with cruise control, enabling a driver to maintain a constant speed under certain conditions. Adaptive cruise technology is appearing. Speed limiting technologies have been used for more than a decade in heavy vehicles, but without evaluation by road safety agencies. Other technologies such as electronic stability control are also being introduced into motor vehicles. But the availability and use of driver-selected speed limiting in Renault vehicles remains relatively unrecognised by road safety agencies, and goes unremarked by motoring writers and motoring clubs. It is my strong personal view that interventions to automatically restrict vehicle speeds to below the posted speed limit will have immense road safety benefits. Such interventions are known as intelligent speed adaptation, and are based on using satellite navigation systems to detect the location of the vehicle, identify the relevant speed limit applicable to that location, and then to govern or limit the vehicle to the permissible maximum speed.

Railway level crossing safety

In 2004, the STAYSAFE Committee completed a major inquiry into the safety of railway level crossings in New South Wales, making more than 70 recommendations for change and improvement. The government has recently responded to the findings and recommendations for improving railway level crossing safety, supporting and implementing 85% of the Committee's recommendations, with most of the remaining recommendations being subject to further consultation across government agencies.

The STAYSAFE Committee will call a public hearing in mid-2006 to review progress and revise and update the findings and recommendations on railway level crossing safety.

A critical issue was to ensure that adequate levels of funding remain available to allow for the upgrading or removal of level crossings. There is funding commitment for FY 2006-2007 of \$7 million, but we need to see a funding allocation out to 2010, as it can take 2-3 years for a level crossing upgrade to get from planning to final construction and commissioning. A budget program with a longer term focus will allow local councils to better structure their programs of roads maintenance and upgrade spending.

The STAYSAFE Committee is also keen to look at the effect of new technologies in improving the safety of level crossings. The use of LED signals now means that we can trial new and better traffic signals at level crossings, such as a green signal to indicate that there is no train approaching. Some further actions that the Committee would like to see include:

- A simplified process for the closure of unnecessary level crossings;

- Every level crossing in New South Wales to be designated with a unique standard reference number that is communicable, visible and easily understood by the public, police, and roads and rail staff;
- An ongoing audit program to ensure that level crossings have appropriate road markings, signage and advance warning signals;
- The implementation of a rail corridor management strategy on all railway lines in New South Wales (Note: A trial corridor management strategy is in place for the Cootamundra-Albury corridor); and
- General publication of the Level Crossing Strategy Council's annual report—currently only distributed internally to government agencies and rail operators.

Car surfing

Car surfing is the name given to the dangerous activity of young people that can cause severe injuries or death. Car surfers sit and hang on to, or stand on top of, moving cars and utes as though they were 'surfing'. Sometimes this is done as a game or challenge to see who can stay on the longest and land on your feet when the car or ute suddenly stops or turns. Kids ride on the bonnet, roof, or boot lid of moving cars, stand up and balance in the tray of utes, or hold to or be towed by vehicles while skateboarding or roller blading. Injuries from car surfing occur so quickly that there is no time to try to break the impact, and typically include severe head injuries such as skull fractures and intracranial haemorrhage, as well as major bruising and abrasions to the face, hands and legs. Car surfing has been a feature of hoon behaviour at B & S balls and such like in the country for some time, but seems to have been given a new lease of life as a result of stunt depictions in movies such as *Matrix Revisited* and *Jackass*. In 2004, the STAYSAFE Committee took a close look at car surfing – standing or sitting unrestrained on cars and utes while the vehicles are being driven, often at high speed. Criminal and traffic law could not deal effectively with these sorts of dangerous behaviours, both for the people who car surf and the people who drive the cars involved, because of way the legislation was drafted. The Committee made a number of recommendations, almost all of which have been implemented. It is interesting to note that from time to time you will see people trying to sell motor cars and they will put on an advertisement. Coca Cola Zero was the most recent one. They put an advertisement on which shows a fellow surfing on the top of a double-decker bus. We thought that was a little bit over the top, so we wrote to Coca Cola and they took the advertisement off the television screens, but they left it on the web. We wrote to Coca Cola again and bitterly complained about it being on the web and, of course, now it has been taken off the web.

Driver distraction

This report of the STAYSAFE Committee will publish the proceedings of the first international conference on distracted driving, held in Sydney, Australia. On Thursday

2 June 2005 and Friday 3 June 2005, the Committee welcomed over 100 delegates from New South Wales, Australia, New Zealand, England, Canada and the United States to the first international conference on driver distraction.

A particular focus of much of the debate about driver distraction has been about the use of mobile telephones, or cell phones. The conference was designed to widen the debate on driver distraction to include a wide range of influences that have the potential to impact on a drivers, including in-vehicle technologies, external-to-the-vehicle distractions, and social distractions relating to the presence of children, peer passengers, and the workplace. Conference presentations explored driver distractions—both in and out of the car—and the impact of these distractions on drivers' performance behind the wheel, in a series of sessions dealing with mobile telephones and traffic law; data collection issues; external distractions; technology issues; and work-related issues.

Driver distraction is increasingly being recognised as a contributory cause of road trauma. As with driver fatigue, driver distraction is notoriously difficult to define and study. While analysis of recorded road crash data indicates that distractions account for at least two per cent of crashes on New South Wales roads, it is likely that this figure does not truly represent the impact of the multiplicity of distractions on driving performance and on crashes. A significant challenge for road safety workers is to develop a crash data records system that allows for the consistent collection of information relating to the role of driver distractions in road trauma.

In all, over twenty papers dealing with issues associated with driver distraction were presented at the conference. The Committee expects that the publication of the proceedings will assist the ongoing effort involving all Australian jurisdictions to deliver a safe and efficient road transport system to all Australians.

The STAYSAFE Committee did not seek to provide a definitive account of issues associated with driver distraction. However, the Committee notes that following the conference the Victorian government moved to establish a formal inquiry by the Victorian Parliament's Road Safety Committee into distracted driving.

As well, following the STAYSAFE Committee's conference on driver distraction, the Canadian Automobile Association and the Traffic Injury Research Foundation, also undertook a conference on driver distraction, which was held in Toronto over the period Sunday 2 October 2005 to Wednesday 5 October 2005. The purpose of the Canadian conference was to identify rational and effective programs and policies for controlling the problem of distracted driving, based on solid facts about the magnitude and causes of the problem.

While the proceedings of this conference have been published on the website of the Traffic Injury Research Foundation, the conference summary and recommendations arising have not yet been released.

Motor vehicle insurance and the smash repair industry

Most recently, the STAYSAFE Committee has inquired into motor vehicle insurance and the smash repair industry, focusing on NRMA Insurance's Preferred Repairer Scheme. The inquiry follows major disruption in the smash repair industry, with court actions and a prior investigation by the Productivity Commission. Motor vehicle insurance and the smash repair industry is very interesting and it is one area where, if there is a certain amount of conflict out there, a committee like ours can do something about it. This inquiry came about because the Insurance Australia Group, primarily through NRMA Insurance, the largest insurance company in this country, put out a new policy for web-based repairers. For argument's sake, if your car is in an accident and needs repair, a photo is taken of it which is put on the web site and people have to put in a tender based on what they see in the photo on the computer. They also have their own repairers, who are the only people who can quote on that. As a result there were a lot of repairers, a lot of people who had been panel beaters for many years, very well known panel beaters, going out of business because they were not the preferred tenderer.

This inquiry by the STAYSAFE Committee was the first time that the Committee has been asked, because of its well-established reputation for accurate, comprehensive and exhaustive inquiries into road safety matters, to act essentially as a 'select committee' in examining the operation of the Insurance Australia Group (NRMA Insurance) Preferred Repairer Scheme, with particular reference to the possible compromise of public safety associated with aspects of the scheme such as:

- the requirement for quotations for repair to be based not on the physical inspection of damage to a motor vehicle but on electronic images of the damage taken by an employee of Insurance Australia Group and a written description of what that employee thought the necessary repairs might involve;
- the imposition (or threat of imposition) of a financial penalty if a smash repairer who lodged a successful bid—meaning the lowest cost bid—for the repair of a damaged motor vehicle later found that more extensive repairs were required;
- the use of non-original equipment manufacturer (OEM) parts in the repair of damaged motor vehicles; and
- whether the employees of Insurance Australia Group working as assessors of damage to motor vehicles have the skills and knowledge to perform their job safely and effectively.

In terms of these specific heads of inquiry, the STAYSAFE Committee concluded that the Insurance Australia Group (NRMA Insurance) Preferred Repairer Scheme was an unsafe system in its current form and operation. The Committee found that it was likely that cost cutting and unsafe repair practices are associated with Insurance Australia Group's imposition of financial penalties—termed the tender adjustment factor, TAF—if damage to a motor vehicle is later uncovered that was not apparent through the electronic photographs taken by Insurance Australia Group employees. The Committee found that it is possible that safety is compromised by the use of non-

original parts manufacturer—non-OEM—parts in the repair of motor vehicles (including classes of parts termed 'new non-genuine', parallel, grey, recycled, second hand). Finally, the Committee found that there is a need to review the qualifications and training needed by loss assessors to effectively examine and document and photograph damage to motor vehicles, and the role of loss assessors in managing the repair process to a damaged motor vehicle.

The STAYSAFE Committee raised a significant number of concerns about roadworthiness and crashworthiness of motor vehicles that are repaired after a severe crash, and is awaiting the response of government to its findings and recommendations. At the end of the day, we found the requirements for quotation for repair to be based not on physical inspection of damage to a motor vehicle but on electronic images of the damage taken by an employee of Insurance Australia Group (NRMA Insurance) and a written description of what the employee thought the necessary repairs might involve. There was also the threat of imposition of a financial penalty if the smash repairer who lodged the successful bid, meaning the lowest cost bid for the repair of the damaged vehicle, later found that more extensive repair was required. We looked at the use of non-original equipment. You take your motor car to a smash repairer anywhere in this country and when you pick it up it looks fine, it has been ducoed very nicely and all the rest of it, but you may have - and you are not told you may have - second-hand parts in it to start with; you may have parallel parts to start with; you may have what we call grey parts to start with, and nobody is told. Some of these grey parts are parts that come in container loads from overseas, many container loads a day. No standards are checked and, of course, the structure of the motor car today is built so that if you have an accident it folds like a domino set, but if the damaged part has been replaced by one of these so-called grey parts from overseas, you have no idea of the strength of these parts, whether they are up to our standards here, and they are something that in future we all have to have a look at.

We also had information about a repaired car that was crash tested and we saw the results of it. The people who did the testing of the repaired car were able to compare the test results to that of a new car crash tested under the Australian New Car Assessment Program. The crash tests on the repaired car were unbelievable. The repaired car was not crumbling the way it should because of the different parts that were put in during the repair.

At the end of the day we thought that the whole system was unsound and unsafe and unfair. This inquiry started in October 2005, and we reported in December 2005. We have now looked at progress in resolving the issue. We had a move from Insurance Australia Group and NRMA Insurance about a month ago, where they conceded that they would do away with this prepared tendering system and they would also do away with basing a tender on a photograph on a computer. Our final day of hearings was only last week and Insurance Australia Group at that hearing decided to give choice to the person who owns the motor car, so the consumer gets choice. Instead of the insurance company telling them where to take it to be fixed, the consumer now has

got the choice to take his or her car where he wants to have it fixed and they also gave us the okay and the green light on Monday that you could take it to your own panel beater and they would send an assessor out there to have a look at it, to tell you whether it was okay to get it fixed at the quote that was being put in. That was on Monday last week. On Tuesday of last week we received a number of telephone calls and also a letter from Insurance Australia Group telling us that they made a mistake. They gave evidence the day before, with the chairman of Insurance Australia Group, the largest insurance company in the land, the chief executive, and also the person in control of this new system. The evidence was as I just stated. On the Tuesday, within 24 hours, they had back-flipped and said look, the consumer will get choice of where to have their car fixed but they still have to take their car to the central care and repair centre, so we still have a major problem with them at the moment.

There is also a bill before the Parliament at the moment, an anti-steering bill, and I am certain that every insurance company in this nation would be shaking, and Ian just shows me the effect that we have had. They have put these full page advertisements in all Sydney papers last Saturday and again yesterday and they are saying an anti-steering law is anti-motorist. It says:

"An anti-steering bill was recently introduced into the New South Wales Parliament. If passed premiums are likely to rise. Repair quality will be at risk. Your insurer can't help you find a quality repairer."

So we have a major debate, but at the end of the day if it wasn't for the STAYSAFE Committee this problem would not have come to the forefront like it has and although we have an independent who has jumped on the bandwagon now and put this bill before the Parliament, if there is any need for an anti-steering bill or any such bill to go before the Parliament that will be done by recommendations from the STAYSAFE Committee and the Department of Fair Trading, not by an independent.

Road safety administration

The STAYSAFE Committee is also completing an inquiry into road safety administration in New South Wales. Rather than examining every aspect of the road safety effort in New South Wales, the Committee has reviewed activities across a number of road safety issues and areas, including:

- Statistical collection, analysis and reporting
- Enforcement activities
- Police pursuits
- Heavy vehicle safety
- Local government road safety
- Road safety education
- Road safety research

The STAYSAFE Committee has used the findings arising from these reviews as a base or springboard to identify and understand the bureaucratic structures that underpin the administration of road safety. The Committee will formalise its view on the most appropriate structure for organising future road safety policies and programs in a report to be released later this year.

The work of the STAYSAFE Committee

The STAYSAFE Committee organises its activities around three main deliverables or outputs:

1. Reports to Parliament arising from inquiries
2. Consideration of issues through statements and debates in Parliament, or comment in the media, or presentations to conferences and seminars; and
3. Representations to Ministers on behalf of the New South Wales community on individual matters of concern.

Representations

A significant number of people in the New South Wales community, and with the advent of email and the capacity to lodge submissions on Parliament's website, people from the rest of Australia and overseas, raise a specific matter of concern about road safety with the STAYSAFE Committee. As well, it is common for Members of Parliament to write to the Committee on behalf of their constituents rather than to Ministers of State.

Issues

The STAYSAFE Committee commonly considers road safety-related issues independent of the formal inquiry processes. There are other issues, I suppose, which I could go on and speak about. One thing that we are looking at, and we have said for a long time that we have made the motor car a lot safer than ever before. We have looked inside the car with air bags, seatbelts and roll bars and everything else, but we have to start looking outside the motor car to see what we can do there to save lives. For example, recently the STAYSAFE Committee called for a refocus of road safety efforts to target safer roads. There is an ongoing effort into enforcement by the police and by courts, as well as public education campaigns and school education programs. The benefits of safer cars is enormous. But there is a need to put an increased effort into safer road infrastructure, and not just the big dollar road replacement programs such as the Federal government's Roads Of National Importance (RONI) program and blackspot programs. The Committee called for a consistent approach to providing low cost safety infrastructure on New South Wales roads. Low cost safety infrastructure includes:

- rumble strips
- sealed road shoulders
- wire safety rope fences
- removal or protection of roadside objects such as power poles, trees, etc.

These countermeasures have been shown in economic terms to yield very high benefits to cost ratios (community benefits of up to 40 times the cost of installation and management). Using these countermeasures is not rocket science and it is not the kind of thing that involves splashy public launches and media opportunities—so marketing and communications people in roads authorities don't rate them highly. But these countermeasures are basic to a safer road system. They don't involve major construction firms and finance houses, but can be done by road authorities using local contractors. That's a benefit for the local economies in rural and regional New South Wales, but the biggest benefit is in increased safety for road users. They are things that we can do at very little cost, and I am certain that the outcome there would be very beneficial to the overall community.

Rumble strips

Rumble strips are effective in reducing crashes associated with driver fatigue and inattention, regardless of design of rumble strips (width, depth, length, intermittence and continuity). There is a need to better use rumble strips across a range of road types, not just on major freeways and highways. A recent Swedish study demonstrated that rumble strips on narrow roads were very effective in alerting drivers to lateral deviation to both left and right (off the carriageway, or across into the path of oncoming traffic).

Sealed road shoulders

Australian road safety research from 15 years ago showed that sealed road shoulders were highly effective in reducing crashes associated with vehicles running off the road due to driver fatigue, inattention, or driver error. Sealed road shoulders are 'forgiving', allowing drivers to correct their mistakes without loss of control in gravel verges.

Wire safety rope fences

Wire safety rope fences have proven, since their introduction in New South Wales a decade ago, to be a low cost and highly effective means of stopping vehicles from leaving the roadway and colliding with roadside objects, or median intrusions on freeways into the path of other vehicles. There is a particular need to increase the usage of wire safety rope fences on the centreline of undivided roads to prevent head-on crashes associated with vehicles crossing into the path of oncoming traffic.

Removal or protection of roadside objects such as power poles, trees, etc.

The removal or protection of roadside objects such as power poles, trees, etc., remains a major safety need, not only for streets and roads in urban communities but also along major highways in rural and regional New South Wales. Simple barrier

protection can mean the difference between property only damage in a crash and a crash involving serious injury or fatal injury to vehicle occupants.

Reports

Over the period 2000-2005 the STAYSAFE Committee has tabled reports addressing a variety of issues, including:

- Road safety issues associated with schools and school travel
- Railway level crossing safety
- Road safety, traffic planning and traffic management
- Work-related road safety
- Aggressive driving
- Strategic planning for road safety
- Car surfing
- Motorcycle safety
- Safety issues associated with motor vehicle insurance and the smash repair industry
- Road safety statistics
- Local government road safety
- Reviews of the road safety effort in New South Wales
- Reviews of the government response to recommendations and findings in STAYSAFE Committee reports

These reports result from formal inquiries, involving consideration of submissions received, visits of inspection, and the taking of evidence from witnesses, but also include collations of seminar and conference proceedings.

Reports in preparation address issues such as:

- Distracted driving
- Administrative structures for road safety activities
- Vehicle-based measures for drivers to better monitor, manage and control speed
- Issues in motor vehicle insurance and the smash repair industry

amongst others.

As well, the STAYSAFE Committee is about to commence new inquiries, likely to include a review of progress in improving the safety of railway level crossings, and a review of motorcycle safety.

The list of STAYSAFE Committee reports for the 2000-2005 period is:

STAYSAFE 50 (2000). Speech by Grant McBride MP, STAYSAFE Chairman, in opening the 4th Local Government Road Safety Conference, Millennium Hotel, Kings Cross, 11-13 August 1999.

STAYSAFE 51 (2000)	Review of the road safety situation in New South Wales in 1998.
STAYSAFE 52 (2001)	Responses of Government agencies to recommendations in STAYSAFE reports of the 51st Parliament.
STAYSAFE 53 (2001)	Part 1 - Traffic control and safety around schools - Major recommendations and summary.
STAYSAFE 53 (2002)	Part 2 - Traffic control and safety around schools - Responses of government agencies to the major recommendations and summary.
STAYSAFE 53 (2002)	Part 3 - Traffic control and safety around schools - The evidence. VOLUME 1 – The testimony of school communities in 2000. VOLUME 2 – The testimony of school communities in 2001. VOLUME 3 – The testimony of representatives of government agencies. VOLUME 4 – The testimony of representatives of local councils. VOLUME 5 – The testimony of bus and taxi operators, representatives of non-government organisations, private citizens and Members of Parliament.
STAYSAFE 53 (2002)	Part 4 - Traffic control and safety around schools - Summaries of submissions received from government agencies, non-government organisations, and the community.
STAYSAFE 54 (2002)	Road safety and street design in town centres: Towards best practice in traffic control and safety for main streets in New South Wales: Proceedings of a conference held at Parliament House, Sydney, 31 July - 1 August 2000.
STAYSAFE 55 (2002)	Review of the road safety situation in New South Wales in 1999.
STAYSAFE 56 (2002)	Railway level crossings: Improving safety where railways and roads intersect at the same level.
STAYSAFE 57 (2002)	Work-related road safety. Proceedings of a seminar held at Sydney, Thursday 8 February 2002.
STAYSAFE 58 (2002)	Bullying, abuse, intimidation and assault on the road – selected Australasian research on ‘road rage’ and aggressive driving.
STAYSAFE 59 (2002)	On strategic planning for road safety in New South Wales.
STAYSAFE 60 (2002)	A decade of the STAYSAFE Committee, 1992-2002.
STAYSAFE 61 (2004)	Car surfing and the carriage of unrestrained and unprotected passengers on motor vehicles.
STAYSAFE 62 (2004)	“Road safety is no accident”: Proceedings of a seminar for World Health Day, 7 April 2004.
STAYSAFE 63 (2004)	Road crash statistics in 2002
STAYSAFE 64 (2004)	Road crash statistics in 2003
STAYSAFE 65 (2005)	Aspects of motorcycle safety in New South Wales—Proceedings of seminars on issues in motorcycle safety held at Sydney, Friday 3 December 2004 and Tuesday 4 May 2005, and other selected papers
STAYSAFE 66 (2005)	Motor vehicle smash repairs under the Insurance Australia Group (NRMA Insurance) Preferred Repairer Scheme, and its implications for roadworthiness, crashworthiness, and road safety

The STAYSAFE Committee also reviews the Government's response to the recommendations and findings of the Committee. That is something we do very well.

If we make a recommendation to the Parliament, we follow it up. It took seven years for them to do something with the 50 km/h speed limit in urban areas, and five years to have a look at the flashing light situation for use outside schools, but if we do make a recommendation we do follow it up and we do without fear or favour and we do not play politics on this Committee. The Committee is there for the benefit of road safety and the people who use roads and it is there to save lives and every life you save is a bonus, because that life could be your own.

Questions

Mr Ian FAULKS (Manager, STAYSAFE Committee, in the chair): Thank you very much, Chairman. Just to underscore the points that the Chairman has made, I took the opportunity in getting the most recent of the fatality reports that are issued by the Roads and Traffic Authority on a daily basis. It was considerably delayed this morning, which is a sign that there were a number of fatal crashes that occurred over the last weekend. I have collated the numbers for fatal crashes in New South Wales for the last 10 days to give you an idea of why the STAYSAFE Committee is starting to get a little alarmed. We have had 24 fatal crashes in New South Wales in the last 10 days; 26 people have been killed in those crashes. A curious point that I would like to raise—and the Chairman did talk about low cost road infrastructure issues—three quarters of those road deaths with associated with a single vehicle crash where the vehicle ran off the road and struck an object. The objects struck were utility poles, rock embankments, trees, and fences. There were two killed when a vehicle entered a river and the occupants drowned, and there have been a couple of fatal crashes where the vehicle has left the road, but not struck a roadside object, instead the vehicle overturned with such force that it was sufficient to result in the death of an occupant. These recent events are illustrative of the reasons why the STAYSAFE Committee is starting to get a little concerned about what is happening in terms of what appears to be an accelerating rate of road trauma in New South Wales. It has been continuing probably since May 2005 and trending upwards.

Chapter Four—

ACTIVITIES OF THE QUEENSLAND PARLIAMENT'S TRAVELSAFE COMMITTEE, 2000-2005

Mr JIM PEARCE MP
Chairman, Travelsafe Committee

Thank you for the invitation to be here. I appreciate the opportunity to come down and catch up and let you know what the Queensland Travelsafe Committee is up to.

The Travelsafe Committee in Queensland is a Committee of the Parliament and we are required to monitor, investigate and report on all aspects of road safety and public transport to the Queensland Parliament. I am sure if all of you here today would be aware that we do not have an Upper House in Queensland so unlike other committees here, our members are all from the Legislative Assembly and of course they are all back bench members as well. The current committee has seven members, four Government members of the Labor Party, a National Party member, a Liberal Party member and one independent who is the Vice Chair. We were appointed on 18 March 2004 and this is my second term as the Chair, as I have been elected there in 2001.

As the Chair I tend to try and lead the Committee in a way that I think is best for the Government and for the community and is that is not being seen as an expert in providing statistical facts at all times, but being one who is prepared to work at the grass roots level and give everybody the opportunity to have some input and say on whatever inquiries we are undertaking and, most importantly, when I am using the media I believe in reporting accurately back to the community what I have learnt from the community and I am finding that as a result of that we are getting a lot higher profile in Queensland than we have ever had before and I know that our staff and our secretariat will acknowledge that, because of the high increase in the number of letters that we are getting from the community as a whole, just talking about local issues they want us to have a look at. It is interesting that has happened because we are certainly getting a higher profile.

The Travelsafe Committee has completed a number of issues since 2000. These include public transport in south-east Queensland and that was one was difficult for me as the Chair at the time because the Committee was halfway through the inquiry when the election was called so we had to make a decision whether to abandon the inquiry and make recommendations based on the information available to us at the

time, or we go back somewhere towards the beginning and start again, which we did because I thought that was the only way we could do it, given that there had been so much effort put into it at that time and it would be unfair and unreasonable to walk away from all the work that had been done.

We have looked at rural road safety in Queensland, work related road trauma, education and training for young drivers, provisional licence restrictions, and driver and rider fatigue.

We are currently working on two inquiries. The first inquiry is examining vehicle impoundment for recidivist drink drivers and the second inquiry is examining Q-RIDE, a motor cycle rider training program, and with 64 deaths in Queensland last year from motor cycle accidents, the Committee decided it was something that needed to be looked at because Q-RIDE is a competency based training and assessment scheme and we are asking the question is there problems in that area, so we are well into that inquiry at the moment.

The Committee will report to the Parliament with recommendations regarding the drink driving inquiry in July and will report to Parliament with the recommendations regarding the Q-RIDE system in November.

Today I am going to make some reference to the Committee's young driver and rider inquiries in a little more detail. The Committee's examination of young driver and rider issues has been a major part of their work over the last five years. This work commenced with a conference that laid the ground work for the two inquiries. After the two inquiries the Committee has taken an active role in monitoring the Government's progress in implementing the Committee's recommendation.

One thing that we have done in the last couple of terms of the Travelsafe Committee - actually the last recommendation we make in our report to the Parliament is a recommendation that the Minister report back to the Parliament within 12 months of the action taken on the report. I just think it keeps them focussed, rather than stick it away in a little cupboard somewhere and let it gather dust, which has happened to a number of inquiries prior to us that have been given the task.

The inquiries of which I have spoken have examined education and training, provisional licence restrictions. Further information about the other inquiries is available in our paper and I understand that this paper is available to the conference now, so it will be there for you to have a good look at.

The Committee commenced their work in the young driver and riders by hosting in conjunction with the Australian College of Road Safety Conference developing safer drivers and riders. The Conference examined how driver education and training could best contribute to road safety. The Conference was held at Parliament House in Brisbane in July 2002. The Conference explored the need for and role of driver and

rider education and training in road safety. It reviewed the research and other evidence about road safety value. The Conference identified what works and what does not work in this area. It provided a forum to consider legal and professional issues that are of concern to educators and trainers, as well as raise public awareness of the issues and stimulate informed debate. There were 27 presentations at this conference over two days. We had 160 delegates from around Australia and New Zealand. The delegates included researchers, trainers, educators, policy makers, police and emergency services. The final part of the conference was an open discussion and this discussion led to some 15 motions that were agreed to by the delegates, which gave it a lot of bite.

This conference helped form the platform for the Committee's further work in this area and in January 2003 the Committee launched its inquiry into *Reducing the Road Toll for Young Queenslanders - Is Education Enough?* This inquiry examined post-licence education and training. In March 2003 the Committee launched a second inquiry to complement its first. This inquiry into provisional driver and rider licence restrictions examined the role of licence restrictions in reducing crashes. The Committee's consultation process for both inquiries provided people with a range of opportunities to participate. The Committee published an issues paper for the provisional licensing restrictions inquiry. The Committee distributed the issues paper in hard copy and electronic format and placed advertisements in newspapers throughout Queensland. We received some 97 submissions for both of these inquiries.

The Committee also released several media statements throughout the inquiry aimed at publicising the inquiry, its various forums and hearings, encouraging public involvement and submissions as well as making the Committee's recommendations well-known.

The Committee hosted 11 young driver forums across Queensland. I found it quite exciting to get out into the communities and give young people, in particular, the opportunity to have input. It was unexpected at the time, but when you think about it and look at all the research that we have in front of us from time to time, young women were okay, they were quite soft about some of the things we were proposing with regard to the introduction of P-plates and restrictions with passengers and driving late at night, but the males jacked up on it all together. It was encouraging to see that young women were at least keen to support what we were doing.

The forums provided opportunities for members of the public to discuss with Committee members methods of reducing young driver and rider crashes. Individuals completed a response form at the conclusion of each forum to provide an indication of their views. We also invited members of the Road Safety Educators Association to provide information about their activities and courses offered in the form of a short survey. The Committee held a public hearing to gather further information from key stakeholders. We also had a couple of hours with youth parliament, which was sitting

at one particular time, and again that was a great opportunity for young people to have input.

We used this information to formulate 33 practical recommendations. These recommendations were tabled as part of the report of December 2003 and the recommendations included, amongst others, reducing the minimum age an individual is eligible for a learner licence to 16 years; requiring L-plates and P-plates to be displayed; introducing a two-stage provisional licensing system; implementing a late night driving and riding restriction for provisional licence holders under 25 years between midnight and 4.00 a.m. for the first year of driving or riding; introducing a peer passenger restriction for provisional licence holders under 25 years who lose their licence for serious traffic offences or accumulation of demerit points, and introducing a hazard perception test for provisionally licensed drivers and riders under the age of 25.

The Parliament of Queensland Act 2001 requires the responsible Minister to respond to the Committee's recommendations within three to six months of those recommendations being tabled. The Minister's response is tabled in Parliament, so it is one way that the Committee can keep an eye on how the Minister is responding. All of the Committee's young driver and rider recommendations, with the exception of the late night driving and riding restriction and peer passenger restriction, were either partially or fully supported, but they rejected the re-introduction of P-plates into Queensland because we did have them at one stage and I understand for political reasons they were taken off the scene.

Some recommendations have already been implemented. An example of this is the reintroduction of L-plates for learners. The Queensland Government supported this recommendation and, as a result, commenced a three-year trial of L-plates on 31 January 2005. I was really concerned about this trial business because it is lacking a little bit of guts to implement the darn thing and get on with it, but, if that is the way they want to go about it, then that is the way they will go about it. Personally, I do not believe we should be going down that path, we should be just doing it and getting on with the job.

Other recommendations have not been implemented to date, however, in late 2005 Queensland Transport, the government agency that looks after road safety and driver licensing amongst other roles, released a discussion paper: *Queensland Youth - on the Road and in Control*. This discussion paper canvasses many of the issues that the Travelsafe Committee raised in its inquiries. It also considers additional issues such as completely banning mobile phone use, including hands-free use, for younger drivers. Queensland Transport called for submissions as part of this process. The Travelsafe Committee has made a submission and our submission was based on the work we had already done with our inquiries.

I have to say as chair of the Travelsafe Committee - and I have one other member who has been on the Committee with me for his second term - we are quite disappointed really that our recommendations were not taken seriously three years ago. We could have been well down the path of having them in place and, in my book, saving lives, but Queensland Transport or whoever did not think at the time that it was a good idea. Now it is a great idea. It just makes you wonder what this whole thing is all about. I have had my say in other areas about that to people I need to have hear me and I think I have got the message through.

What I have provided today is just one example of the Committee's work over the past five years. This example is important because it highlights how the Travelsafe Committee reviews the mechanisms to continuing to advocate new counter-measures on an issue. In this example the Committee held a conference, two inquiries, followed up on the implementation of its recommendations and made a submission, so we are there, we are doing the job, we are doing the research, we are talking to highly qualified people, we are talking to police, we are using government agencies to get the information and we are using the community. We have actually been getting the information together and I believe making informed recommendations to the Parliament and I see the work that the Travelsafe Committee does as good reason for responsible Ministers to say, given that it is an all party committee: This has been a decision of the Travelsafe Committee and we are going to support it. I think the tide has changed, so we will see what happens over the next couple of years.

The Committee also considers other issues that are not specific inquiries. The Travelsafe Committee maintains an interest in all developments that affect road safety and public transport in Queensland. For instance, the Committee will attend trials and demonstrations of new technologies, make submissions and maintain a watching brief on departmental activities and initiatives, and attend road safety related forums and conferences.

As an example of how the Committee examines other issues, the Committee observed the initial trials of the automatic number plate recognition technology organised by the Queensland Police Service. I have to tell you that, as chairman of the Travelsafe Committee in Queensland, I support the implementation of that technology. I think it will allow police to do their job, not only just for road safety, getting those unroadworthy vehicles and unlicensed drivers off the road, but also crime detection in local areas. I think it is a great piece of technology and I would support it strongly.

The Committee has also recently attended a demonstration of alcohol ignition interlock technology. This demonstration will certainly assist the Committee in making recommendations regarding the current vehicle impoundment report.

Attending these demonstrations allows the Committee to gain a greater understanding of road safety issues in general. It also supports the Committee in making innovative recommendations in its reports.

As a member of the Travelsafe Committee, I have been asked by local communities to give advice on setting up school road safety committees - I have done a couple of those, which have been very successful - and am working very closely with the coal industry at the moment on the issue of fatigue. The number of run-offs and roll-overs that we are getting between some of our regional cities because of the 12-hour roster system that these guys are asked to work is just unacceptable and we really have to do something about it. I have done things like travel on school bus routes to look at safety issues and there are other issues that will be in our written paper.

Before I conclude I would like to mention that last year was the 15th anniversary of the Travelsafe Committee, which is something we are very proud of. I believe that this is a big achievement for a select committee. I also believe that this is evidence of the important role that the Committee has in discovering and highlighting innovative and practical road safety measures in Queensland and, the more I get involved as chairman of this Committee, the more passionate I get about it because I am really starting to believe that I can make a difference here and get things put in place that can do what we are all about: Saving lives on our roads.

After 15 years, the Committee has released a CD, which contains all of its work to October 2005. The CD contains all reports, issues papers, media releases, hearing transcripts, submissions from several inquiries, papers from conferences and government responses to Committee recommendations. We have a number of copies available, if anyone is interested. One good thing about it is that it is easy to put in your bag when you go home. Thank you very much, I appreciate your time and attendance here and congratulate you all for the good work you are doing.

Chapter Five—

ACTIVITIES OF THE VICTORIAN PARLIAMENT'S ROAD SAFETY COMMITTEE, 2000-2005

Mr BARRY BISHOP MP
Member, Road Safety Committee

Thank you for the introduction, and welcome. I am a member of the Road Safety Committee - I have been for a fair while - and I am accompanied today by Graeme Both, our research officer. We are standing in for Ian Trezise MP, our chairman, and also our acting executive officer Richard Willis. They have both had recent bereavements in their families and they extend their apologies for not being able to attend today. I also should mention that Alexandria Douglas, who has been our executive officer, has been seconded to VicRoads. Alex is now running the Novice Driver Training project, which is a joint venture between the Commonwealth, Victoria and New South Wales, and that is post-licence drivers, so it will be interesting to see the results that come out of that.

To Paul Gibson, thanks very much for the welcome and, to Ian Faulks, well done in putting it all together, I know that there is a lot of work in all of that. We think it is a great opportunity to - I hate the word "network", but that is what we do I guess - network and to catch up with other members of road safety committees around Australia. Paul, your enthusiasm is fantastic. I do not always agree with you, as you know, but on the issue you raised today I certainly do. I do not think we have any boredom in Victoria in road safety. The take-up of the issues we put to government sometimes you could question - or we do - but it has been quite reasonable. But one of the issues you mentioned is the expansion of our freight task, say doubling by 2020, which is going to catch up with us very quickly, and the fact that quite often our recommendations on infrastructure and education are not picked up as quickly as we would like from a committee perspective, which I will talk about a little bit later.

Our Victorian Road Safety Committee is an all party joint investigative committee, similar to Queensland - the same numbers in fact. We have seven members, four from the Government and three from the Opposition - a couple of Liberal Party members and a National Party member. I am the National Party member - and we get along really well. I mean some of the other committees in our parliament have some scuffles from time to time but we do get on very well. We certainly do not play politics and I believe that we certainly do make a difference. One of the reasons I think we do make a difference is we are blessed with good staff who certainly rise to

the occasion, and many times they have had to rise to the occasion, I can assure you, to meet the deadlines we have to meet. Our function is to broadly inquire, consider, and report on road trauma and safety on roads and related matters to that.

We obtain our inquiry references by resolution of the Parliament, or through the Governor and Executive Council. We can only generate our own inquiries if we review a report that has been tabled in the Parliament. I might mention that, different from Queensland, our Government has to respond within six months, not 12 months. It is a much sharper time scale. We are having an election this year in November 2006 and the work of the Committee is put on hold at election time and always cranks up after that but it is a disconcerting time, as Queensland mentioned, in that if you are halfway through a report you have to make a decision what you do with it from there.

The inquiries that we have looked at since 1999 - and I might remind you they are all on the web and have all been since 1992—that is, the reports, the Government responses, and everything else that goes with it. In fact, the Monash University Accident Research Centre, in their Report No. 237, have reviewed all of the Committee's work as well.

Since 1999 we did a walking safely inquiry into the incidence and prevention of pedestrian accidents and we did another one into Victoria's vehicle roadworthiness system. That was March 2001. We inquired into rural road safety and infrastructure in 2002. We then did an inquiry into road safety for older road users, which I showed a lot of interest in obviously, given my years and, as Queensland said, we were three quarters or two thirds of the way through that when the elections came along and a partly new committee came into place but we picked that up, reviewed it, and pressed on and made that report and made it a lot easier in relation to getting it together, and we also had a conference in that particularly interesting inquiry.

Then we did two inquiries together. One was the crashes involving roadside objects and the inquiry into the country road toll and they were particularly interesting and I might just for today's purposes mention the country road toll without going into too much information.

What we were asked to do there was to have a look at the incidence and the cause, the role of speed, drugs, alcohol and fatigue in rural road crashes, and one of those things we were to look at was cruise control, car navigation systems and the extent and effectiveness of enforcement activities in country Victoria, amongst a number of other things. The committee received 121 submissions from government organisations and overseas agencies, non-government organisations and individuals and we went through those. We had seven days of public hearings in Melbourne and heard from a plethora of people in relation to that and, I suspect like most committees which have public hearings, they had parliamentary privilege with Hansard there so you can reasonably say what you like, I suppose, and manage to get through that.

We took a view that in fact because this was a country road toll we should get out into our rural and regional centres and we made 10 visits out into those centres and I do not think there were many municipalities that we did not talk to as we went out there. That absorbed a lot of time, effort and resource but we believed it was really worth it as we reached out into those rural and regional areas.

We had interstate briefing in Canberra and we have been here at least once, if not more, in relation to that study and others. We travelled overseas for that study. By rule of thumb we get an overseas trip per term of Parliament, provided the reference is responsive to that, so we had a look in Sweden, the Netherlands, France and the United Kingdom and met primarily with car manufacturers and road safety organisations and that was, I thought, extremely worthwhile. It certainly gave us a snapshot of where they were and, more importantly, where we were.

We made 70 recommendations out of that report and I am not going to go through them obviously but the government responded generally supporting, not fully in all of them, but 68 of those recommendations. One of the recommendations that Paul brought up in his opening remarks was cross country Victoria design and construction standards for local roads and roadsides. They knocked that back and I think it is interesting to note that that did happen and it is also interesting to note, in my perception of the issues, that in Australia I think we lead the world in relation to driver behaviour issues. I really believe that, having travelled around the world.

We have done the seatbelt bits, David, which you said got bowled over in one of the areas you are working in. We have been very strong on seatbelts, not only the enforcement but also the education.

We have done random breath testing as well. As I understand it, David, in the UK they do not have random breath testing because it is an intrusion on civil liberties, but we go for it here and it has worked.

Speed cameras are a wonderful debating point wherever you go and some governments and the police can take the public with them and some cannot. I noticed in British Columbia that they are now off the list. The government has decided to take them out of the system, which is interesting. It is apparent that they did not take the public with them.

In all of those things I believe we have lead the world, but we certainly have not lead the world in infrastructure. I believe that in Europe the infrastructure is far better. It is a simple process: Better roads, better signage, better guard rails, and an example of that is when we want a road and utility poles we often put up these whacking great concrete poles that are about 18 inches around. In Europe they do not that. They have collapsible aluminium poles, so that if you run into them you cause damage to the pole but not much a damage to yourself. That is a simple measure which they use which has a good message for us. We believe that simple things in infrastructure like

road shoulders, the rumble strips, the wire rope barriers, and signage is something that we should push quite hard.

In current inquiries we are reviewing the walking safety inquiry which we did some time ago, which we have picked up and that was self-generated by us under the Act by the committee and we are working our way through that and that is due to be tabled on 11 September 2006.

We have a new inquiry which is into driver distraction, and that is due to be tabled not too far away, 17 July 2006. This inquiry has been given to us and we have been asked to focus on internal and external distractions. It is a tough reference, driver distraction. How do you get distracted? Do I get distracted because I am in the car with George Souris and he is talking to me all the time, which he probably would be. Is that as much of a distraction as a mobile phone that goes off, or the radio that is going off, and some say navigation systems are a distraction. Others say well, it is better to look at your navigation system than try to read a map when you are going along, and it is better to have a navigation system for your marital arrangements because that is often a difficult thing for people reading maps in cars. They are the issues we are looking at. I have the view that mobile phones or cell phones as they call them in other parts of the world are over-represented in the research that is being done on driver distraction. I do not know why. I suspect because they are there and it is easy. There is a fair bit of evidence to suggest that in fact a hand-held phone is not much different than a hands-free phone in relation to the distraction that occurs, and there are many other things like the external stuff where we are up here at a conference and the Pedestrian Council of Australia put a very strong proposition to us that outside signs are very dangerous for pedestrians. Someone mentioned earlier today the number of people killed outside cars, so we are showing an interest in that. We have been told that particularly where there are signs that are scrolling, people take their eye off the road and do not look at what they are doing. That is a tough one for us. We are certainly looking at the latest technology in relation to communication in cars. We are getting more and more and more of it. You can have a fax in the car. You can have a phone in the car. You can have DVDs in the car. You can have everything. We have had a bit of a glimpse at other places around the world that regulate in relation to manufacturers' lobbying, but at the end of the day how do you manage the after market stuff where you can buy what you want and put it in the car anyway? That is not going to be an easy reference for us and we have found, like all of these things, there has not been a lot of research done or if there has it has not been dragged together. That is where we are up to now and we will have to work hard to get that up to the middle of July when we are due to table it in the Parliament.

Thank you very much for the invitation to be here. We do appreciate it and it is great to be amongst the family, I put it that way, of road safety people who are committed to the task of making our roads safer and also making it safer for our pedestrians as well.

Chapter Six—

A BRIEF SUMMARY OF THE ACTIVITIES OF ROAD AND TRANSPORT SAFETY COMMITTEES IN OTHER AUSTRALASIAN PARLIAMENTS, 2000-2005

Mr IAN FAULKES
Committee Manager, STAYSAFE Committee

That concludes the presentations from the Parliamentary Road Safety Committees that are present for today's meeting. Several other Australian Parliaments actually have transport committees and I would like to just very briefly touch on the work of those committees. There are three that I am aware of. Of these, the representatives of two committees were unfortunate late apologies for today's meeting. However, they have provided reports or comments which I will refer to.

House of Representatives Standing Committee on Transport and Regional Services - Commonwealth

The first is from our Commonwealth Parliament. It is the House of Representatives Standing Committee on Transport and Regional Services, chaired by Paul Neville MP. It has existed under a number of names over the past few years, but that is its current incarnation. They are currently doing an inquiry that is looking at the integration of regional rail and road networks and their interface with the ports. It grew out of a concern about Australia's transport infrastructure bottlenecks and delays that are experienced at the nation's ports.

Mr Neville advises that the Committee has taken evidence outlining road safety concerns in many regional communities, especially concerns about the impact of large trucks carrying freight on busy public roads. That Committee is currently taking further evidence in relation to that inquiry, which is why they were unfortunately unable to organise their schedule to attend.

Looking at their reports over the 2000-05 period in their various incarnations, in 2004 they released a report into some measures proposed to improve train visibility and reduce level crossing accidents and as I recall, that report, which is more an issues based report than a general overall review, arose out of a level crossing crash

with multiple fatalities in Western Australia, so Iain Cameron may later refer to that in his presentation.

Importantly, I think, they did a major study called National Road Safety Eyes on the Road Ahead which was again released in June. They provided some comments on that in their written report which I will distribute to the meeting. They advised that the committee was asked by the Minister for Transport and Regional Services to investigate matters relating to road safety in Australia because the rate of improvement in Australian road safety activities, or Australian road safety generally over the past two decades, looks as though it is largely levelling out. The report released contained some 38 recommendations that addressed quite a range of road safety issues. The report highlighted a need for a national approach to road safety.

I think if I can put Lauchlan McIntosh on the spot, part of the problem for their highlighting the need for a national approach to road safety is that road safety in Australia is primarily a state concern, so that put them into a fairly difficult position in terms of the recommendations they made. They did make recommendations which I will draw to your attention, including the need to establish and promote targets for reducing serious injuries, not just road fatalities, to put those targets together with time lines and accountabilities into road safety action plans, to increase funding for road safety measures, particularly in relation to black spots, uniform licensing regimes across all of the Australian jurisdictions, a comprehensive review of the Australian design rules for motor vehicles, and the development and implementation of national road safety strategies, in particular for young drivers, motor cyclists, bicycle riders and pedestrians. The Government has responded to the committee's report supporting 16 out of 38 recommendations, but, as I have indicated, they have generally taken the view that the matters raised are of a State concern and not of a national concern.

Other reports that they have released include moving intelligent transport systems and they had a quick look at variable speed limit signage as a case study of intelligent transport system developments. They also released a particularly significant report I think called *Beyond the Midnight Oil*, which looked at managing fatigue in road transport. That was released right at the boundary of our area of interest in October 2000 with the Government responding in 2001. As I indicated, they have provided a report and copies will be made available fairly shortly in relation to that.

New Zealand Select Committee on Transport and Industrial Relations

The second of the transport committees is again a 'doubled-up' committee. This is the New Zealand Select Committee on Transport and Industrial Relations chaired by Mark Gosche. The Honourable Taito Philip Field MP was coming, but sent an apology very late last week that he is now unable to attend. To quickly summarise the work of that committee, it tends not to be particularly road safety oriented. Reviewing the work over the 2000 to date period, they have released over 100 reports. The majority

of those reports, however, are one or two page reports relating to their support or otherwise for the examination of bills that have been introduced into the House of Representatives in New Zealand, or the examination of petitions that have been lodged in the House. The latter are typically petitions that relate to road construction matters rather than matters of road safety. A large component of the remaining reports that have been tabled examine financial or budgetary aspects of government agency operations.

There is one significant report that they released in June 2005 that is germane to the matters that we are interested in and that was a report of the briefing to review progress in implementing key recommendations from the 1996 inquiry into truck crashes. That 1996 inquiry had resulted in a report with some 67 recommendations. Seven of those called for an immediate response and the other 60 called for long-term action. The New Zealand Auditor General decided to review what had happened to those 60 long-term recommendations and reported to the House in March 2005 and the Transport and Industrial Relations Committee then reviewed the Auditor General's report. The report contains the transcripts of the formal review process. There is particular focus on braking systems in heavy vehicles and roles of government inspectors in the regulation of the road transport industry. To summarise their conclusions, they indicated that they were "generally pleased" with the outcome and the response.

Legislative Assembly Community Development and Justice Committee - Western Australia

I indicated that there was a sixth committee among the Australasian jurisdictions with a brief to address road safety matters. That is the Western Australian portfolio committee that has as part of its oversight the Office of Road Safety in Western Australia. My advice from that Western Australian committee is that they have not yet subjected the Office of Road Safety to any particular scrutiny.

That concludes the reports from the six road safety or road safety-related committees across the Australasian jurisdictions.

Australasian jurisdictions that do not have a safety or road safety-related Parliamentary committee

In passing, I would like to mention those Australasian jurisdictions that do not have a safety or road safety-related Parliamentary committee:

- South Australia
- Tasmania
- Australian Capital Territory

- Northern Territory
- Norfolk Island

Chapter Seven—

ROAD SAFETY ACTIVITIES OF THE NATIONAL TRANSPORT COMMISSION

Dr JEFF POTTER

Senior Advisor (Safety), National Transport Commission



NTC

Independent body established under Commonwealth Legislation and Inter-governmental agreement to develop and implement policies, practices and laws which:

- **make road, rail and intermodal transport safer, more innovative and efficient**
- **introduce greater national transport uniformity and consistency**
- **reduce the environmental impact of road transport**
- **reduce the costs of administration of road transport**

By way of background, the National Transport Commission is an independent body that has been established under Commonwealth legislation and subject to intergovernmental agreement that sets out the objectives to develop policies, practices and laws, which most importantly for this forum make road, rail and intermodal transport safer or, in particular, more efficient, and this government agreement does set those things up in that order with "safer" being the priority; also to get greater national uniformity in transport regulation and reducing environmental impact and costs of administration.

In doing this, the National Transport Commission put together a three-year rolling plan, which, like all of the things that the National Transport Commission does, is subject to consultation with all the jurisdictions and stakeholders in the industry and other bodies to try to ensure that the matters that we are addressing in our work program are the highest priority ones across the country rather than just internally based.



The current strategic plan covers the areas of transport efficiency, safety, environment, improved observance of regulatory requirements and also monitoring maintenance, and review of reforms that the National Transport Commission and its predecessor, the National Road Transport Commission, have put in place. These are things like the Australian road rules, the national medical guidelines for driver licensing and so forth.

**National Heavy Vehicle
Safety Strategy 2003-2010**



- **Endorsed by ATC 2003**
- **Complements National Road Safety Strategy**
- **Action Plan based on 5 strategic objectives**
 - increased seatbelt usage by heavy vehicle drivers
 - safer roads
 - more effective speed management
 - reduced driver impairment
 - safer heavy vehicles

The other main guide that we have towards activities to improve safety on the Australian road network is the National Heavy Vehicle Safety Strategy, which the agency endorsed in 2003. This strategy complements the National Road Safety Strategy. Its main objectives are to promote actions within heavy vehicle operations that will assist in achieving the objectives of the National Road Safety Strategy in terms of reduction in fatalities and injuries.

A new action plan was just approved by transport ministers for the Australian Transport Council and should be on our web site this month, it is currently being printed, based on five key strategic objectives, one of which is improved seatbelt usage by heavy vehicle drivers - the lack of seatbelt use amongst this particular road group is a major contributor to deaths of heavy vehicle occupants; safer roads, particularly in the areas of improved roadside rest areas for drivers to stop and also, in revising the guidelines for road safety audits and reviews of the road network, to ensure that freight routes that have large amounts of heavy vehicle traffic are designed to accommodate the requirements of those vehicles; more effective speed management in heavy vehicles, which is an issue that needs to be managed for safe operations; reduce driver impairment not only from fatigue but alcohol use, drug use as well, and more generally in terms of driver health and wellbeing, and also vehicle safety improvements for the safety of vehicles.

A presentation slide with a light gray background and a dark gray border. The title "National Heavy Vehicle Safety Strategy 2003-2010" is centered at the top in a bold, black, sans-serif font. To the right of the title is the NTC Australia logo, which consists of a blue square with a white star-like pattern, followed by the text "NTC AUSTRALIA" in red and "National Transport Commission" in a smaller blue font below it. Below the title, there is a bulleted list with a red dot for the main heading and three red dashes for the sub-points. The text is in a bold, black, sans-serif font.

National Heavy Vehicle Safety Strategy 2003-2010 
National Transport Commission

- **Action Plan also addresses**
 - enhanced driver and industry management
 - effective enforcement
 - targeted research and education

It also addresses issues of driver industry management, methods for effective enforcement and research and education initiatives. These are actions not just for the National Transport Commission to undertake but also the jurisdictions, police force and the industry themselves have a role in delivering safety outcomes from the strategy.

Currently the safety projects that the National Transport Commission is undertaking, or probably the big one—certainly the big one in terms of the extent of commitment to it over several years now—is heavy vehicle driver fatigue management and this week, possibly even today, there should be the first tranche of twelve documents going up on our web site on the policy proposals for improved management of driver fatigue. It is not simply a matter of restricted hours of how long you can spend behind the wheel, it also addresses minimal requirements for rest, restrictions to the amount of driving that should be done at night and taking into account the need for sleep. The final package of regulations for improved fatigue management are scheduled to go to transport ministers to vote on before Christmas this year.

Current Safety Projects




- **Heavy Vehicle Driver Fatigue Management**
- **Safety/environment/axle mass package**
- **Heavy vehicle speed compliance – review of regulatory options**
- **Heavy Vehicle Braking review**
- **Interaction between heavy vehicles and the road network (with Austroads)**

The other project is a combined safety, environment and axle mass package. This is a proposal that has been endorsed in principle by transport ministers to increase the allowable mass on the front axle of heavy vehicles if they are fitted with front under-run protection; increase cabin strength standards to the current European guidelines as well as the Euro-4 standard engines that reduce emissions into the environment. In the case of the Euro-4 engines, they become mandatory in 2008 in any case, but the benefit of this package is that things like front under-run protection, which is working its way through the regulatory pathway, and vehicle cabin strength we hope will be taken up more rapidly by the industry because of the benefits they can get to productivity by having a greater front axle mass, and so get a faster spread of these through the heavy vehicle fleet and the safety benefits that follow.

We are undertaking a review of regulatory options for vehicle speed compliance, looking at responsibility for speed compliance as well as technological means of enforcing and detecting the reliability of the speed limiting devices that are already required but do not always work as the original manufacturer may have designed them to work in a heavy vehicle fleet. We recently published a review of heavy vehicle braking addressing a performance-based future program to try to get proper compatibility between the braking requirements of prime movers and trailers, which is particularly problematic when you are dealing with a Japanese built prime mover to a European standard towing an American constructed trailer where they have quite different braking philosophies and not necessarily systems compatible with the current best practices for safety.

Finally, the other project I mentioned is with Austroads. Currently we have the Australian Roads Research Board undertaking a review looking specifically at high freight routes and the nature of crashes and how the guidelines that they produced for Austroads Road Safety Audit can accommodate the requirements that are needed to ensure the safe use of those roads by heavy vehicles.



COAG reform agenda

NTC AUSTRALIA
National Transport Commission

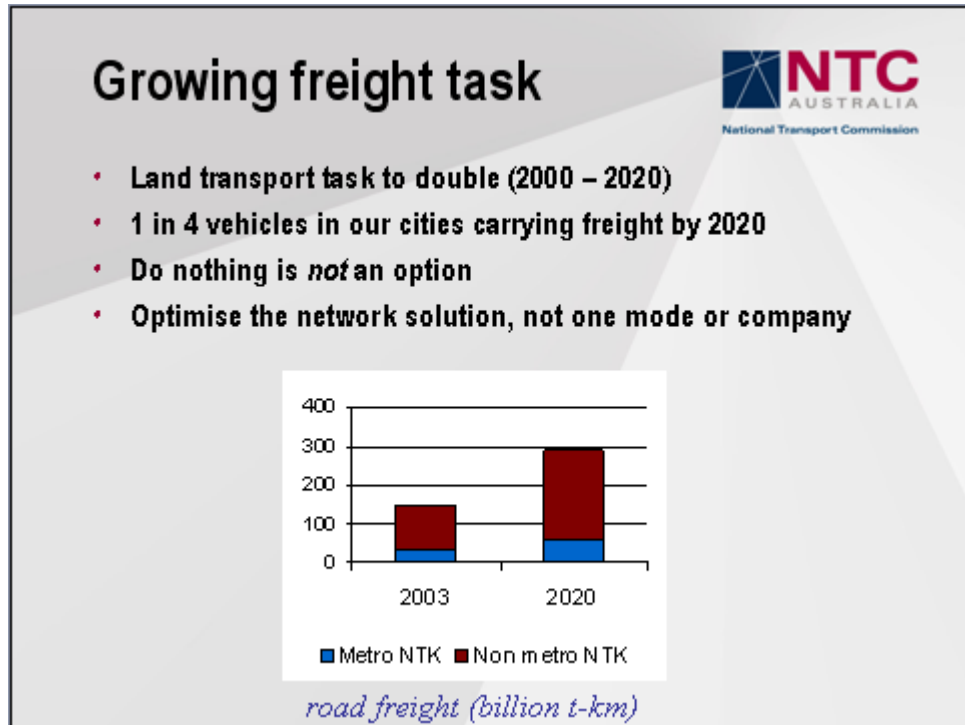
“COAG has agreed to improve the efficiency, adequacy and safety of Australia’s transport infrastructure by committing to high priority national transport market reforms” - COAG Feb 10, 2006

- Performance-based regulation
“a nationally agreed process for assessing the access of innovative vehicles to the road system”
- Intelligent Access Project
- Rest area audit and construction to new guidelines
- Review rail safety regulation
- Road-rail “efficient” pricing
- Guidelines for evaluating road infrastructure projects
- Logistics chain co-ordination initiatives

One of the big influences on our future activities is going to be the Council of the Australian Governments transport reform agenda. After the February 2006 Council of Australian Governments (COAG) meeting there were a number of issues placed by the Premiers and Prime Minister to be addressed over the relatively short term of the next two to three years, including the performance-based regulation about which I will say more in a moment, increasing the uptake of the intelligent access project, which allows the use of global positioning systems (GPS) and radio monitoring of heavy vehicles to ensure that they stick to the roads that are safe to carry them, and also requiring rest area audits and instruction to meet new guidelines which the National Transport Commission fixed last year as well as a number of matters which are less immediately relevant to the road freight task.

As has been mentioned by a couple of speakers today, the land transport task is going to double between 2000 and 2020, which means within our cities one in four vehicles will be carrying freight 15 years from now if no other action is taken in terms of vehicle capabilities and safety. This will happen if we do nothing and doing nothing and moving to that side of the track is not an option. What the NTC is trying to do with our projects, not just the safety ones, but across transport efficiency is

looking at the network solution, what is the best way to move freight rather than just what is the best way to deal with road freight or the rail freight.



When we say it is going to double by 2020, this does not mean that on 1 January 2020 there will be twice as many vehicles. It means that there will be 5,000 more trucks on the roads every year, an extra 1,600 in Sydney, 1,400 in Melbourne and 900 in Brisbane—my apologies to the other jurisdictions where we have not calculated the numbers.

A MAJOR REFORM




Safer Management of Australian Road Transport (SMART)

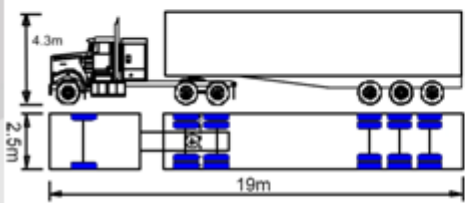
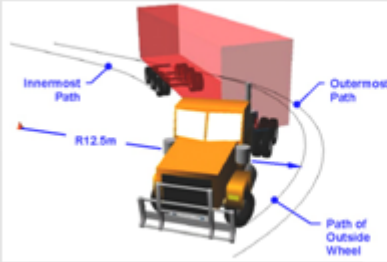
SMART program focuses on how well the vehicle behaves on the road, rather than how big and heavy it is, through a set of 20 safety and infrastructure protection standards matched to four levels of the road network.





The way that the National Transport Commission is working with the industry and the state jurisdictions to address this is the cutely named Safer Management of Australian Road Transport (SMART) program, which is very much based on not what a vehicle looks like but whether it complies with specific safety and infrastructure performance requirements. The current regulations dealing with heavy vehicles are very much based on what it looks like, how wide it is, how long it is, how high it is, whereas moving to a performance based standard is focussed on what the vehicle can do, how well its trailer will track the front wheel movement, what sorts of characteristics it has towards static rollover and the like.


Performance-based Standards




- **What the vehicle looks like** 




- **What the vehicle can do** 


Of the twenty measures, sixteen relate to safety. One of the requirements that we are putting on vehicles to be a performance-based standard under the SMART program is the tracking ability on a straight path: how much wobble you get as you go further down the vehicle.

Performance Measures - Safety





1. Startability
2. Gradeability
3. Acceleration Capability



4. Overtaking Time
5. Tracking Ability on a Straight Path
6. Ride Quality

Other requirements include some low speed safety measures such as:

- startability, can it start on a one percent grade;
- gradeability, can it maintain speed going up grades of a particular height;
- acceleration capacity, very significant if you are talking about clearance time for a long vehicle across a railway level crossing, or an intersection for that matter.


High speed safety measures include:

- overtaking time, how long will it take a car to overtake a heavy vehicle;
- tracking ability, relating to lane positioning and path along a single track road;
- and also ride quality.

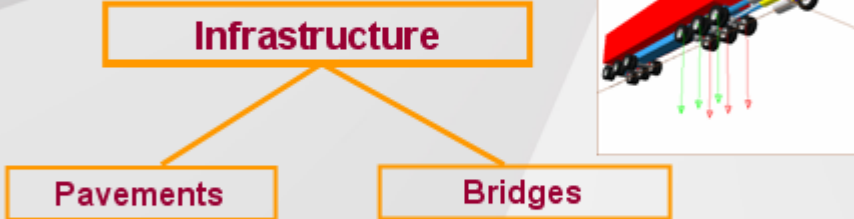
There is also directional safety measures, the swept path at low speed, how large an area of space is needed for a vehicle not to bump into the sides of it, frontal and tail swing as it is cornering, how much of the neighbouring lanes is it going to occupy, friction of the steer tyres, static rollover threshold, how likely is it to fall over going around a tight bend, and then the high speed ones particularly relating to when a heavy vehicle or a long vehicle is required to do an overtaking or avoidance manoeuvre, how much does the amplification or exaggeration of the sideways movement get reflected towards the rear of the vehicle, how well does it stay on track as it travels and once it starts getting a wobble along the tail, how quickly does that yawing moment get damped down, as well things such as handling quality and braking stability.



That is not a regulation about must have anti-lock brakes or must have electronic stability control, it is a regulation about must be able to stay within certain parameters and a straight line when applying brakes from high speed.




Performance Measures - Infrastructure







7. Pavement Vertical Loading
8. Pavement Horizontal Loading
9. Tyre Contact Pressure Distribution


20. Bridge Loading



MATCHING THE VEHICLE TO THE ROAD

PBS road class	Equivalent prescriptive access
Level 1 access (L1)*	
Level 2 access (L2)	
Level 3 access (L3)	
Level 4 access (L4)	

* L1 roads would be the default classification, but some roads may not be classified as L1 due to special local factors.



There are other infrastructure performance measures which are part of this because a large part of the restrictions for large vehicles on the network relate to the capabilities of bridges to support the load and the corners to be able to be negotiated by a large vehicle and the distribution of the weight and what that does to paving.

The important thing about taking this approach to heavy vehicle safety and allowing larger and better designed heavy vehicles on the road is matching the vehicle capabilities to the road design parameters. If you are doing this by different levels of operation, based on how closely the rear of the vehicle will track to the front of the vehicle, how much it will overlap other lanes, how likely it is to topple when going around a right corner, you get the opportunity for some innovation in the design of these vehicles and produce overall a safer vehicle even though it may be larger, heavier and wider than current ones because of the focus on its performance rather than shape.

Using one example, Shell were concerned about the safety and stability of some of their very large fuel tankers. They redesigned them to lower their centre of gravity by lengthening the trailers, changing the shape profile of the tank, lowering the tank to a lower level on the trailer, adding a fifth axle on the trailer to better distribute the weight and improve its stability and tracking. The overall result was a vehicle which was 22 metres long instead of the regulatory allowable 19 metres long, meaning that to use these they required applications for permits in every state in Australia that they wanted to operate in, all of course with slightly and maybe not significantly different conditions, in order to get them on the road and different restrictions on which roads they could use.

Removing the performance based system removes that problem and makes it much more attractive to design safer vehicles and to get them on the road and linking that to the intelligent access program ensures that a vehicle which is safe for one road with dual lanes and wide corners does not get used on a lower quality road where its performance does not match the road design. That really sums up what I wanted to say and thank you for the opportunity.

Chapter Eight—

PROGRESS IN THE NATIONAL ROAD SAFETY STRATEGY

Mr IAN FAULKES

Committee Manager, STAYSAFE Committee

The National Road Safety Strategy 2001-2010 process provides for a progress reporting mechanism and the most recent of those progress reports was released in November 2005 by the Australian Transport Council.

Progress Report to the Australian Transport Council on the National Road Safety Strategy 2001-2010 (November 2005)

Key points

In the 12 months to September 2005 there were 1619 road deaths in Australia: 0.7% fewer than in the previous 12-month period. The road fatality rate was 8.0 deaths per 100,000 population; this was:

- 1.7% below the rate for the preceding 12-month period
- 15.9% below the 2000 fatality rate
- 14.3% below the 1999 fatality rate of 9.3, which is the benchmark rate for the 40% reduction target in the National Strategy.

After four years and nine months of the 10-year strategy period, a fatality rate of 7.3 (21.5% below the benchmark figure) would have represented exact pro-rata progress toward the 2010 target. Up to the end of 2004, national fatality trends were broadly on track to meet the 2010 target of 5.6 deaths per 100,000 population. However, no further improvement has been registered in the first nine months of 2005. The latest fatality rates were lower than 1999 rates in all states and territories except the Australian Capital Territory, and lower than 2000 rates in all jurisdictions except Tasmania and the Australian Capital Territory.

Reductions in road fatalities since 1999-2000 have been concentrated in three categories: vehicle occupants in multiple-vehicle crashes, pedestrians, and cyclists in crashes involving another vehicle.

The number of road deaths involving articulated trucks has decreased substantially since 2002.

Background

The National Road Safety Strategy for 2001 to 2010 provides a framework for coordinating the road safety initiatives of the federal, state, territory and local governments and of others capable of influencing road safety outcomes. The National Road Safety Strategy was adopted by the Australian Transport Council in November 2000 and commenced in January 2001.

The target of the National Road Safety Strategy is to reduce the annual number of road fatalities per 100,000 population by at least 40%, from 9.3 in 1999 to no more than 5.6 in 2010.

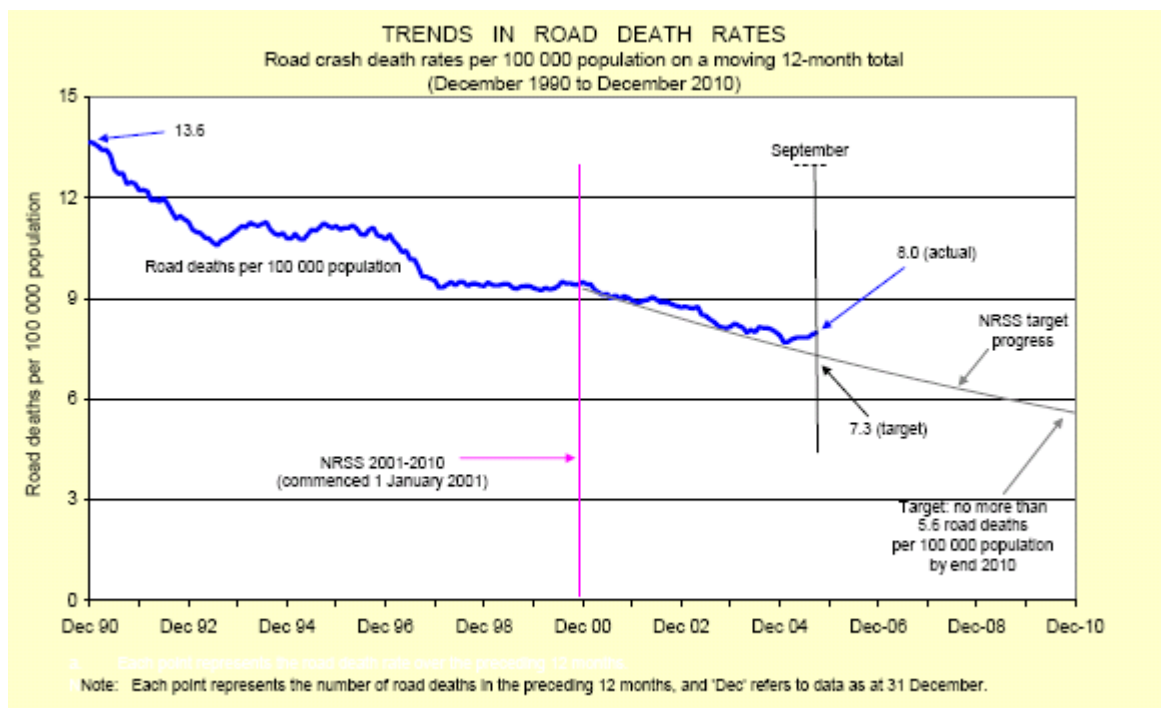
The Australian Transport Council requires annual reports on implementation and outcomes of the National Road Safety Strategy and associated two-year Action Plans. In alternate years, a review with recommendations for a new Action Plan is required.

Conclusions from the 2004 review are summarised in the *National Road Safety Action Plan 2005 and 2006*, which was approved by the Australian Transport Council in November 2004 (available at:

http://www.atcouncil.gov.au/documents/NRSA_Action_plan_05_06.aspx).

This report provides a summary of road fatality statistics to September 2005. Data for recent months are provisional.

National data



The road fatality rate for the 12 months to September 2005 was 8.0 deaths per 100,000 population; this was 14.3% below the 1999 fatality rate of 9.3, which is the benchmark rate for the 40% reduction target in the National Strategy.

After four years and nine months of the 10-year strategy period, a fatality rate of 7.3 (21.5% below the benchmark figure) would have represented exact pro-rata progress toward the 2010 target.

Road fatalities and fatality rates: Australia

Year	Road deaths	Road deaths per 100 000 population	Per cent change in road deaths from previous year	Per cent change in road death rate from previous year	Cumulative road death rate change (base = 9.32)
1999	1 764	9.32			
2000	1 817	9.49	+3.0%	+1.8%	
2001	1 737	8.95	-4.4%	-5.7%	-4.0%
2002	1 715	8.73	-1.3%	-2.5%	-6.3%
2003	1 621	8.16	-5.5%	-6.5%	-12.4%
2004	1 589	7.90	-2.0%	-3.1%	-15.2%
<i>12 months to Sept 2005</i>	<i>1 619</i>	<i>7.98</i>	<i>-0.7%*</i>	<i>-1.7%*</i>	<i>-14.3%</i>

* relative to 12 months ending September 2004

Data by jurisdiction

Fatality rates in the 12 months to September 2005 were lower than 1999 rates in all states and territories except the Australian Capital Territory, and lower than 2000 rates in all jurisdictions except Tasmania and the Australian Capital Territory.

At the end of the previous decade, Victoria and the Australian Capital Territory had the lowest fatality rates.

Victoria's rate rose above the national average in 2001, but dropped sharply over the next two years. This reduction has been largely sustained, and Victoria has had the lowest fatality rate since 2002.

The Australian Capital Territory rate decreased substantially between 2000 and 2004, but has returned to pre-2000 levels during 2005. It should be noted that actual

numbers of deaths in the Australian Capital Territory are quite small; and that annual changes can be significantly influenced by random statistical variation.

The New South Wales rate has been just below the national average for most of the last five years.

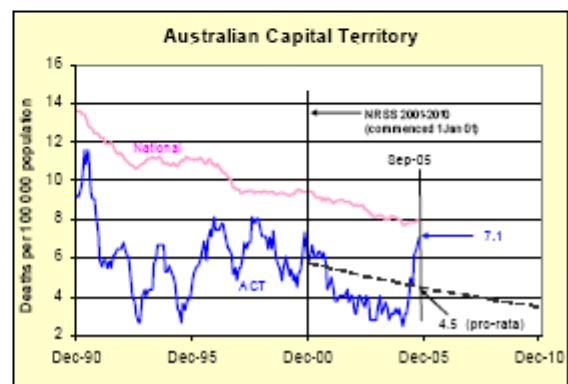
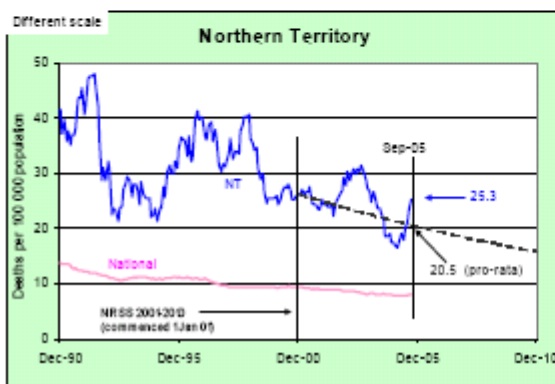
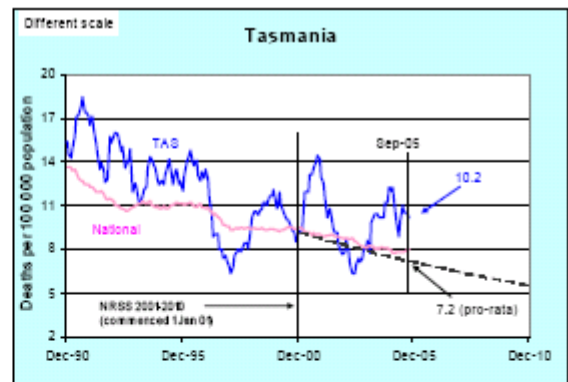
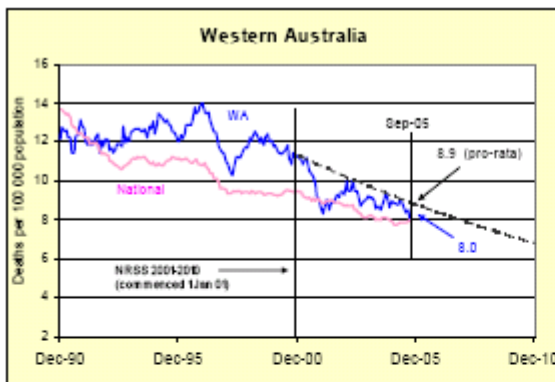
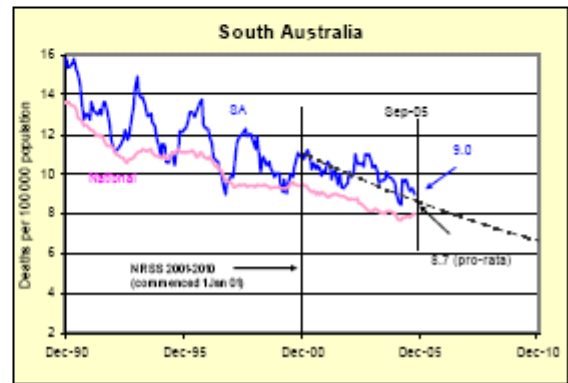
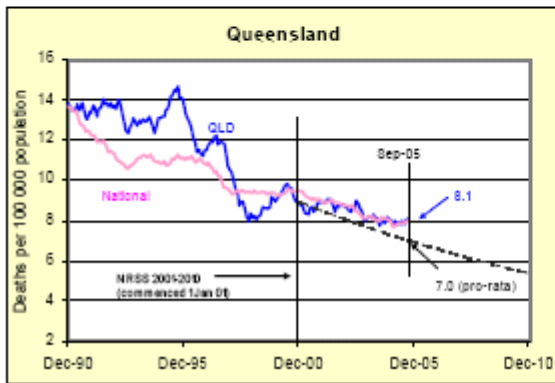
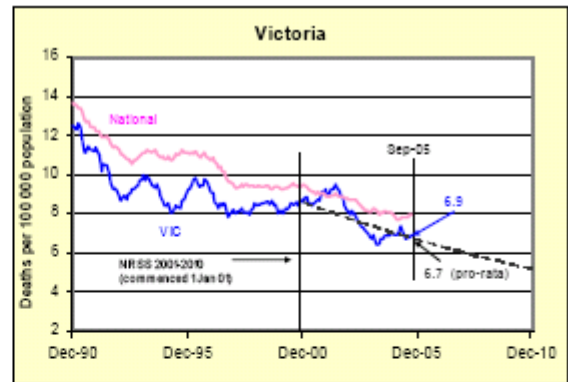
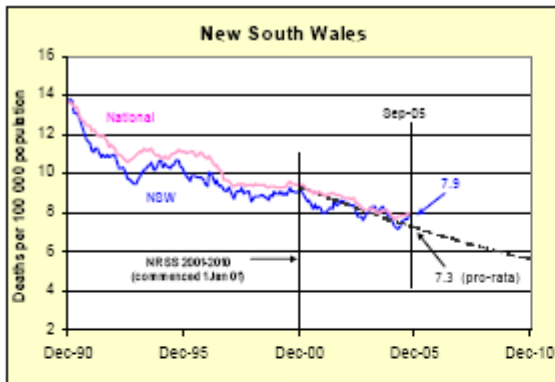
Over the period of the current strategy, the largest percentage reductions in fatality rates have been recorded in Western Australia, South Australia and Victoria.

Road death rates per 100,000 population, by jurisdiction

Year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Australia
1997–1999 average	9.0	8.3	9.2	10.5	11.7	9.4	31.3	6.2	9.4
1999	9.0	8.2	9.0	10.1	11.8	11.2	25.4	6.1	9.3
2000	9.3	8.6	8.9	11.0	11.3	9.1	26.1	5.7	9.5
2001	8.0	9.2	8.9	10.1	8.7	12.9	25.3	5.0	8.9
2002	8.5	8.2	8.7	10.1	9.3	7.8	27.7	3.1	8.7
2003	8.1	6.7	8.2	10.3	9.2	8.6	26.7	3.4	8.2
2004	7.7	6.9	8.0	9.1	9.0	12.0	17.5	2.8	7.9
12 months to Sept 2005	7.9	6.9	8.1	9.0	8.0	10.2	25.3	7.1	8.0
<i>Change:</i>									
2000 to 2002	-9%	-5%	-3%	-8%	-18%	-14%	+6%	-46%	-8%
2002 to Sept 2005	-7%	-16%	-7%	-12%	-14%	+30%	-9%	+127%	-9%
1999 to Sept 2005	-13%	-16%	-10%	-11%	-32%	-10%	0%	+16%	-14%
2000 to Sept 2005	-15%	-20%	-9%	-19%	-29%	+11%	-3%	+24%	-16%

Graphs of trends in each jurisdiction are provided on the following page.

Road death rates per 100 000 population, by jurisdiction (moving 12 month average). (Dotted lines in graphs show pro-rata progress required to achieve a 40% fatality rate reduction by 2010 in each jurisdiction.)



Road user groups and crash types

Comparing the last two calendar years (2003-2004) with the two years before the current strategy period (1999-2000), the largest percentage fatality reductions have been for:

- pedestrians (22%)
- vehicle occupants in multiple-vehicle crashes (20%) and
- cyclists in multiple vehicle (motor vehicle and bicycle) crashes (17%).

There has been no reduction in fatality numbers for vehicle occupants in single vehicle crashes, and motorcyclists.

Road deaths by road user group and crash type

	1999	2000	2001	2002	2003	2004	Change: last two years relative to first two
Vehicle occupant: single vehicle crash	577	648	604	658	634	608	+1%
Vehicle occupant: multi vehicle crash	670	654	579	548	532	524	-20%
Pedestrian	299	287	290	249	232	223	-22%
Motorcyclist: single vehicle crash	66	80	89	101	61	81	-3%
Motorcyclist: multiple vehicle	110	111	127	123	127	115	+10%
Bicyclist: single vehicle crash	2	3	3	1	4	10	nc
Bicyclist: multiple vehicle	38	28	43	33	22	33	-17%
All Road Users*	1764	1817	1737	1715	1621	1598	-10%

* includes cases with missing data for crash type or road user group

Fatalities involving heavy trucks

Road deaths and fatal crashes involving an articulated truck

Year	deaths	fatal crashes
1999	191	163
2000	208	165
2001	178	146
2002	200	171
2003	173	144
2004	147	136
<i>12 months to Aug 2005</i>	<i>132</i>	<i>119</i>

Since 2002, there has been a substantial reduction in the number of road deaths involving articulated trucks. There were 147 such fatalities in 2004, and 173 in 2003. These figures compare with an average of 190 per year in the decade to 2002, with a peak of 208 in 2000.

The downward trend appears to have continued into 2005: in the 12 months to August 2005, there were 132 deaths involving articulated trucks.

Progress in implementing the National Road Safety Strategy action plan for 2005 and 2006

The National Road Safety Strategy 2001-2010 is administered through a national panel—the National Road Safety Strategy Panel—and, as can be seen from the preceding section, is the subject of regular formal reports to the Australian Transport Council.

At its most recent reported meeting held in August 2005, the National Road Safety Strategy Panel commented:

3. NRSS and Action Plan progress report

Progress towards the target

Graphs depicting current trends in the national road fatality statistics prepared by the ATSB showed that there has been a slight upward shift in the trend this year.

To be on target for a 40% reduction in road fatalities nationally between 2001 and 2010, fatalities should have been down to 7.4 per 100,000 people at the end of July but were only down to 7.8 per 100,000 people. Further, a 20.8% reduction in the fatality rate should have been achieved relative to the starting point in 2001, but to date the reduction has only been 16.5%. Work remains to be done to maintain the momentum.

The Panel was reminded that they had originally recommended a 50% reduction target over the ten years between 2001 and 2010 (similar to some European countries). This had been reduced to 40% by ministers. Members were cautioned not to think all was proceeding well because the 40% reduction was almost being achieved, since this is well short of the initial target. The evidence suggests that countries with relatively ambitious road safety targets perform better in this regard.

Public awareness of the NRSS target and perception of road fatalities

The issue of public awareness of the Strategy target of a 40% reduction by 2010 was raised and it was suggested that a communication programme should be considered to raise public awareness.

It was also suggested that a daily perspective, viz. five road deaths per day nationally, makes the figures more readily understandable, and that any public awareness programme should focus on both serious injuries and fatalities.

Different groups appear to estimate road safety risks very differently, and there is evidence that some groups significantly overestimate the risks involved. This suggests that caution should be exercised and that perception of this issue across the whole population should be clearly understood before deciding how to publicise the 40% reduction target.

Car safety features

It was suggested that advertising the benefits of individual technologies rather than publicising ANCAP results may lead to better uptake of safety features by the public. The Panel was reminded that advertising of safety features by vehicle manufacturers is a recent departure, and that an agreement among the manufacturers not to advertise ANCAP results had been broken only about 18 months ago. The importance of developing consumer-driven demand for vehicle safety was underlined.

National system to measure road fatalities

The issue of a nationally consistent system to measure fatalities was discussed.

It was suggested that the lack of a nationally consistent method of defining road crashes impedes the analysis of fatality data in the context of a National Road Safety Strategy. An alternative view was that, provided the systems for compiling statistics remained constant *within* jurisdictions throughout time, meaningful conclusions about trends could still be drawn in the absence of a single national protocol. It was further suggested that the difference between a national approach based on current data gathering protocols and one based on a fully standardised system would be very small (perhaps less than 1 per cent), and that the costs of implementing standard data collection nationally would outweigh the benefits.

The importance of focussing on gathering data that are pertinent to what can be addressed by legislative adjustments to the road rules was underlined. Gathering data on, for example, crashes in locations not subject to these rules would draw resources away from genuine road safety outcomes. The possibility of some states excluding certain categories of crashes from their databases was raised.

It was proposed that this matter be further considered at the next Panel meeting.

4. 2006 review of NRSS

Last year there was a thorough review of the 2003-2004 Action Plan by a task force comprised of representatives from all jurisdictions, the ATSB, and the Police. They produced the rigorous and substantial Action Plan for 2005-2006 which incorporated systems thinking for the first time and was informed by the Neville Committee Report where relevant. There is now a need to plan for a

review next year - in accordance with SCOT's April 2005 deliberations - and revise the terms of reference and framework to be considered by SCOT.

Panel members agreed that a task force, appointed by the Panel, should be assisted by an expert advisory group. In view of the body of good ideas already on hand, the focus should be on implementing these ideas rather than generating new ones. With this in mind, the expert advisory group should be familiar with the issues and processes of implementation.

The Panel endorsed the approach involving a task force and expert advisory group to enable the review to be completed before the second meeting of SCOT and ATC next year.

The Australian Transport Council also considered progress in implementing the National Road Safety Strategy action plan for 2005 and 2006.

Benchmarking the implementation and outcomes of the National Road Safety Strategy 2001-2010 and action plans under the strategy

The Australian Automobile Association has, from time to time, benchmarked the implementation and outcomes of the National Road Safety Strategy 2001-2010 and action plans under the strategy. The most recent evaluation released by the Australian Automobile Association, released in 2003, stated:

... recent fatality statistics are disappointing, and implementation of the NRSAP [National Road Safety Action Plan] 2001-02 objectives could have been more rigorously pursued. In recognition of this, the second plan, NRSAP 2003-04, released in December 2002, has clearly acknowledged that greater efforts need to be made by all parties.

The Australian Automobile Association concluded:

This comparison is by no means comprehensive in terms of road safety programs being undertaken in Australia. There are many programs, at the Commonwealth, State and Local Government levels that were underway, such as Blackspot Programs, and these have continued since the launching of the NRSS [National Road Safety Strategy]. Nevertheless, this comparison does demonstrate that during 2001 and 2002, the implementation of new programs aimed at reducing the road toll has been patchy and less effective than predicted.

It seems that unless substantial efforts are made to fulfil the objectives of the new NRSAP 2003-04, and in particular improve the safety of roads, then the prospect of reducing Australia's fatality rate by 40% by 2010 is going to become increasingly difficult to achieve.

A postscript: The current view of the Australian Transport Council (June 2006)

The Australian Transport Council reported that Ministers had considered progress on the National Road Safety Strategy, noting that there has been no overall reduction in the road fatality rate since 2004 and in some states an increase. Accordingly, all jurisdictions have recommitted to examine measures in the current road safety action plans to stem the increase.

While noting that technological improvements in vehicle design such as electronic stability control could not be retrofitted to the existing fleet, the Australian government agreed to examine the capability and benefits of regulating such technologies in the Australian Design Rules. In addition, Ministers requested officials to develop a national action plan to promote the take up of the technology.

Ministers also requested that reversing sensors be examined in regards to inclusion in the Australian Design Rules.

Ministers also noted that work has commenced to review the National Road Safety Strategy and to develop the next two-year action plan, which will be submitted for consideration at the next meeting of the Australian Transport Council scheduled for mid-October 2006.

Chapter Nine—

PROGRESS IN THE WESTERN AUSTRALIAN ROAD SAFETY STRATEGY

Mr IAIN CAMERON

Director, Western Australian Office of Road Safety

Mr FAULKES (Committee Manager, STAYSAFE Committee, in the chair): I thought since we had invited Iain Cameron to give a presentation this afternoon we would use him even more by asking him to comment to us about the Western Australian experience in road safety. The reporting of his presentation will also include a copy of the Western Australian progress report submitted as part of the National Road Safety Strategy 2001-2010 process and I thought it would be useful to combine that together with the presentation from the National Transport Commission, and the presentation summarising progress in the National Road Safety Strategy, to give you a little bit of a perspective to how we are trying to combine everything and get it work.

Thank you, Ian, and thank you, Paul, as Chairman of the STAYSAFE Committee, for the opportunity to share with you what is happening in the west. If I was here five years ago probably I would not have too much to share with you. What I would acknowledge up front is that in five years a lot of you around this table, either directly or indirectly, and more recently overseas David and others, have shared immensely and it is nice to reflect on that and put some of that back to you in terms of what we have taken out of what you have been doing for some time, and to highlight that it can actually make a difference, but in me doing that I am hoping in the next few minutes you might reflect on where you are currently at as well because the rate of improvement in Western Australia has been remarkable by just about any standard.

What I am going to do is loosely talk across the top and try to make it punchy. I will go through the report and try to pull out a couple of reflections that have probably not been written down but I tend to talk about this in various forums. Last year was the lowest number of deaths on Western Australian roads since records began. This was 162 deaths. The numbers are not very big compared with other jurisdictions but in a state our size that is a significant improvement. There was a 32 percent drop and these are not my figures, these are the Australian Transport Safety Bureau figures, a 32 percent drop since 1999 which exceeds any jurisdiction in Australia in that time. That is a remarkable result.

I am less positive about serious injuries. There is a decoupling there and we need to do a few things. We need to count them better and be able to identify what is actually

going on there, but in terms of the deaths that is a remarkable result. That gave us a death rate I was hoping for 7.999 deaths per 100,000 but I think it is about 8 and 8.1 which is remarkable, given that at the beginning of the nineties we were the second best in Australia and probably none of you would have been speaking to us then anyway because we probably were not doing any remarkable and it was probably a combination of good luck and all the rest of it.

In that time the rest of you got better and we got worse. At the end of the nineties we were the second worst in Australia. This is a significant turnaround, it is not just that we have been improving at a rate, and I am going to share with you a few thoughts on that.

The target that we have got is a very ambitious one. We acknowledge Monash University as the principal architect of our state road safety strategy, the five year plan. Ian Johnston and colleagues have had an enormous input into that plan. To highlight on top of that, we chose out of the scenarios that Monash gave us, one of the most ambitious scenarios, close to 50 percent reduction over five years by 2007. We have achieved 32 percent so far. I would stand before you and say that I am an optimist but I would be very optimistic to think that we would get that 50 percent. I will leave it to you and others to judge whether we have failed or not.

We do not have a parliamentary committee for road safety. We have a legislative peak advisory body governed under the Road Safety Council Act. Our Road Safety Council provides advice to the government. We looked at the Monash work and chose the most ambitious scenario and then I think we added a little bit on top. As I stand before you today I can say that there is a passion and commitment and drive that comes from that. I can give you two pages of summaries and strategies and outcomes but there is certainly in the last five years a significant political push and a significant drive from the road safety community in our state, working with the community to try to turn this around, and you cannot always write those down in terms of numbers, but the numbers are there so the outcomes are being achieved.

Make no mistake, there is a certain strong passion from an independent chairman, right through a Road Safety Council and a supportive government and ministers, backed by a supportive community: We are after you. Our target is a moving one. We set our sights on New South Wales originally. We are happy to line up on Victoria and we are having a go at Queensland as well. We want to be the best in Australia and that was the five year commitment that the Road Safety Council made.

We have a couple of ex-footballers on that council and I guess that has translated across the football field in terms of commitment, but you are ahead of us and we want to make a difference and catch up, so there is certainly that about it.

My agency is a small one, a lead agency if you like, with 16 staff. We sit in the Department of Premier and Cabinet. Our culture is 100 percent safety focussed. We

are probably only one of two organisations in our state that has that 100 percent safety mandate. The other is a local government organisation that we fund called Roadwise, and there are Roadwise officers who work with the community throughout the State. We are not part of a large agency and we have 100 percent road safety brief. It does cause us to look at things slightly differently to our very supportive but core service delivery agencies. Our main output for our office is community education campaigns.

As I say, there has been a scientific effort but there has been a commitment on top of that to achieve these results. I might add that in the context of the last five years and it is not my field and I hear our Treasurer debating with the New South Wales Treasurer and others over payments recently, but the context for us has been described in that time as a V8 economy with a rocket engine bolted onto the back of it. In Western Australia with the resources boom, what is happening is our economy has been growing at a significant rate, which is normally a contraindicator for road safety. Alcohol sales in a that time have gone up 37 percent and a 10 percent density increase in the number of alcohol outlets available throughout the sale to sell that 37 percent.

With Queensland I understand we have the highest percentage of young drivers per head of population coming through each year and we have record low levels of unemployment. They are all great outcomes for the community but all contraindicators for road safety generally. In that context to even hold our own or to reduce the rate of increase would have been probably a fairly reasonable effort.

In terms of those targets, as I said, that 50 percent reduction or thereabouts over five years by my calculations is one of the most ambitious in the world. Normally those magnitudes are over 10 years or they are in the vicinity of 20 to 30 percent over a five year period, so it is a very ambitious target. We chose, as a council, not to kick for the halfway line but to try to kick closer towards the goal. That was the parlance that they used in discussions and I guess the fear of failure was not there. We decided we would be judged at the end of the day on how much we stuck our necks out and how much we could achieve in that time.

We are moving beyond a behavioural based approach. We are trying to, as other speakers have said today, move to a more integrated safer system approach where roads and vehicles are all working together with improved behaviour.

A couple of snapshots: One of the ambitious targets in our road programs was to increase the amount of road funding, not per se, but to dedicate to safety treatments. We have gone from about an \$18 million black spot program, which is Federal, State and local funding, to a \$30 million black spot program in that time. We have a new \$80 million safer roads program, which is looking at road crashes alongside roadside lengths, particularly in the country. Forty-five percent of our fatal crashes are single vehicles running off the road, either rolling over or hitting objects on country roads.

Our metropolitan death rate refers to that 4.95 per 100,000, which I think would put us up with the best in the world. Our country rate is closer to 22 deaths per 100,000. So we have significant issues and we do not have many taxpayers to fund road infrastructure improvements on a road network the size of Western Australia. We are looking to target that, we are looking to be very selective in how we can apply that, but maybe down the track we need to look at combinations of road infrastructure on high risk and high economic routes and maybe we should be looking under a safer system at speed management as well, which dare I say may involve looking at lower speed limits.

Safer vehicles: Traditionally, this is an area we have done very little in, we have just let come what may happen. Again, with the support of people around this table like Lauchlan and others, we have started to gear up in this area. It is more recent for us. We are working hard with Treasury and the State Government fleet to see if an example can be set there, perhaps starting to look at four-star minimum, and within a few weeks - I think it is around then - we will be launching for the first time a new community based mass media campaign to remind consumers that not all vehicles are as safe as the next when you purchase them. We have not done that before in our State. We have some market research that shows us that the majority of people in the community still do not know that some vehicles have safety ratings and that there is safety beyond the minimum standards that apply. So that will be a significant new advance for us.

There are some comments there about safer speeds. If you ask me what one of the biggest contributors has been in that time, it was certainly 50 kilometre an hour speed limits and we have had about a 2.5 percent reduction in speed across the entire road network. It does not sound very much, but, exactly in line with calculations that Monash gave us, it is delivering a significant result. We saved 65 lives in the first two years of 50 kilometres an hour speed limits. We got a network effect displacement on the 60 kilometres an hour roads as well, which are your high urban distributor roads, which contributed to that reduction. Unfortunately, those results were released in a pre-election environment and did not get a fair hearing. We continue to go back to the community showing that, like one less fish out of the sea by everyone fishing, a little bit lower speed by everyone is giving us a significant return.

One area we did back-off a little bit, our target was a 5 percent reduction in speed across the urban network. We are halfway there. We want to go the rest of the way. Monash gave us the option of trying to shoot for 10 percent, but we felt that that was too ambitious and even we could not achieve that.

There are a number of behavioural-based programs. I just want to finish off with a few comments, and I think Jim from Queensland spoke about it earlier and a number of other speakers have mentioned it. I will make some broader comments in the presentation after lunch. One of the areas where we have turned our business significantly is the way we engage with the community. We really believe that, if we

can work hard with the community to develop demand for road safety, political support is easier and able to flow much better. With young drivers, I think if I had walked out into the street a couple of years ago and talked about night and passenger restrictions and 120 hours I would have been run out of town. One of the lessons we have learned is to go to the community and ask them and, not only ask them, provide them with a decent frame of reference on which to make some decisions or make some comments.

We took six months to develop a policy document on young driver safety and we were almost ready to release that for community consultation, but none of us policy officers would have even read it, it was too much of a hard slog. It was a great document, it carried all the facts, but it did not deliver a message that the average consumer was going to be able to understand. We had an ex-journalist rewrite it for us, a few late nights over about five days and some ridiculous deadlines, and that was a critical factor in that when we went to the community we had a plain English document. It was still nearly 10 pages, I think, but we had over 4,000 responses to that, over 4,300 completed surveys, and they were not government bureaucrats or agencies or road safety stakeholders or lobby groups and so on, they were country and city parents, young people, elderly people, throughout the State. What it gave us, with all the statistical analysis that you can do on these things, was a representative sample of the Western Australian city and country communities.

That has been a critical factor as we have moved forward in the political process, but one of the lessons we learned from that was: Don't underestimate the community. Give them the facts presented in a logical and transparent way and let the debate begin. The support for a package of nine recommendations bottomed out at 67 percent support. That was the starting point for support on any one of the collective packages of measures. That rose to the low 90s for all of those measures. Night and passenger restrictions were supported. 120 hours of supervised driving experience was supported in a community paper. That has been presented by the council to the Government and is currently being considered through the Government budgeting process. That was an amazing result for us as road safety stakeholders and, even at the bureaucratic level of road safety stakeholders, we have had people wanting to self-regulate, wanting to not put things out that they felt the community would throw back at them. We are not there yet, but we have what is a tremendous degree of support in what you would probably regard as a frontier town with a bit of a wild west mentality, we still like our open spaces, but that just showed us that, if we engage more effectively with the community, we can achieve or at least gain support for road safety measures which we would not have thought we could progress in any shape or form. If that package is adopted it will save 27 lives a year - not necessarily all young people, but currently we lose 54 young people.

The key points to leave you with are not about those results or what is happening in terms of particular strategies - as I say, we are adopting or borrowing or stealing or using whatever we can from whatever you are all doing - but some of the critical

factors for us are, firstly, even though I head it up, I believe a small peak lead agency with some whole of government focus is important. We do not have, as I said earlier, a particular service delivery view or a strong established culture other than 100 percent safety. We do not have a parliamentary committee, so I would not comment on that, but our legislative body, our peak advisory body which includes three independent members, an independent chairman, a representative of local government and our Royal Auto Club represents road users on that mixed with government officials. The Chairman's mandate was to get all those people to work as a team. He is out at football, he has a profile in our community, he talks all the time about agencies fighting amongst themselves. His message is: We're one team here for road safety. Let's sort it all out. And that works very well. The Minister for Community Safety works well for us as well.

I guess finally, to finish on the starting point, that ambitious target scientifically derived from Monash on the number of calculations that were done has galvanised our action. All of our discussions, our strategies, are around how we are going to meet that ambitious target. It is ambitious, but it is not a pipedream. It is based on science, but then we added a little bit on top of that and it is the difference between kicking to halfway and kicking for goal. Thank you.

Questions

Mr FAULKES (Committee Manager, STAYSAFE Committee, in the chair): Thank you very much. I think that is a fairly powerful way to end this particular session. Are there any questions before we break for lunch?

Mr Daryl MAGUIRE MP (Member, STAYSAFE Committee): I wanted to ask Jim to expand on the issue he raised about P-plates and L-plates and the political background to that. What actually brought it all about?

Mr PEARCE MP (Chairman, Travelsafe Committee): My understanding is that a particular Member of Parliament was booked, lost his licence and then had to go on to P-plates, and he did not want to go through that process, so they got rid of it. That is what happened. It was some years ago. As a result of that there has been a lot of resistance to having P-plates.

Mr MAGUIRE MP: How does the system work now in Queensland?

Mr PEARCE: It was not compulsory to display learner plates until just recently and that is now on a three-year trial, but the system is no P-plates at all.

Mr MAGUIRE MP: What are the criteria for P-plates and L-plates now that you are actually trialling? Is it similar to New South Wales and Victoria?

Mr PEARCE: We have graduated licensing, but you do not have to display P-plates. We have graduated licensing, but there is no display of plates.

Mr MAGUIRE MP: It is a probationary licence but no display of plates?

Mr PEARCE: Yes.

Mr FAULKES: I wonder if John Goldsworthy might care to make some comments from the Australian Transport Safety Bureau's point of view regarding this morning's session?

Mr John GOLDSWORTHY (Australian Transport Safety Bureau): Perhaps I should expand on your cryptic remarks at the start of the day. We were not able in time to get ministerial approval to actually present at this forum.

In his opening remarks, Mr Gibson made a number of comments about the national strategy, fatality trends, how we are tracking and so on, and summed it up fairly negatively and fairly accurately I suppose. We are now a little over halfway through the current 10-year strategy cycle period. We were doing quite well up until the end of 2004. Things have not gone so well over the last 12 to 15 months and, as a consequence, our current national fatality rate per population basis is tracking significantly higher than where we really needed to be in order to be on track to meet our 10-year goal of 5.6 deaths per 100,000 population or lower. That is the reality. The implications of that are fairly obvious and probably do not require any gratuitous commentary from me.

In terms of process, though, it might be worth mentioning that the ATSB, as the sort of lead agency under the National Road Safety Strategy framework, is currently gearing up to conduct a review this year of the strategy outcomes, implementation, progress and so on leading up to the development of a new two-year action plan by the end of this year. There has been a cross-jurisdictional taskforce appointed, which will include people like Iain Cameron and his counterparts and all the jurisdictions to oversee that process and to be collectively charged with developing the new action plan. We are also engaging a number of independent experts, not only from within Australia but from other parts of the world, to try to provide some input and a different perspective on that process. I will not name the individuals at the moment because we are still in the process of negotiating all of that, but our intention is to hold a major workshop in May some time, which will include all of those players who will sit down and go through a fairly intensive process of review and assessment and try to map out a reasonable framework for moving forward, and I guess you will all hear a lot more about that as the year progresses.

Mr FAULKES: Thank you. I think just to quickly recap, some of the points that emerged from the sessions this morning relate to target setting. One of the things I think that we should emphasise is that the national road safety target reduction that

was decided upon was 40 percent, as I recall, which is by any account a fairly ambitious kind of target. The same target was adopted in New South Wales.

There are some questions that start to emerge from all of the presentations about whether or not a 10 year strategy is necessarily the right kind of timeframe. The New South Wales Road Safety 2000 strategy that was set up in 1991 was required to be revised, as I recall, in about 1993-94. The strategy was revised, and some effort was made to relaunch annual action plans, it these had effectively collapsed by about 1997. Given that experience, one wonders whether our current strategy—the Road Safety 2010 strategy—continues to have relevance after five years. Most of the major bits and pieces in it have been put in place already and the strategy now seems to be operating in a bit of a vacuum.

Overall, there is a sense that commerce, business, technology, general society itself, is accelerating away from us in terms of the way the road transport system is evolving and I am not sure that the road safety communities are picking up on these changes. This is a strong message with which I would like to finish the morning session.

I invite those who have not been to New South Wales Parliament before to consider, if you wish, a quick tour of the Chambers during the luncheon break. Please talk to me or my staff, and we will be very pleased to accompany you.

APPENDIX--WESTERN AUSTRALIA ROAD SAFETY PROGRESS REPORT

Iain Cameron, Executive Director, Office of Road Safety
29 March 2006

1. LEVEL OF ROAD TRAUMA ON WA ROADS

The year 2005 saw the lowest number of fatalities (162) since records commenced in 1961. This maintains the consistent reductions seen since 1998(223). The fatality rate of 8.1 deaths per 100,000 head of population was also the lowest on record.

While WA has been coming from a higher base there has been a 32% drop in deaths achieved since 1999 the best rate of improvement of any Australian jurisdiction. An average of 44 lives per year have been saved since 2000.

In 2005, country fatalities (101) accounted for 62 per cent of the total. This compares with 55 per cent regional fatalities in 2004 and 58 per cent in the previous record year of 2001.

The record low result for 2005 has been followed by a high number of deaths for January 2006. The number of road deaths for the year ending 31 January 2006 was 27, almost double that recorded in January 2005 (14) and in the previous record year of 2001 (14). Fatalities in the country are, again, over twice that of that metropolitan area (18 cf 8).

While the 2005 results are very positive, it is evident that the gains made in the first few years of this decade must be maintained and built upon if WA is to meet its ambitious target of reducing the rate of deaths occurring to no more than 5.0 fatalities and 72.4 persons hospitalised per 100,000 head of population by 2007.

The lack of progress with serious injuries is concerning with a decoupling trend when compared to declining deaths as is being experienced by many countries. A comprehensive overhaul of data collection, sharing and monitoring has commenced across agencies including the Insurance Commission of WA (compulsory third party insurer) to develop a more effective injury reporting system where shifts in severity of injury can be identified.

A comprehensive Performance Indicator Project is monitoring 133 PI's. Since 2003 an annual review of road safety performance has been produced for Western Australia and is available on the web at: www.officeofroadsafety.wa.gov.au.

2. SAFER SYSTEM APPROACH TO ROAD SAFETY

WA is moving beyond a predominantly behaviourally focussed approach to improving road safety (speeding, drink driving, fatigue and seatbelts) to a more integrated, safer systems approach to improving safety. Behaviours will continue to be enhanced (through enforcement, education and legislation) but increasing focus on safer vehicles and safer roads and more forgiving roadsides together with safer speeds is being progressed.

3. SAFER ROADS AND ROADSIDES

Single vehicle run off the road crashes in rural areas account for 45% of all road fatalities in WA.

In 2004/05 a total of \$65.335 million was spent on improving the safety of roads and roadsides in Western Australia not including expenditure by local governments. In 2005 a total of \$32.6m was identified by Main Roads WA as the safety component of the Road Enhancement Program

In 2005/06 a total of \$28.75 million (an increase of \$5m) will be spent in Western Australia on treating Blackspots. This is made up of \$20 million from State Government, \$3.75 million contribution from local government and \$5 million from the Australian Government.

The new \$20m Safer Roads Program in its initial year 2005/2006 is targeting state rural highways with safety improvements such as passing lanes, intersection improvements, seal and shoulder widening, audible edge lines and wire barrier protection of roadside hazards. In urban areas it will include state projects that target improved safety for pedestrians and improved safety for major intersections that are outside the scope of Blackspot funding.

Main Roads WA are developing Safety Performance Charts and Crash Incident Charts as aids to identifying the crash risk on any given State road or for individual road user groups and collision types to assist in systematic safety analyses of the network.

4. SAFER VEHICLES

A WA Fleet Procurement Policy for Government is behind schedule but expected in 2006.

A new community education campaign promoting vehicle safety features and ANCAP star safety ratings is being developed in partnership with the RAC (WA) for release in the first half of 2006.

5. SAFER SPEEDS

It is evident that people are slowing down on WA roads, even if by only small amounts.

While figures for 2004 (the latest available) show that there was a 14 per cent reduction in the total number of fatal crashes since the 1998-2000, and a nine per cent reduction in the absolute number of speed-related fatal crashes, the proportion of fatal crashes where speeding was judged by attending Police to be a factor in 2004 increased. In 2004, speeding was judged to be a factor in 36 per cent of fatal crashes, compared with 34 per cent in the baseline period and 33 per cent in 2003.

The overall reduction in absolute numbers of speed-related fatal crashes is mirrored in speed monitoring data collected by Main Roads WA at a selection of metropolitan and rural sites.

Arriving Safely, the WA road safety strategy for 2003-2007 has a target of reducing average travel speeds in urban areas by 5%, equating to 3km/h on 60km/h roads and 5km/h on 90km/h roads. Achievement to date is in the vicinity of 2.5% reduction or halfway to the target which is encouraging although of concern was a small increase in average travel speeds in 2004 compared to 2003.

Comparison of the baseline and annual 2004 PI values shows a 15% reduction (to 25 fatalities) in crashes involving pedestrians and a 19% reduction in fatal crashes involving cyclists (to 3 fatalities).

6. SAFER ROAD USERS (BEHAVIOURS)

6.1 Drink driving crashes

The levels of alcohol related fatalities in WA are falling, with a 33 per cent reduction in 2004 compared to the baseline for 1998-2000. Crashes involving illegal BAC's have decreased from 26% of the total at the baseline to 21 percent in 2004 despite a 37% increase in alcohol sales and a 10 per cent increase in the number of alcohol outlets over the same time. It is concerning that some of the gains made to 2003 where illegal BAC's fell to 15% of the total appear to have been lost in 2004.

6.2 Repeat Drink Driving Strategy

The WA Repeat Drink Driving Strategy (RDDS) was approved by Cabinet on 15 November 2004, including the drafting of necessary amendments to the Road Traffic Act 1974. RDDS includes:

- an alcohol ignition interlock scheme;
- vehicle sanctions with provision to impound or confiscate the vehicles of repeat drink driving offenders and drivers without a valid licence;

- rehabilitation for repeat drink driving offenders with serious alcohol problems;
- initiatives to limit unlicensed driving including compulsory carriage of licence and increased detection of those driving without a valid licence;
- compulsory blood alcohol analysis for all drivers involved in a fatal or serious injury crash; and
- confiscation of vehicle keys for 24 hours from drivers charged with drink driving where they are believed to be at risk of driving their vehicle while intoxicated.

It is anticipated that a Bill will be tabled for consideration by Parliament late in 2006. Commencement of the RDDS will coincide with the introduction of the legislation changes in mid-2007.

A committee has been established to further review the issue of drink driving amongst Aboriginal and Torres Strait Islanders and progress new initiatives in consultation with Aboriginal communities.

In addition, improvements to the Repeat Drink Driving Strategy are currently being sought through Cabinet. To enhance the safety of all road users, it is proposed to establish alcohol interlocks as an alternative penalty to licence disqualification for all drink driving offenders. The aim is to ensure that interlock devices are fitted as soon as possible after a drink driving conviction in order to minimise the potential for unlicensed driving and effectively separate the acts of consuming alcohol and driving.

6.2 Drug Impaired Driving Program

The Road Traffic Amendment (Drug Impaired Driving) Bill 2005 was introduced into Parliament on 9 November 2005. The Bill deals with the prosecution and identification of drivers that are impaired by drugs and involves initial Random Breath Testing for alcohol involvement followed by behavioural assessment of drivers by Police at the roadside. This is backed by mandatory blood testing and analysis. The approach also allows for the detection and referral to medical assessment for other causes of impairment, including prescription drugs and other medical conditions (besides alcohol).

Police training in the new procedures for drug impaired driving will roll out once the Bill has been assented to. Depending on the passage of the Bill through Parliament, a proclamation date of 1 July 2006 is anticipated.

The Drug Impaired Driving Bill does not allow for random roadside testing of drivers for the presence of drugs. A proposal for random roadside drug testing using oral fluids (saliva) is to be put to Cabinet in early 2006. The trial will focus on drugs known to impair driving and which are amenable to screening via oral fluid at the roadside, ie MDMA, methamphetamine and THC (active Cannabis).

6.3 Novice Driver Safety

Following extensive community consultation yielding very high levels of support, a package of 9 recommendations by the Road Safety Council to improve novice driver safety (including night and passenger restrictions zero BAC for learners and supervising drivers and mandatory 120 hours of supervised driving experience) is currently being considered by the WA Government as part of its budgetary process for 2006/07.

Five weeks of community feedback was analysed from 4310 completed surveys, providing a reasonable level of confidence that the views expressed are representative of the broader community;

- 85% of the community was very concerned or quite concerned about the safety of novice drivers.
- 87% felt that there was probably a need to make changes to the way that novice drivers are trained and licensed.
- More than two thirds of people agreed with the concept underlying each of the nine recommendations made in the discussion paper.
- A similar proportion expected each of the recommendations to be at least quite effective in reducing the number of crashes involving novice drivers.
- 77% of people would support the introduction of the recommendations as a complete package either very strongly (37%) or quite strongly (40%).
- 87% of people expect that if introduced as a complete package that the recommendations would be at least quite effective in reducing crashes involving novice drivers.

In recognition of access and equity issues particularly in relation to the supervised driving recommendation, a separate but related project has commenced within the Education Department's Road Aware program. A Project Officer will identify community-based programs required to assist novice drivers gain the necessary supervised experience.

6.4 Child Car Restraints Fitting and Checking Program

The initial round of training has been completed, there are now 137 trained Type 1 Fitters throughout Western Australia and in excess of 780 restraints checks have been conducted. A pilot course of the Lead Trainers Course has been conducted and a second course being held in February will provide a Lead Trainer in each of the regions in Western Australia. A submission is being prepared to have the course accredited to assist with the ongoing sustainability of the project.

6.5 Enhanced Enforcement and Supporting Penalties

Enhanced enforcement activity is being provided by the WA Police. Key new initiatives include the establishment in February 2005 of the highly visible Traffic

Enforcement Group to concentrate on errant driver behaviour on freeways, highways and main arterial roads. Since February 2005 the Group has issued over 36,000 infringement notices and approximately 4,500 charges.

The Strategic Traffic Enforcement Program, which provides additional funding to support increased Police operations to improve safety throughout WA, has seen an additional 8,300 traffic patrol hours in 2004/05, with 58,000 vehicles stopped and over 16,000 infringements in 2004/05.

Two new number plate recognition cameras supported by extensive and random Police operations are identifying significant numbers of drivers without valid licenses among other offences.

The Road Safety Council has conducted a review of traffic penalties and made recommendations to Government for a safety-based rationale to increases and decreases in monetary and demerit based penalties for a wide range of traffic offences.

6.6. Seatbelts

Seatbelt non-use has declined from being a factor in 29% of fatal crashes during the baseline (1998-2000) to 24% in 2004 (up from 19% in 2003). Since the baseline there has been a greater reduction in the number of passengers killed not wearing restraints than there has been among drivers. Country young males still remain the major group of concern.


Chapter Ten—

ROAD SAFETY IN AUSTRALIA—CAN WE DO BETTER?

Professor Ian Johnston

Director, Monash University Accident Research Centre

I have been asked if I would take a bit of an overview of where road safety is at in Australia and where it might be heading. It is a great pleasure to have the opportunity to talk to the collective Parliamentary Road Safety Committees. I have worked with each of the ones represented over the last few years at one time or another.



Annual Average Road Deaths

	1989 1990	1999 2000	% change	2004 2005	% change
NSW	879	590	33%	514	13%
Victoria	662	395	40%	346	12%
Queens land	414	316	24%	320	(1%)
Sth. Aust.	224	159	29%	144	9%
West. Aust.	219	189	14%	171	10%

I want to make about four or five points about this table. Firstly, why did I pick these five places? Well, I could not fit all eight States and Territories on the one slide, so I have just taken a cross-section, but I want to make a few points. The first point I want to make is that every one of these places has been getting steadily better, in fact in some cases dramatically better, over the last 20 years. Now these are rates of

death per 100,000 population. I don't believe in decimal places, so I am going to the nearest whole number. The second thing I want you to note is that the pecking order has not changed in 20 years. What does that tell us? Does that tell us that every jurisdiction is doing about as well as the others at improving? What it really tells me is that we must not lose sight of the differences in the transport system and the road transport system across jurisdictions. Why is the Australian Capital Territory so spectacularly low? That puts them at a leading edge internationally. Well, it is very small, it is totally urban, it has a brilliant road system. It has the youngest vehicle population; it has very little high speed rural driving and all of the drivers are very nice public servants, so if they cannot have the lowest road crash rate then nobody can.

Why is the Northern Territory at the other end? Well, for the opposite of all of those reasons pretty well, because it is such a large State with a very high degree of rural driving, with enormous indigenous problems, with a relatively poor road system and, dare I say it, not a lot of attention to behaviour control in our deep north.

The third thing I want you to note is that the rate of improvement is slowing down, as it really must. We must slowly begin to asymptote over time, so it is getting harder and harder to make gains in road safety, which raises the question: Are we now at some kind of minimum? Have we done as well as we are going to do? I am going to argue that we are nowhere near it, but we do have to think very differently about the way we attack the rest of the problem.

If you go to any Western motorised country you will find improvements in rate terms, but not always in absolute numbers. In this same period, the number of people killed in Australia in 1985 was 2,950 roughly and it is now about 1,600, so not only are the rates coming down but the absolutes are coming down. What that is saying is that the road transport system, as a system, is getting safer faster than the growth in population and the growth in licensed drivers. That is not true worldwide. In the United States, for example, there has been an increase in the absolute number of people killed in the last decade, even though their performance on a rate basis has continued to improve. I think that is largely to do with the fact that they will not tackle the behavioural problems pretty much at all, so we need to think about these kinds of things.

What I want to do now is just have a bit of a think about the way we view the road safety problem, the socio-political context in which we understand this issue. In our society we say that safety has to be balanced against mobility. We say that everybody has the right individually to a vehicle to travel where they want to when they want to as often as they want to and we assume that mobility means journey time. We measure our mobility in terms of the time it takes us to get from A to B and we are forever trying to drive that a little bit further. We think about road safety in cost benefit terms. We say that we are prepared to have safety, but it must be at reasonable cost, and then we use the cost benefit ratio—and if we are New Zealanders

we actually legislate to use the cost benefit ratio—and in so doing we make the measure of mobility 'journey time'.

Iain Cameron has already reflected on the value of 50 km/h as the general urban speed limit. I recall we were doing some work Federally for the Treasury people and the economists were saying that, if we were arguing that a few seconds of reduced journey time in a short urban trip could not be added together, my three seconds of saving could not be added to Lauchlan McIntosh's five seconds, to Geoff Wilson's seven seconds, for any kind of economic worth. The economic reaction was: Well, that's rubbish. If the price of milk went down by one cent a litre we could add all those cents up and do something useful with them. So we have this little battle about mobility and whether we are measuring it correctly. I like to challenge people to think about mobility as accessibility. It is about the ability to get to where we want to go, to have access to all of the services we need to have access to, not necessarily to do it in the shortest possible time.

What follows from those two things is that as a society we make an assumption that a degree of trauma is quite acceptable to the community, and there is widespread acceptance of that, although no one is prepared to say what the degree of trauma is that we are prepared to accept. What I think we have to do is to do a bit of a stocktake on this line of thinking and say: If we don't get through this way of thinking, then we are going to struggle to get to the next stage, and I hope to show you why I think that is so.

The interesting thing is, despite all the gains we have made—and we have as, I showed you in the table, made enormous gains in the level of safety per unit of road use, per head of population—despite all that, road crashes are still the single greatest cause of premature death and disability. But we pat ourselves on the back and say, gosh, as a country, we're down now to around 8 deaths per 100,000 people. We used to be 30 deaths per 100,000 people. Isn't that fantastic? Well, is 8 deaths per 100,000 people the level that we want to live with? I don't think it is when the actual number of people killed and, worse still, seriously injured with long-term disability, remains at the level it is.

This is really a disease of the young and I like to think of it as the disease of mobility. It was interesting, reflecting on some of David Ward's talk earlier, that the World Health Organisation with its list of diseases still tends to think about the diseases related to poverty, which are malnourishment and diarrhoeal diseases and high infant mortality rates—all the diseases of poverty. As countries develop and get past their diseases of poverty, so the disease of mobility kicks in, but we tend not to think about it as a disease in that sense, we tend to think about it as an acceptable by-product of running a transport system, and I think we have to do that differently.

So we have looked at the socio-political climate. How do we, as individuals and as governments, actually think about road safety?

The slide features the MONASH University Accident Research Centre logo in the top left. The title 'How do we think about road safety?' is centered in yellow. Below it, a bulleted list in white text identifies 'bad' behaviour and victim blame, with three specific examples: drink-driving, speeding, and belt/helmet wearing. To the right, an illustration shows a human head profile with gears and a road winding through it, symbolizing thought and road safety.

MONASH University
Accident Research Centre

How do we think about road safety?

- "bad" behaviour
- blame the victim
 - drink-driving
 - speeding
 - belt/helmet wearing

We still have a predominant view that most of the road safety problems we have are down to either negligent or reprehensible behaviour. Our whole system is geared to encouraging that belief. The whole insurance system is about finding who is negligent and therefore who has to pay the most. Our police system is finding who is to blame in the crash, so that they can throw the book at them. Our media coverage is entirely about the dramatic crashes. When one understands something about energy exchange, they are going to be the really high speed ones where vehicles leave the road at some altitude and plough into a tree a couple of metres above its base. Again, this is all encouraging us to think that this is fundamentally a problem of social behaviour, and so we blame the victim.

If you look, as I have done, at the basic road traffic regulations, you will find in almost every version, although in slightly different words in different places, it says: "Thou shalt drive in such a way as to avoid an impact". If you have a crash, you have by definition disobeyed one of the fundamental road rules. So everything is geared to encouraging us to think about blaming the victim. Are there people to blame? Is there a lot of negligent and reprehensible behaviour out there? Absolutely. But it does not follow that that has to be our front line of defence in trying to change all of those individuals, and I will illustrate that a little bit later on.

Sadly, we actually have the knowledge to dramatically reduce death and serious injury from where we are now. What we do not have, is the ability at the moment or the

commitment and I like Ian Cameron's use of the term commitment in the West Australian case, the commitment to make it happen.

It seems to me one of the things that underpins our progress in the last three decades is that we have moved away from the old way of thinking about the three E's, engineering, education and enforcement, to the three C's, which if you are going to make progress, it is going to be because there is commitment and that commitment comes right from the top. It is going to be because there is co-operation amongst the agencies, because the one thing about road safety is that institutionally it is enormously complex. The educators have got a role, the courts have got a role, the road authorities have got a role, the traffic managers have got a role and the emergency services system has got a role.

It is institutionally very complex and you have got to get all of the bits working together and then it has to be genuinely co-ordinated, so that everybody is working on the same problem from their perspectives but with a framework that gets that integration.



The Social Responsibility Model

Vehicle manufacturers will do all they can to provide safe cars
which will be operated on
safe roads provided
by (mostly) governments
by
road users behaving responsibly



So the real break through in thinking is to talk about a social responsibility model in which the vehicle manufacturers will do all that they can to provide safe vehicles for people, which will be operated on safe roads provided, for the most part, by governments and that with these safe vehicles and on these safe roads there will be people behaving responsibly.

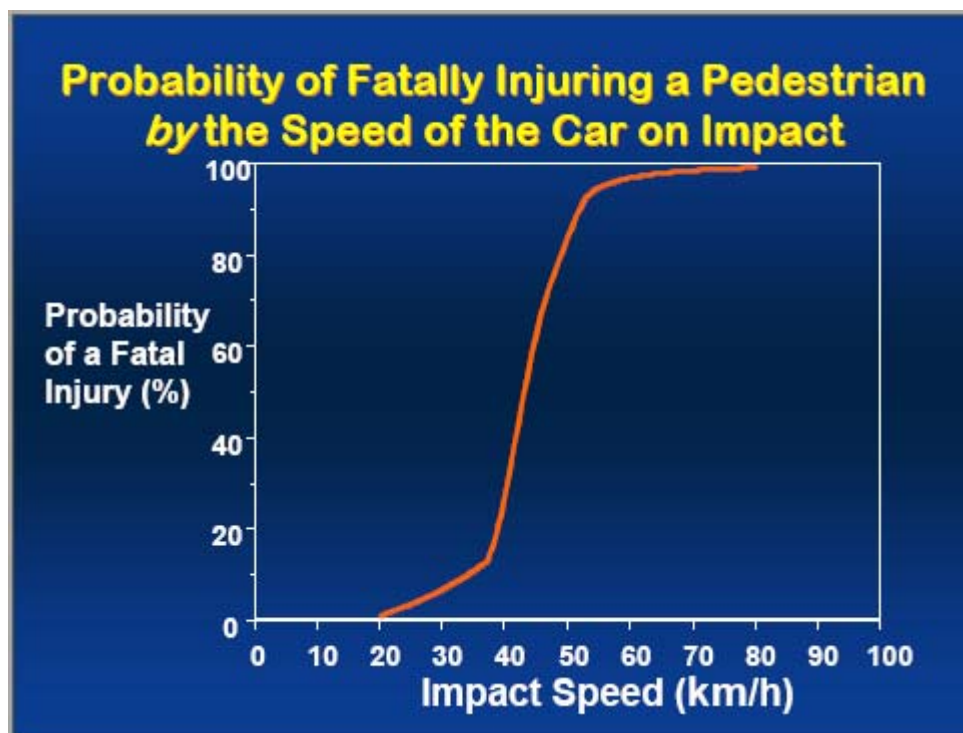
If you want the definition of a safe system, that is basically it and it is very different conceptually from the three E's. We really want a safe vehicle, we want safe infrastructure, which is divided into two parts, it has got to be safe urban infrastructure and safe rural infrastructure, and they are two different things. Then we want safe drivers. Now, to be a safe driver is 100 per cent speed compliant, 100 per cent seatbelt use and 100 per cent sober and drug free, and you will see how we are going on that in a moment.

What I want to do now is say, how close are we to having a safe system of traffic. Do we have all the bits co-ordinated? Are they all co-operating together? Are we missing any opportunities?



Let's start with the safe vehicle scorecard. It is divided into two parts, crash worthiness of the vehicle and then the way in which they are helping keep us out of crashes.

There is absolutely no doubt that since Ralph Nader wrote 'Unsafe at Any Speed' in the 1960s that in terms of crashworthiness motor vehicles have come an enormous distance. However, most people misunderstand the level of safety built into the modern motor car and that is simply because most people don't understand Newton's laws of motion and the physics of kinetic energy, because there are very significant limits to the crash worthiness that has been provided and probably can be provided.



Is the probability of fatally injuring a pedestrian governed by the speed of impact? You will notice it is an incredibly steep curve. Hit a pedestrian at less than 40 km/h impact speed, this is after the braking and so on, and they have got a pretty good chance they will live. Hit them at 50 km/h and they will almost certainly die.

Why are we talking about 50 km/h general urban speed limits? This is why we are talking about 50 km/h urban speed limits, and that is really not very well appreciated, certainly at the level of the community.

There are some encouraging developments and there are experiments with external airbags. You can put airbags in the A pillars of vehicles. You can have the bonnet pop up fractionally as soon as there is impact with the legs of a pedestrian. So that when the pedestrian hits the bonnet, it has got some give in it and when they go up they hit the airbags. There is some potential help for the future and there is a lot of work going on with the frontal design of vehicles to improve pedestrian safety.

Have we got all that co-ordinated and sorted—well, we don't call them bull bars anymore, do we, we call them nudge bars because bull bars is a very bad term. We immediately allow people to use something that destroys the very engineering integrity that we are trying to build in. I find that curious.

 **MONASH University**
Accident Research Centre

Side Impact Collisions

- **Maximum tolerable speed = 30 to 50 km/h**
- **About 10% of fatal crashes**


<http://www.sae.org>


www.civil.ubc.ca/transportation.htm

Side airbags - not a lot different from the pedestrian stuff. If you experience a T-bone, then you have got a serious problem and it is in the range of 30-50 km/h, again single vehicle impact speed and it is an increasing proportion of the fatal crashes that are of this type. In an engineering sense, it is very, very difficult to design out of the system, making a lot of progress with curtain airbags and the like, but it is interesting, we are now discovering what we call injuries to the far side occupant. If you are the driver and there is a T-bone and you have got curtain airbags, that will help you but if you have got a passenger in the left front, then they have got a serious problem we are finding, because that airbag will not trigger because the sensor over there isn't activated.

We are still learning, learning and learning an enormous amount about this stuff but we will not get to the point where we can protect people in say, a 70 km/h collision, 70 km/h impact speed, and yet on a lot of our urban arterials we allow 80 km/h through intersections when it is an 80 km/h speed zone. So we have a real issue there in getting things sorted.

Run off road crashes – if you ever wanted a demonstration of the transfer of kinetic energy, then here it is – get people to hit something that is solid and thin and you will concentrate the energy exchange to the impacting vehicle and through that to the person as well as you could ever hope to do if you were designing a system.

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Accident Research Centre

Run-off-Road Crashes

Maximum tolerable speed = 30 to 50 km/h



Again, 30-50 km/h impact speeds are about all that the modern vehicle will protect you in. So we have a great misunderstanding of the level of protection that exists.

If you are going to have a crash, this is the one I want you to have. In an engineering sense, the biggest design changes and the easiest area to protect and guard against the exchange of kinetic energy that is above the body's ability to tolerate, is the head on crash. Why—because you have got enough room to develop crumple zones that will take a fair bit of the energy. The engine goes under the passenger compartment rather than into it. The steering wheel collapses, you have got seatbelts, you have got a couple of airbags. So you have got a heck of a lot of stuff going for you, but even then much more than the 70 km/h impact speed, that is the impact speed, so it is like driving into a concrete wall at 70 km/h, you are in serious trouble.

We have come a long in crashworthiness, now let's have a look at how good are we in helping you keep out of crashes? It is interesting that it is really only in the last decade that serious attention has moved from crash worthiness to crash avoidance, and I think that is largely because the crash worthiness is starting to bump up against a barrier called Newton's laws of motion, and so attention has turned towards crash avoidance and there is some fabulous stuff coming out. For example, the electronic stability program stuff.

The interesting thing is that these developments are being driven by the manufacturers of sensor technology, not so much the vehicle manufacturers and they are the ones we should be wining and dining now, the Boschs and the Siemens of this

world rather than the car companies, because this is where the big guns of the future are going to come from.

The electronic stability control program basically helps when in a typical rural Australian crash, drop two wheels into the gravel shoulder and overreact. You get into a sideways skid, off the road, into a tree and the rest is history. What the electronic stability control system does is, it has sensors on every wheel, it has a sensor vertically through the vehicle that senses the beginning of a yaw, it knows where the steering wheel is pointing, it has got a sensor there and it says, "This ain't right". So it will lock one wheel up, which will kick the vehicle straight.

In the United States of America, where they are fitted primarily to recreational utility vehicles (RUVs) and sports utility vehicles (SUVs), there has been something like a 60 per cent drop in single vehicle run off road fatal crashes, but they are very high centre of gravity of vehicles and they are much more unstable. We would not get that benefit here, but in Europe they are reporting reductions of 40 per cent in these kinds of crashes when the stuff is installed in conventional vehicles.

In Sweden I am told that the penetration now is close to 80 per cent of new car sales have this system. In Australia it is less than 10 per cent and I find that particularly interesting as well. I will come back and talk a little bit about that in a moment.

MONASH University
Accident Research Centre

BUT

- ever increasing hp/top speed
- ever decreasing sense of speed
- instrumentation promoting speed
- marketing for speed

AND

- increasing mass disparity
- fundamental mis-match between design elements

The slide includes a speedometer image in the top right corner and a photograph of a dark SUV and a silver SUV in the bottom right corner.

In that same context that the manufacturers and the sensory technologists are helping build safer cars and cars that try to keep us out of trouble, we have got this on the other side of the equation. I have plotted the horsepower and top speed capability of

vehicles on the Australian market over the last fifteen years and they get bigger numbers every year.

The Chairman of the STAYSAFE Committee, Mr Paul Gibson MP, asked me why do we permit vehicles with these top speed capabilities. It is interesting, because they get bigger and bigger every year.

With the amount of cocooning in a vehicle and the noise vacuum if you like, there is an ever decreasing sense of speed. The instrumentation we are given—if we were in an occupational health and safety factory, then we would never be permitted to have an instrument that was not fit for purpose.

Now, I cannot think of an instrument that is less fit for purpose than a speedometer. We provide at least half of it for illegal behaviour and then we wonder why people use it, and of course, we market speed, power and performance.

People say yes, but there is an advertising code of practice. Well, there is and it is voluntary and it is absolutely useless, absolutely totally useless. I should stop getting passionate about these things because I am old enough to be quite cynical.

I was sitting there the other night and there is a new television advertisement that has come out by Ford and it is promoting the electronic stability control. I thought at first, you beauty, because people don't know about this. Now what is it? It is a young boy sitting on his lounge room floor with a slot car track in front of him and he is driving it, and he manages to get a high powered racing car to flip off the track at a curve and then he gets a sports model and flips it off the track at a curve. Then along comes the Ford with the electronic stability control and it hugs the track and he is terribly disappointed.

What is the message – get this electronic stability control not because it might save your life, but now you can drive it like the clappers and nothing will go wrong. Then they say, no, we don't promote speed, power and performance. I do get a bit cynical about that.

So whose problem is this – is it a manufacturer's problem, is it the regulator's problem or is it the consumer's problem? Let's think about that. The manufacturers—and I am off the Christmas card list of most of them by now—I think actually do a really good job and the people that I work closely with are really dedicated to improving the level of safety, but they are not the ones who sell the cars and the ones who sell the cars within the car companies are very worried about price and it is about price sensitivity.



Whose Problem?

- manufacturers?
- regulators?
- consumers?



It is fascinating. If you look at the Holden Commodore range you will find the base model just has driver and passenger airbags, no side airbags. If you move up one model you get the two front airbags, you get two side airbags and you get electronic stability control. If you move up another model and the electronic stability control has gone out in favour of a six-stacker CD. If you go up another model, it is back in, along with the walnut trim.

The whole thing is perception that the manufacturers have about what the market is, and they might be right. It is very easy to be critical of the manufacturers, but they have to compete against low price imports, and it is a very important industry, so while it is very easy to criticise them it is also quite easy to understand why they are where they are.

When I talk about coordination and cooperation I am talking about getting all these folk together and working out a way through this morass because, if we don't, we don't make the next level of changes.

Is it the regulator's problem? Well, I must say that the rate at which technology is changing, it is going in one direction and it is leaps and bounds stuff, the new technologies, particularly sensor technologies, and the regulatory process is going just as fast in the opposite direction because the industry is so international, so global now that everybody wants to do nothing other than harmonise, which gives you the lowest common denominator for every one of these regulations. So if you think that

regulating these features is the answer, think again. It is not going to happen that way. It is going to be so far behind the technology changes.

A lot of the answer is going to be with the consumer. The consumer has to demand safety. Does the consumer currently demand safety? Well, obviously not, because the manufacturers would be providing it if the consumer was really keen. Why isn't the consumer demanding it? They don't know it is there. There is a high level of ignorance about the safety features that are available and we are not doing very much about changing that. To me, if we could get the Government fleet purchases to start, and Victoria's road safety strategy *Arrive Alive* says that the Government will lead the way and it hasn't thus far, but if the Government were to mandate, for example, intelligent head restraints, which is a great protection against rear-end impacts, to mandate ESC, we would come a long way, and if we could get some corporate buy-in so that the big companies were leading as well, the market would change very quickly. We have to make that kind of breakthrough. I would love to see big public education campaigns that really inform the market about what the safety availabilities are and I think you would find that that would change things very quickly.



How are we going on five-star roads then? Let's have a look at the urban situation. Iain talked about the frequency of deaths in single vehicle run-off-road rural crashes in Western Australia. In Victoria, one in two deaths on rural roads are exactly that, but it is also about one in four in urban areas. This is not just a rural problem. Have a look at the frequency of deaths in urban areas where people run into poles—particularly poles—on the roadside. We are not doing an awful lot about that. I am

not picking on Victoria about that, it is just that I happen to know Victoria better than anywhere else.

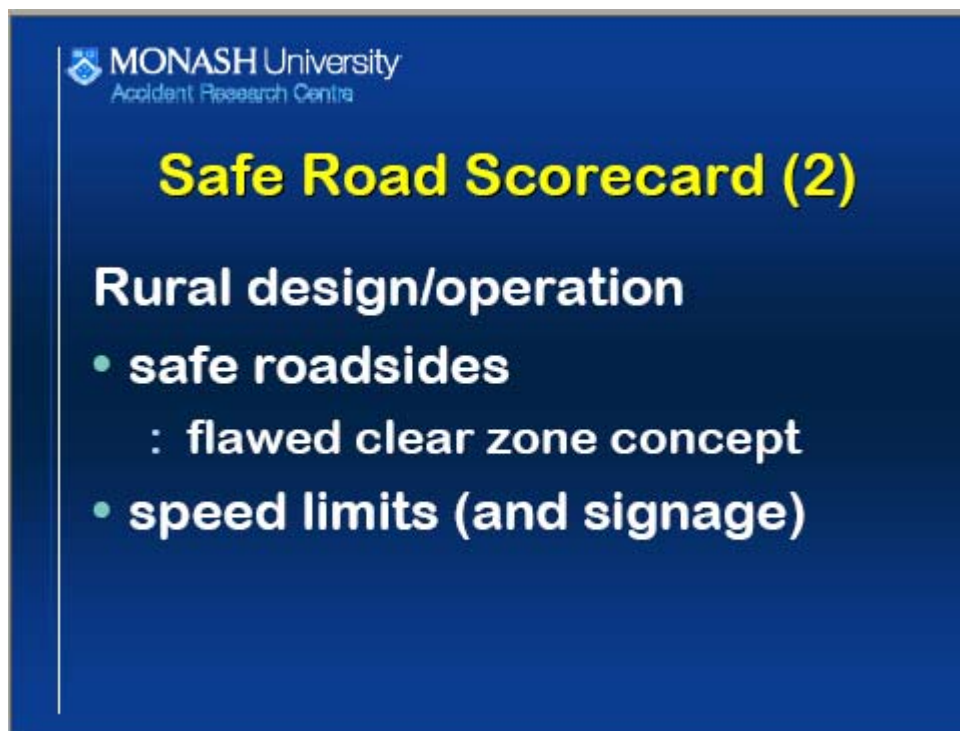
Mr Barry BISHOP (Member, Road Safety Committee, Parliament of Victoria)—
We recommend those poles in the country.

Indeed so, and with electricity privatised there is an Essential Services Act that provides some obligations on people who plant poles by the roadside, utility providers, and it says that their safety obligations are two: They must not start fires, which is interesting because there have been a number of bushfires that have happened when foliage has got tangled up with electricity wires. Secondly, thou shalt not electrocute anyone, which seems a perfectly reasonable safety standard for a utility authority. There is nothing about not planting poles where they are at greater probability of being hit. Not only that, but the Act enables the utility authority to recover the cost of replacing a pole that has been hit. So there is absolutely no financial incentive for them to do anything about the problem.

As we get better and better at road safety what we are doing is drawing in and in on the really difficult problems to solve, and intersection collisions are one of those. They are not increasing in absolute numbers, but as we get rid of other things they are increasing in proportion and we need to take a very serious look at how we do intersections. David Ward pointed out the merits of roundabouts over cross-intersections and indeed there is ample evidence to talk about that. If a mythical person from Mars looked down upon our transport system they would be appalled that we have got a system that is littered with conflict points. If you were starting again with a blank sheet of paper you would never design a road system that had all these intersections all over the place because it follows as night follows day that you must have collisions at these points. Can we go and chuck the system away and start from scratch? Of course not, but we can do a heck of a lot by studying what is happening because we know that red light running is increasing, particularly on turning phases, and we believe that is related to frustration that has to do with congestion, as the traffic builds up people are not going to wait 90 seconds for the next change of lights, and traffic engineers design to maximise capacity. As soon as you put in an all-red phase you should not be surprised that people learn that there is an all-red phase and that they can safely run the red in the first second or two, it is just that they cannot judge the first second or two very well. It used to be that the yellow light meant slow down and stop if you could. Now it means plant down your foot and get through before it goes red, which half the time you do not get around to doing, so we really have to have another serious think about the way we control our intersections.

We now have 50 km/h general urban speed limits pretty much through the country and that has been beneficial everywhere that I am aware of. It worked in Western Australia, it worked in New South Wales, it worked in Victoria and it worked in Queensland. That ought to be enough scientific evidence for anybody, but we still run 60 km/h, 70 km/h, and 80 km/h speed limits on urban roads. I would be arguing that

in terms of fit for purpose we do not have any urban roads that will sustain 80 km/h safely, so it is about matching the speed limit to the level of infrastructure. In Victoria you can get 70 km/h on a road if it is divided, but there are houses along the sides. You can get 80 km/h if it is divided and there are surface roads, so there is a set of standards about where you have the different areas.




The image is a blue presentation slide with white and yellow text. At the top left is the MONASH University logo and 'Accident Research Centre'. The main title is 'Safe Road Scorecard (2)' in yellow. Below it is the section 'Rural design/operation' in white. There are two bullet points in white: 'safe roadsides' followed by ': flawed clear zone concept', and 'speed limits (and signage)'.

Let us turn from urban to rural and think about how well we provide safe roadsides. We have an ubiquitous 100 km/h speed limit no matter what the level of infrastructure. Just have a look at these examples: Top left corner, broken pavement edge, gravel shoulder, trees right up to the edge. It is 100 km/h. The one in the middle is four lanes divided with a New Jersey barrier, tactile edge lining, some guarding of the trees: 100 km/h. It does not matter what rural road we construct or what is the level of safety, we bung on 100 km/h. In fact what we have started to do now, which I find quite appalling, is that in Victoria there is a new sign appearing, a new warning sign, which says, "Trees close to road for next 10 kilometres". Wow. So we leave it at 100 km/h, we leave the broken pavement edge, we leave the gravel shoulder, but we tell people to watch out because these trees are pretty close to this road. I find that quite bizarre behaviour.






We are starting to do a lot more in terms of roadside safety and the flexible barrier. You can see again another classic example of how to manage the exchange of kinetic energy. That vehicle would clean up. It is obviously a set up demonstration, but there are at least four timber poles there, simulating a forest, and you could not possibly miss any of them, but that vehicle will be directed back with a fair amount of body damage but no injury, in fact the airbags will not even go off in that crash. We are finally starting to look at some of these issues.

Whose problem is all of this? My favourite statistic is the number of kilometres of public road per taxpayer and we are blessed with a very large country with a small population, so every one of our taxpayers has to support a lot more public road than our counterparts in, say, the United Kingdom or the United States of America. We do not have the money, we know we do not have the money, but what we can do is focus on the very high volume roads. That is my problem with the Clear Zone concept. The safest roads we have kill more people than any other roads we have. That is, if you look at the crash rate per million vehicle kilometres you will find the Hume Freeway is very low, but more people die running off the Hume than anywhere else. So if we are interested in the absolute number of people killed and seriously injured - and I am - then you will spend your money on the high volume roads where you will get the return. It sounds perverse, but you spend your money on your safest roads to decrease the number of absolute deaths and serious injuries.



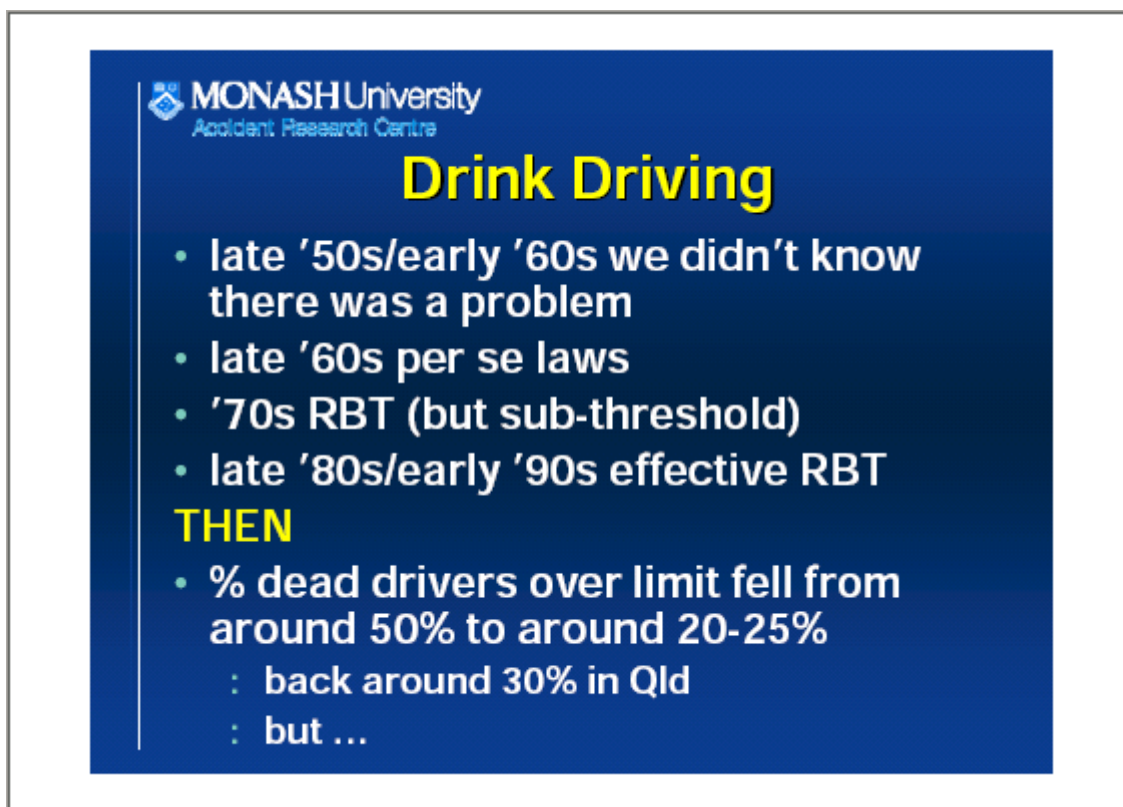
Whose Problem?

- infrastructure funding 
- engineering mind-set 
- mobility is “king” 

With low volume rural roads, where we know you do not have the money, we have to alter the speed limit to suit the level of infrastructure safety. I have been working with VicRoads investigating some crashes and talking to regional groups and let me tell you: The rural ones hate the notion of reducing the speed limits from 100 km/h to 90 km/h on their roads out to the farm or whatever. We have not won hearts and minds.

The engineering mindset I find absolutely fascinating. I spend a fair bit of my time talking to roads and traffic engineers trying to get them to see the error of their ways and understand that safety is a right and it is difficult to get the message across because there is a set of standards and the way liability runs everybody is very keen to lock into those standards, so there is very little room for innovation and for experimentation, yet when you think about it, if the Swedes had really got hooked into engineering standards, they would never have put wire rope barriers down the centre of roads. They put the wire rope barriers down the centre and eliminated head-on collisions. It was of enormous benefit, but no engineering standard in the world would have permitted that. We have to challenge the way we think in engineering terms about what we are designing, and the mobility stuff I have already talked about I think sufficiently.

What I want to turn to now is how we are going getting our five-star people? Have we got that sorted? Well, let's take the big problems.



MONASH University
Accident Research Centre

Drink Driving

- late '50s/early '60s we didn't know there was a problem
- late '60s per se laws
- '70s RBT (but sub-threshold)
- late '80s/early '90s effective RBT

THEN

- % dead drivers over limit fell from around 50% to around 20-25%
 - : back around 30% in Qld
 - : but ...

Drink driving: Back in the 1950s and 1960s we did not even know there was a problem because we never routinely measured the presence of alcohol in road crashes. Then it began to be measured routinely at autopsy and we discovered that one in every two dead drivers—that is, 50 percent of dead drivers—were over the limit. That led to laws and, because they had some effect and made it easier to prosecute people but they did not actually prevent the problem, eventually random breath testing came in. Initially it appeared not to be working. Then we realised that because it works on general deterrence, the public has to believe that there is a serious chance of being apprehended, so the intensity—in Victoria again—went from a couple of hundred thousand tests a year to 1.2 million tests per year. That got it past the threshold and there was a massive effect. The percentage of dead drivers over the legal limit—I keep saying dead drivers because they are the only ones they were routinely measured at autopsy—went from 50 per cent to 25 per cent in three years. That is a massive gain. It is currently sitting around 25 to 30 per cent, depending on which State you look at.

How many people out there are driving over the limit?

- just over 1% in Queensland
→ **99% are NOT**
- yet 30% of dead drivers in Queensland in 2004 were over the limit (and $\frac{3}{4}$ of them were over 0.15!)



Who is in the 1%?

- people with alcohol problems
- (young) binge drinkers

How do we change them?

- more RBT?
- more public education?

DRUNK DRIVERS *are not survivors!*



Does that mean the drink driving problem is getting out of control again? I don't think so. I think what it means is that we are getting better at fixing other things and just for the side impacts at intersections, they are becoming an increased proportion, not that they are actually increasing in absolute numbers. We have taken it from one in two to one in five, four, three, depending exactly when you want to look – huge gain – but what do we want to do with what is left? Well, how many people are out there driving over the limit? When you look at the random breath data—and I am not saying it is the most statistically reliable—but fundamentally the random breath stations are set up on high volume roads at high alcohol times—so Friday nights, Saturday nights, Sunday mornings. They are finding less than one per cent of the people they test are over the limit. Let us assume that is our current best estimate. That means 99 per cent of the driving is not above legal blood alcohol levels.

So when we talk about the long-term effects of the enforcement and the associated public education, have we changed the social mores around drink driving—yes, I think we have. How are we going to get the last one per cent? Everyone keeps saying, well we have got to do more random breath testing, we have got to get really serious about it with more public education. I don't think that is going to get us there. I mean, who are the one per cent? I think there are two categories – there are people with an alcohol problem and there are young binge drinkers. There is a sub-element in our culture who are out there doing binge drinking and still driving.



The image shows a presentation slide with a dark blue background. In the top left corner, the MONASH University logo is displayed, consisting of a blue diamond shape with a white 'M' inside, followed by the text 'MONASH University' and 'Accident Research Centre' below it. The main title of the slide is 'Or do we need to think differently?' written in large, bold, yellow font. Below the title, there is a bulleted list in white and yellow text: a white dot followed by 'technology' in white, a white dash followed by 'for convicted people' in white, and a white dash followed by 'for everybody' in yellow. In the bottom right corner, there is a cartoon illustration of a grey road curving downwards. Several cars are driving on the road, each with a computer monitor on its dashboard. The driver of the lead car is visible, looking at the monitor. The background of the slide is a solid dark blue.

We are not going to get to them with more random breath testing, we are not going to get to them with more public education. I think we need to think differently. We have got the social change, we now need a technology change for that last one per cent.

It has started already in most States of Australia. There are ignition interlock systems for recidivist drink drivers. Queensland is looking at it at the minute, Victoria has got it and Western Australia is well on the way, so that is a start. We are saying people at really high levels or people who are recidivists, they have got to do their term of licence suspension. A condition of coming back into the system is admission interlock. I think ultimately we have to say we want a universal text. Will it be today's technology – absolutely not, the public will not wear it, but there is a lot of work going on internationally with simple, cheap, unobtrusive measures of alcohol in the system and I am confident that within a relatively small number of years there will be a technology available that can be incorporated in every vehicle. But it has to be encouraged and I don't hear governments talking about it. I don't hear governments say I would love to see one of the committees explore the next generation of drink driving counter measures for one thing.



The image shows a presentation slide with a dark blue background. In the top left corner, there is the MONASH University logo and the text 'MONASH University Accident Research Centre'. The main title of the slide is 'Not just technology but protect the "innocent"' in yellow and white text. Below the title, there is a bulleted list of three items: 'disqualification', 'rehabilitation', and 'vehicle impounding'. In the bottom right corner of the slide, there is a small inset photograph of a woman with dark hair, wearing a red top, sitting in the driver's seat of a car and smiling.

It has got to be more than technology, because as long as we say everybody in this society can have a driving licence—and what percentage don't get a driving licence eventually—it is trivial, it is absolutely minuscule. So we should not be surprised that

there are sociopaths and all kinds of not very nice people who are out there and doing irresponsible things. It should not surprise us at all.

We have used licence disqualification but the evidence that is coming through more and more is that it is being ignored—not totally—but it is being ignored. I think that tragic case in Mildura just recently where a dozen teenagers were taken out as pedestrians, that fellow had eight convictions for driving whilst disqualified.

We have to keep moving with rehabilitation because it works for some but it is not going to be the cure. I think we do have to say if there is a sub-group of people who simply refuse to play by the rules, then they cannot have cars. It is no good saying they cannot have licences, because they do not care. I think ultimately we are going to have to start taking the cars off them. That discussion is just beginning and in fact it is reasonably advanced in some places.

Seatbelt wearing – exactly the same story in my book. We have very high wearing rates. For example, for drivers, 97 per cent wearing their seatbelts and yet the proportion of drivers and vehicle occupants generally who die who are not wearing their belts is at least a quarter to a third. So have we got the social change – absolutely – I mean can you think of another area of behaviour where you are trying to convince people, you are trying to regulate and you get 97 or 99 per compliance? You would be over the moon. It is as good as you are going to do and yet we know that last small percentage are very, very highly over-represented.

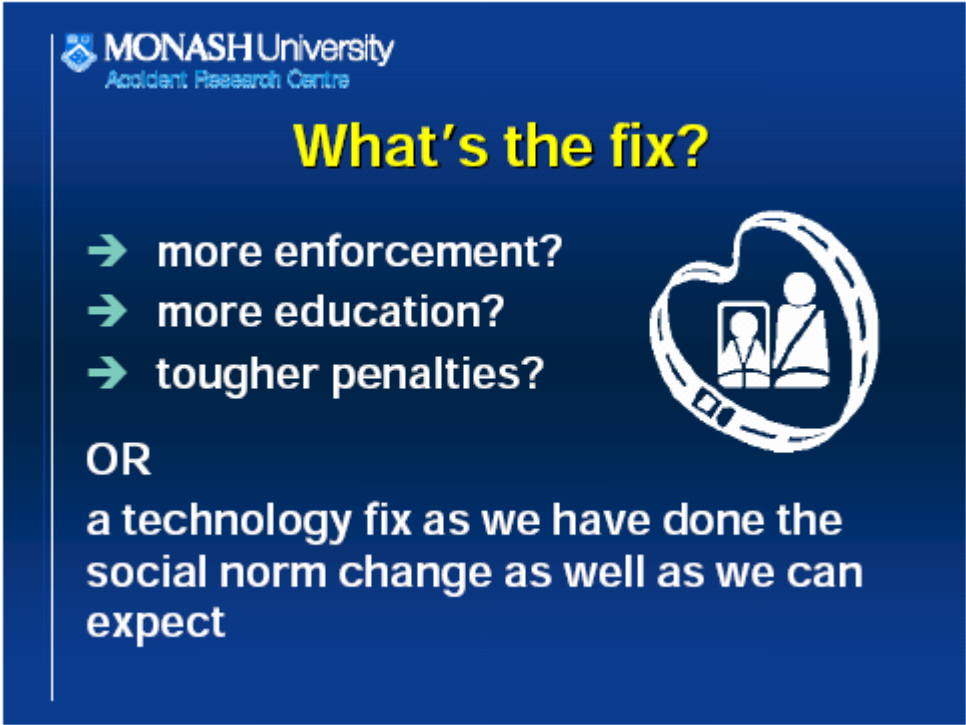
 

Seat Belt Wearing

Same thing – very high wearing rates, especially for front seat occupants

YET in last 5 years in Queensland the proportion of dead vehicle occupants who were not wearing belts ranged between 25 and 35%

I have heard people argue to me, well that is great, because eventually they will kill themselves off and that will save us a lot of money, but unfortunately they do not want to do that, and they also tend to take up a lot of the long term disability, it is grossly over-represented by these people as well.



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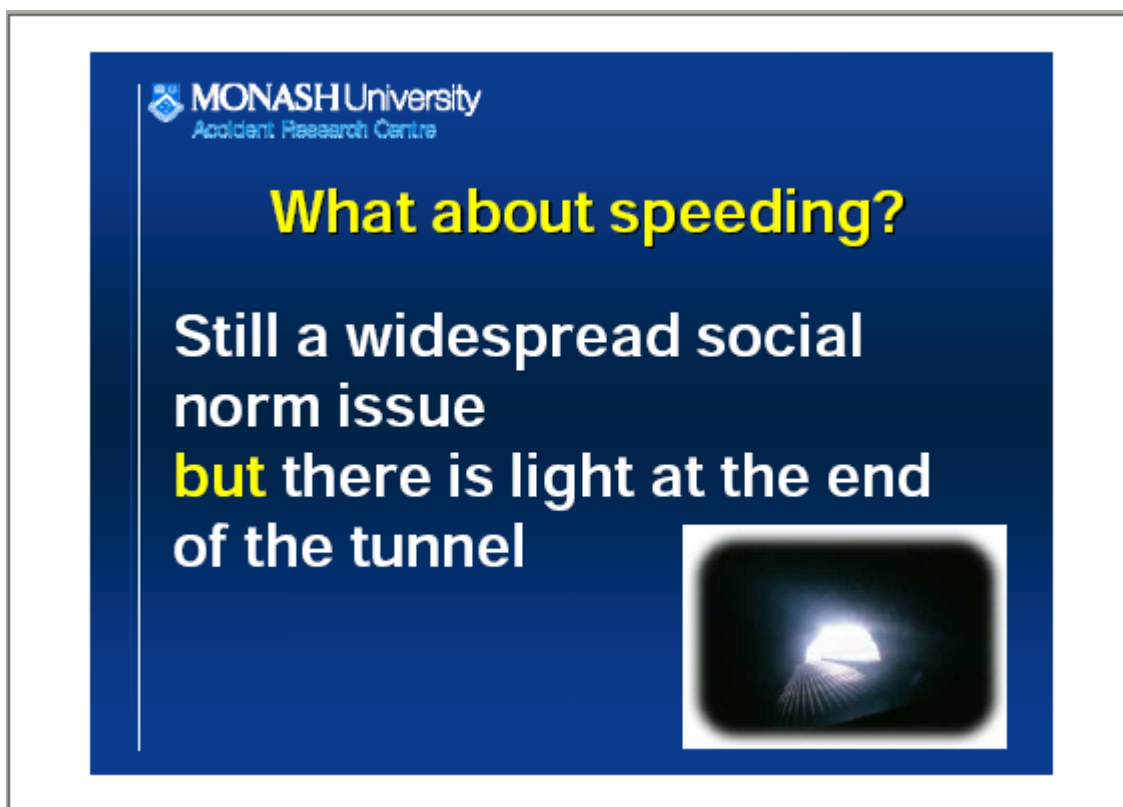
What's the fix?

- more enforcement?
- more education?
- tougher penalties?

OR
a technology fix as we have done the social norm change as well as we can expect

What are we going to do about them – is it law enforcement or education or driver penalties – I don't think so. There has got to be a technology fix, because we have got the social change.

What is the technology fix? Well, at least there has been some movement in the recent past. Only a couple of years ago the only seatbelt reminder system was a little red stickman that came up for five seconds when you turned the admission on and then went away – whether or not you put your belt on. A number of us made a song and dance about that and the manufacturers – certainly Holden and Ford and I presume the others as well – have now got quite aggressive seatbelt reminders. As soon as you are going forward or at least 6 or 7 kph it goes off and screams at you. So that is a good start, but I think ultimately an interlock – and the sensor technology is there. We have simply got to bite the bullet and put it in place.




The slide features the MONASH University Accident Research Centre logo in the top left corner. The main title is 'What about speeding?' in yellow. Below it, the text reads 'Still a widespread social norm issue' in white, followed by 'but there is light at the end of the tunnel' where 'but' is yellow and the rest is white. A small image of a tunnel with light at the end is positioned to the right of the text.

Speeding – we have not got the social moray change yet but I would like to think we are on our way. Speed management is not a panacea, it is not the cure-all to everything but it is an absolute fundamental that I think not very many jurisdictions, but some, have really tackled. I am often accused of being totally anti-speed and in fact hankering for the day when the man with the red flag walks in front of us again. Let me correct the record—that is nonsense. I do not have a problem with a 130 km/h speed limit on the right road. You give me a freeway that is fully divided, where the roadsides both at the medium and the extremes are guarded by wire rope barriers, where there are no at grade intersections—so you cannot have a head on, you cannot have an intersection collision, you cannot cross the median—I don't have a problem with 130 km/h speed limit.

When you start looking and people throw autobahns in your face and all of that stuff, let's have a look at what they are designed for. They are fundamentally those kinds of roads. For people to say we can have autobahns and therefore we can have 130 km/h here is an absolute nonsense, if you look at some of those rural roads I was showing you before.

It is not about lowering our speeds per se, it is about matching them with the level of safety that is built into the infrastructure and with the level of safety that the vehicles will give you when you are in that situation. It is all about managing the energy exchange.

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- **Speed management is not a panacea but it is a fundamental**
- **It is not about lowering speeds per se, but about matching speed to the levels of protection provided by the vehicles and the roads (i.e. reducing energy exchange)**

What are our tools for speed management?

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What are our tools? (1)

Roads

- ⇒ **local area traffic management**
- ⇒ **intersection design**
- ⇒ **roadside management**
- ⇒ **speed limits**



I am not going to go through these in detail. In the urban areas, local area traffic management is intersection design, particularly things like roundabouts and I don't see why we cannot think innovatively about – we have now introduced ramp metering

for the entering of vehicles onto freeways to control that flow. Why not think about a ramp meter roundabout, which conceptually would work very well. We don't yet know what they cost but it seems to me that they ought to be experimenting with some of these energy forms of stuff and see what happens to both capacity and safety.

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What are our tools? (2)

Vehicles

- ⇒ reduced speed performance
- ⇒ “intelligent speed adaptation” systems
- ⇒ more appropriate instrumentation
- ⇒ different marketing



In the vehicle sense, we have got to front up to this issue about the ever increasing top speed capability and horse power. If you need the power to pull your boat or your caravan, that is fine. There is a big difference between torque and top speed capability. You can have a car with plenty of grunt that will tow anything but will not basically go any faster than 110 km/h. That is not difficult at all but huge vested interests against that.

Intelligent speed adaptation—lots of goods systems, we have been experimenting with some of them in the TAC Safe Car—which if you exceed the speed limit for more than three seconds it gives you an audible warning and pushes the accelerator up against your foot. Now, I think it is bizarre that we are getting into these design systems to control people's speed urges and we are not changing the fundamental design of the cars. We have kind of got that entirely wrong.

The speedometer—well, it is not fit for purpose and we do finally have to bite the bullet on the marketing.

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What are our tools? (3)

Enforcement

- ⇒ “automated”
 - fixed camera
 - mobile cameras
 - overt
 - covert
- ⇒ intensity
- ⇒ tolerances



Enforcement—hugely controversial, absolutely hugely controversial. Victoria took it on and New South Wales didn't. I am not pointing the finger at either of them in that sense but I think New South Wales is coming along a little bit behind. It saw the degree of public controversy and backed off. I notice Iain Cameron has got a clipping from West Australia that says “We are fast approaching the nanny state” and the journalist talks about the letters to the editor are totally supporting his view. Let me tell you, the surveys that are done are indicating 80 per cent public support for intense speed enforcement. That 80 per cent do not write into the paper, they do not ring up the shock jocks on radio and I think the Victorian government, to its credit, understood that and was prepared to stand up. Incidentally, I think a great chunk of the reduction that happened in Victoria in 2003 was down to the controversy. If I had my way, I would be encouraging the controversy – in fact I suppose I spend half my life doing just that.

I think with drink driving and seatbelt wearing we have got the social change, now we have got to bite the bullet of the hard nuts of what is left in there, the small residual. Here we have still got to keep working on the social norm. The community support I think is there. It needs to be tested more often I think but we need to take on the vested interests and I think it can be done in a way that does not mean the death knell of the automobile industry to the Australian economy. Obviously none of us want that, but I think there are ways in which it can be done.

The one thing I think the Parliamentary Road Safety Committee does not do at all well yet is work out who its natural allies are. Let me tell you, the environmentalists are your best friends in this area because the amount of pollution that is generated is

heavily correlated with speed. Urban amenity, noise, all of these things are heavily correlated with speed, and fuel, that diminishing resource, is clearly related to speed. It is also related to stop/starts. The number of times you see people in urban areas planting their foot just to get to the next red light a little faster than anyone else. It is that stop/start that is destroying the fuel stuff. There are a lot of things that could work in our favour. You have a lot of natural allies.

That, above my head, I believe is an Aladdin's lamp. If I found the lamp and rubbed it and was granted three wishes, here they are.

The first one is that folks like you folks in the agencies will change the way they think about road safety and accept that some of the major behavioural problems are no longer related to social norms, that we have got to tackle them differently and the fix is going to be in technology and the opportunity is there to have it.

At the same time I do not think we are doing anywhere near enough about protecting the community against that small residual rump that just refuses to behave, the one percent who are still drink driving, the three percent that are not wearing their belts, and we really need to focus on those. I have a little quote there, which is interesting.



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First Wish

Get politicians/agency officials to accept that two of our major problems are no longer related to social norms

→ press for technology fixes

- : long-term**
- : immediate**

The slide features a photograph of a man in a suit and tie, with a thought bubble above his head containing an illustration of an Aladdin's lamp. The background of the slide is dark blue with white and yellow text.




Second Wish

Protect the Community


- dealing with the 1-5%
- unlicensed driving
- vehicle impounding

"... problematic development pathway, which may lead to a range of later difficulties, including problematic driving"

In the Driver's Seat: Understanding young adults driving behaviour



The Institute of Family Affairs has been conducting a long-term cohort study called the Australian Temperament Study and they recruited something like a couple of thousand children at the age of six months - they did not recruit the children but the families at that stage - and they started taking measurements of temperament and indicators of social behaviour. They kept doing that, and that cohort is now around 20 years of age. What they have done, which I believe the RACV paid for, the RACV said, in your next contact with these people, could you please ask them to self-report some of these kinds of behaviours: Do you drive after drinking? How often do you break the speed limit? Have you had any crashes? Have you had any convictions? If so, how many? It is all self-report with all the issues that go along with that, but the interesting thing was that they took the self-reported data and divided people into a low risk group - the group that said "No, I never drive after drinking, I rarely exceed the speed limit and then only by tiny margins and I always wear my seatbelt, I have not had any convictions or crashes" - and a medium risk group and a high risk group, who said, "Yes, I do that stuff all the time". Then they went back and looked at the indicators of temperament and they discovered that the high risk group was categorised by people who, between the ages of 8 and 12, were having significant behavioural problems at school and in the home. That did not surprise us, that that group of people were in fact the kind of anti-social folk in the community. Do we know them well enough to say: Can you do this test for me? No, sorry, you can't have a licence. No, we do not have it at a predictive level, but once we discover them we really have to try to get them out of the system by means other than just licence disqualification.

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Third Wish

Capture the Vehicle Safety gains that are ready for the taking

How?

- government purchasing
- corporate purchasing
- public education



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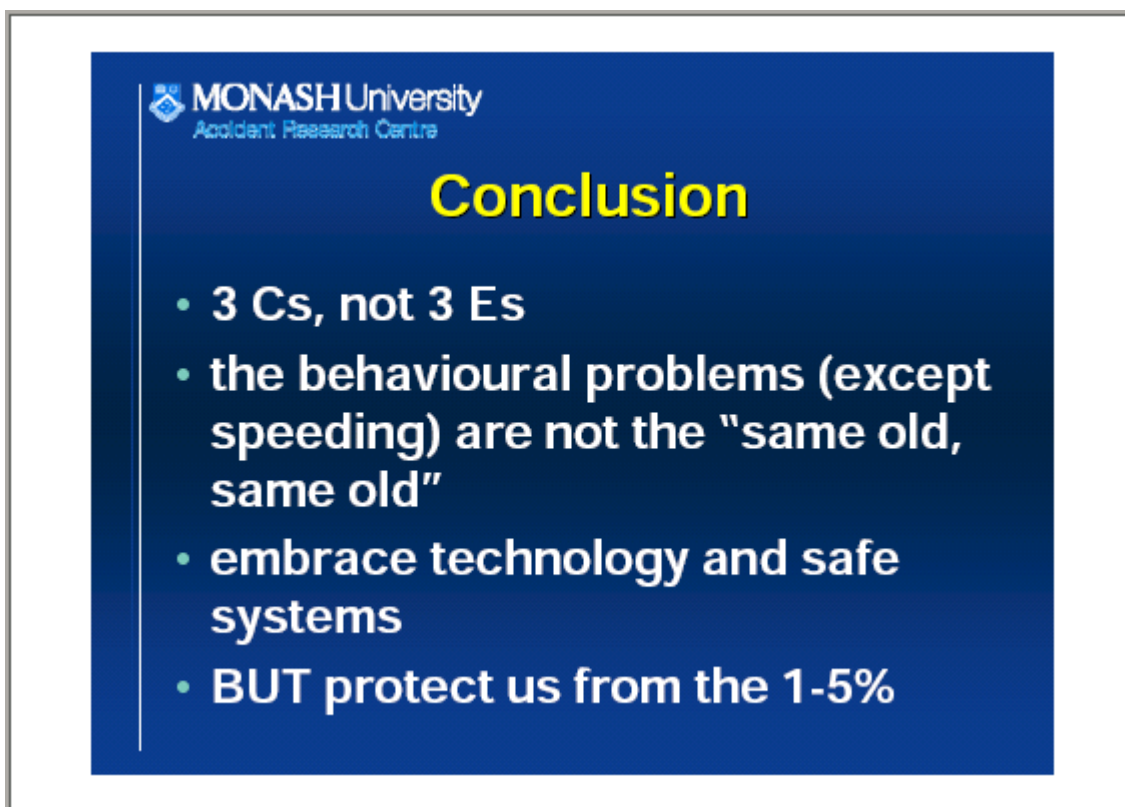
Fourth Wish

Road and Traffic Engineers
Understanding how to design an **error tolerant** road system



The third of my wishes is that we capture the vehicle safety gains. They are there for the taking. It really is astonishing that we have a raft of things, a raft of technologies, that are available and the take-up rate is minuscule. It is not being driven by the manufacturers, who perceive the market to be different. We have to lead the market. The governments in Australia are huge purchasers of cars. The opportunity to lead the market is really there.

The fourth of my wishes is that roads and traffic engineers start to think really quite differently about the way they design the road and traffic system. If you think about rural roads, if you talk to an engineer about a rural highway, he will tell you about super-elevation, horizontal curvature and vertical curvature - he will even tell you that he has put skid resistant pavement surfaces in - and you go out there and discover that there are giant trees within a metre of the road edge. Then he says, "No, my road is so good, nobody runs off it". There is a fair bit of work still to be done with the mindsets of the system designers. They build really good roads, there are very clever traffic engineers out there and we should not expect them naturally to know all this, but we have to work really hard to educate them.



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Conclusion

- **3 Cs, not 3 Es**
- **the behavioural problems (except speeding) are not the "same old, same old"**
- **embrace technology and safe systems**
- **BUT protect us from the 1-5%**

One of the questions just before lunch was: Should we have a 10-year road safety strategy or is that too hard? I would argue that we must have a 10-year strategy and I will tell you why, because when you look at a five-year strategy and you have an ambitious target, the only way you are going to achieve it is with legislation, regulation and a huge amount of enforcement. Think about that for a minute. If you are going

to change the way vehicles are designed and manufactured, that is not going to happen within five years, and even if you got government leadership now and they said, 'Righto, from 1 January 2007 we are only going to buy vehicles with curtain airbags, intelligent head restraints, electronic stability control, ...' That is only a couple of hundred thousand vehicles in the first year; 400,000 in the second year - I mean it is going to take years to kick in. Think about the roadside investments, which we have to have a lot more of, rolling out barrier programs alongside high volume highways, redesigning intersections - it does not happen quickly. So if you say to a government: You must have an ambitious target and it must be a five-year timeframe you are indebting yourself to behavioural programs. To me you would need a 10-year program in order to get investment in road infrastructure and in vehicle safety.

Hopefully, this has given you a few things to think about. Thank you very much.

Questions

Mr FAULKS (Committee Manager, STAYSAFE Committee, in the chair): Thank you very much, Professor Johnston.

In 1997, as part of the road safety reform process in Western Australia, Merv Lane and I presented a paper at a strategic planning workshop in Perth titled 'Actions speak louder than words'. We provided a commentary on the types of issues that were to be faced by police and road safety practitioners in effecting the 1998-2001 road safety implementation plan for Western Australia, drawing upon the New South Wales experience in developing and implementing the Road Safety 2000 strategic plan for road trauma reduction. We emphasised the need for commitment, for co-operation and co-ordination, for effective communication, for evaluation, and for courage in implementation, as absolutely necessary for the successful implementation of the plan.

Mr WARD (FIA Foundation for the Automobile and Safety): If I could make a quick comment on your third wish about encouraging technology through procurement, it strikes me that there is an opportunity to look at incentives in different forms, economic incentives, because a lot of this vehicle technology - we have mentioned Sweden, but if you go to the UK it is probably only about 25 percent of new cars, and it is all in the luxury cars. The manufacturers are using it as a high value element and they are very reluctant for obvious reasons to put it into small family cars. It seems to me that there is a really clear issue there where Governments do have an option because they can make a difference for the consumer on a purchase decision if they can offer some kind of incentive, whether it is related to insurance or whatever, but there is quite a big opportunity there. On the environmental side, that is happening a lot now, there is a consensus around stimulating environmental technology, but safety just does not seem to be on the agenda. I do not understand that. The gains are there and they are gains that ultimately will pay back. We have talked about

electronic steering control. I do not disagree, but I think you have to be careful about the business of not so much regulation but defining performance standards. There is actually a problem in defining what electronic stability control is and you do not want a technology description because technology is changing so fast, you need a performance test. The US is about to come up with a double lane change manoeuvre as a performance test. It would be a good thing to try to harmonise around that as far as one can. There is concern that if we are not careful we are going to start having second-rate ESC systems on the market. At the moment the electronic stability control system has a sensor which real-time measures what is going on, but apparently there is a risk of a second version, which is a dumb version of ESC. It is much cheaper and what it does is make assumptions, it is not a real-time system. It is probably about 50 percent cheaper, but much less effective. So we do need some way of controlling that sort of thing, otherwise the consumer can be quite seriously misrepresented.

Professor JOHNSTON: It seems to me, though, that that does not have to happen through regulation. I think the NCAP program can come up with a performance standard that is written from the consumer end that says: This is what the system shall deliver.

UNIDENTIFIED SPEAKER: It is a tough call.

Professor JOHNSTON: Yes, it is a tough call.

UNIDENTIFIED SPEAKER: The marketplace approach would be better than regulation, but we still have to spend the money to do it.

Chapter Twelve—

ROAD TRAFFIC INJURY RESEARCH AT THE GEORGE INSTITUTE FOR INTERNATIONAL HEALTH

Professor Mark Stevenson
Executive Director, George Institute for International Health

Mr FAULKES (Manager, STAYSAFE Committee, in the Chair): I would like to begin the showcase that we have organised of what we think in New South Wales are superb research organisations and institutions involved in road safety and road trauma reduction that have recently been established in Sydney. The first is Professor Mark Stevenson from the George Institute for International Health.

What I would like to do is to, firstly, give a very brief overview of what the George Institute for International Health is. A number of you from outside of New South Wales have probably never even heard of the George Institute for International Health, and there is good reason for that. The second point I would like to cover is really just some of the road traffic injury research that we are currently doing here nationally, but also, because the George Institute is focused in the south-east Asian area, some of the work that we have been doing in the Asia-Pacific region, and to present that under the framework that we tend to operate within the institute but predominantly also within the road traffic injury area.

The George Institute for International Health was established in 1999 with about five staff and it has grown exponentially over the last six years. It currently has about 150 staff. It is a not-for-profit medical/health research institute. Obviously you are all familiar with that in Australia, but overseas this concept of a not-for-profit medical research institute is an unusual one, particularly in the United States of America. We are affiliated with the University of Sydney, and most of the staff have faculty appointments in the Faculty of Medicine. The key mission of the institute is to reduce the global burden of non-communicable diseases and injuries through research, through policy development and capacity building. The key elements are that we are focused on the research aspect, but really on key research questions that move into policy and have direct implications in terms of practice as well, and also focused on capacity-building, and that key point there is particularly in the case of the work that we are doing in the Asian region.

Background: The George Institute

- > **Est 1999** as a not-for-profit medical/health research Institute
- > **Affiliated with**  The University of Sydney
- > **Mission**
To reduce the global burden of non-communicable diseases and injuries through research, policy development and capacity building



Background: The George Institute

- > **George Institute - China**
- > **George Institute - India**
- > **Cardiovascular**
- > **Renal Disease**
- > **Neurological Disease**
- > **Injury Prevention and Trauma Care**
- > **Mental Health**
- > **Epidemiology & Biostatistics**



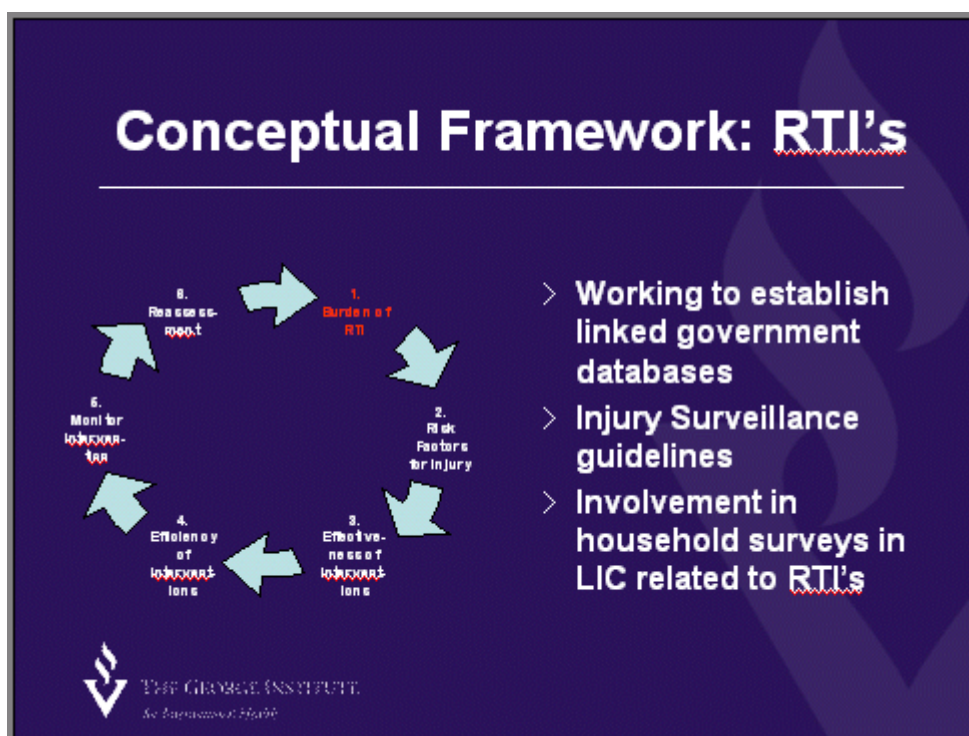
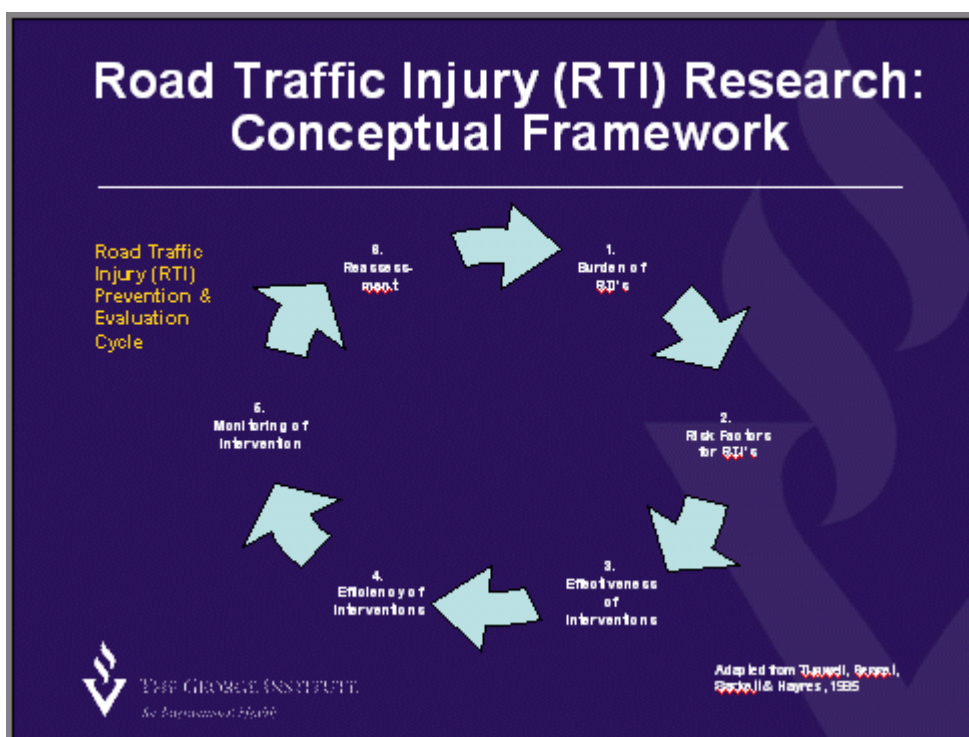
We have two offices established in Asia. We have the George Institute China and the George Institute India. Our China office currently has around 10 staff and is growing similarly to our Sydney office and we are expecting around 50 staff by the end of next year. We work across a broad range of medical and public health areas. This list

highlights what those areas are. I currently head the injury prevention and trauma care division, which focuses on four areas. It focuses on road traffic injury; indigenous injury; musculoskeletal injury and trauma care. Really the indigenous injury and trauma care areas are linked strongly with the road traffic injury area. Our focus in trauma care is on pre-hospital care, particularly around road trauma, and most of our work is happening in that area in India and in China, and our indigenous injury area also has leading indigenous researchers focusing on road traffic injury among indigenous people. We have a very strong focus on road traffic injury prevention.

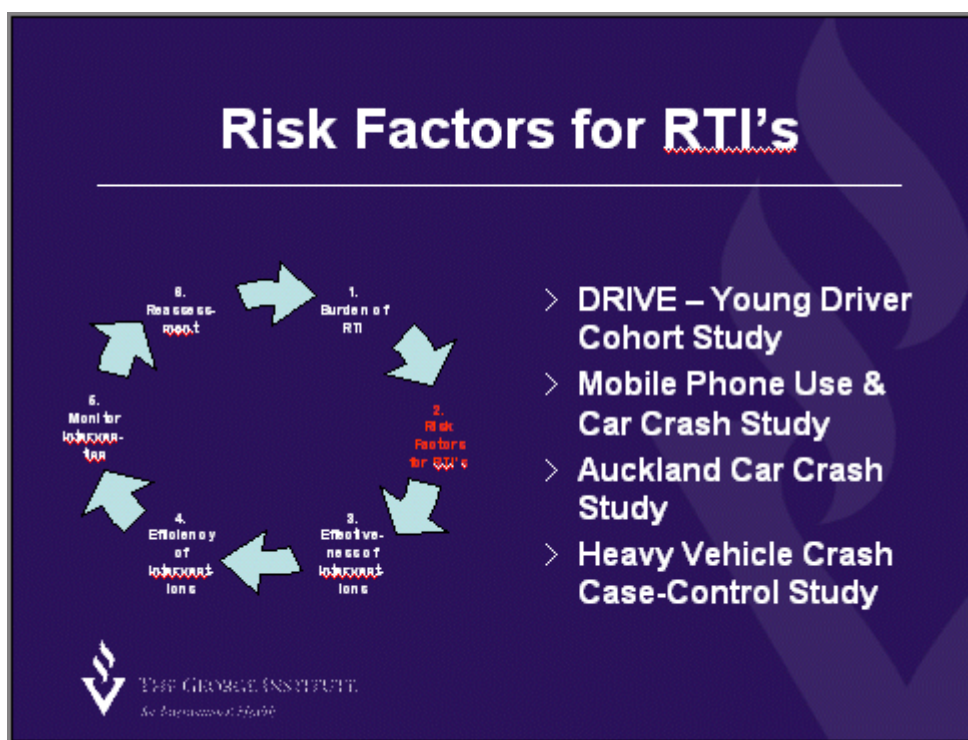


What I would just like to present is how we go about doing our work within the Institute, particularly around the road traffic injury area and it fits within this conceptual framework that many of you have probably seen before and it is an intuitive process and it really gives us some focus on the type of research that we choose to do. We really take on large-scale population base studies. We are not focused on small pieces of work, they are very large scale and they have direct policy implications, which I have already alluded to.

Our first focus then is we are really particularly interested in documenting that burden of road traffic injury, both here in this State, Australia as well as the region. When I refer to road traffic injury I am really not talking about injuries and casualties and death, but really what we wanted to understand is what is the personal societal cost associated with road traffic injury, the sort of disability costs, and we are really just beginning to focus on that.



As I talk about that, I also want to highlight that we are focusing on that in terms of the Asian region as well, given that there is very poor quality data in many of these countries that we are working in.



The second area we work in is risk factors for road traffic injury and I really am not going to go into a lot of detail on that. I want to reiterate what Ian has just said, that we are moving away from just single risk factor identification in our large scale studies. We are sort of appreciating that road traffic injuries occur within a very complex system and it is particularly important for us to understand that system at our operations. So a lot of our risk factor work is focused within this understanding of the complex system and how we move around that.

We then focus our research on areas of the effectiveness of the interventions and clearly there are some areas that need considerable work, particularly in Asia, but as Ian has already highlighted too, there is a lot we already know but it is important for us to understand how effective are they, how effective are they when they are implemented on a population basis versus just a laboratory environment. Our illustration of that is around some of the mobile phone work that we have currently been doing.

Effectiveness of RTI Interventions

1. Burden of RTI

2. Risk Factors for RTI's

3. Effectiveness of Interventions

4. Efficiency of Interventions

5. Monitor Interventions

6. Reassessment

- > Cochrane Systematic Reviews
 - > Effectiveness of helmets
 - > Effectiveness of helmet use legislation
 - > Effectiveness of motorcycle rider training

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Efficiency of RTI Interventions

1. Burden of RTI

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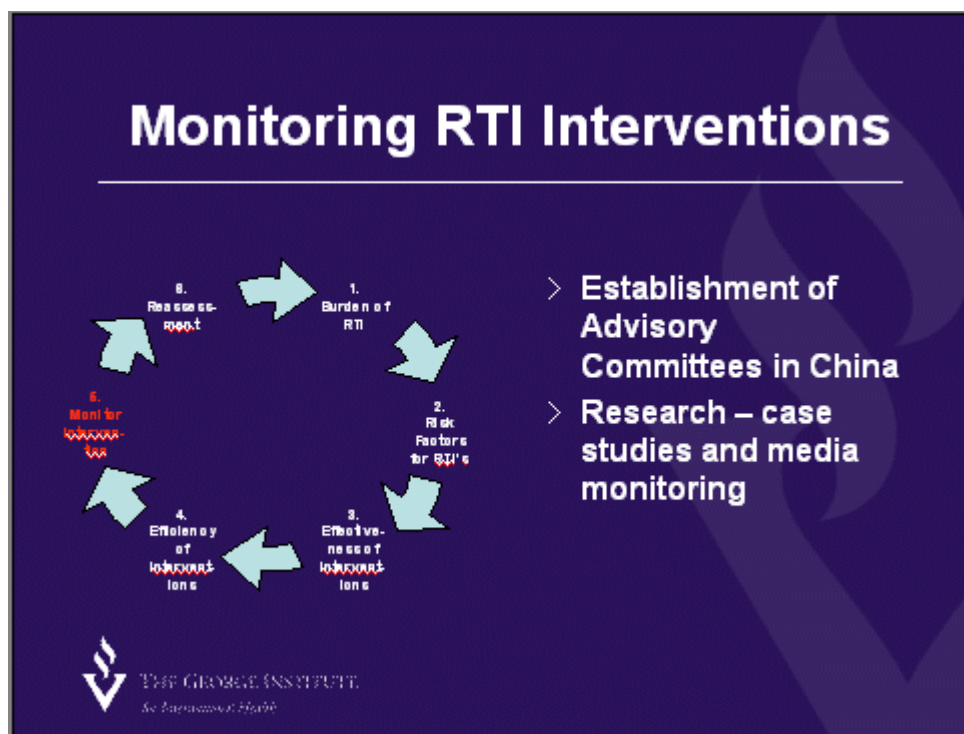
6. Reassessment

- > China Seatbelt Intervention
- > Vietnam Motorcycle Survey and Intervention
- > Abu Dhabi Seatbelt Intervention

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The next point in this conceptual framework is the efficiency of the interventions and that is really a point, coming from members of Parliament and CEOs of road safety organisations is particularly important. It is about resource implications. Is this intervention most effective in terms of cost efficiencies in terms of outcomes and reducing permanent injury? Again, that is a focus of some of our works in terms of

the efficiencies of interventions. It is particularly the focus of our work in low and middle income countries throughout Asia.



We then go on to looking at monitoring those interventions. It is important to measure the short term and long term outcomes - what can happen in the short term in terms of take up of an intervention. It does not necessarily mean it will have effects in the long term, and again, it is nice just listening to some of Ian Johnston's points that he has raised.

There are areas of a sub-group within a population where we are actually not seeing changes and what modifications to a potential intervention are needed in order to see those sorts of changes occur. It is an intuitive process and we continually go through that cycle.

Using that framework, I just want to highlight a number of the areas that we have been working on in the Institute in road traffic injuries. The first of them is the burden of road traffic injury. Previously I worked in Western Australia, which Ian may have already highlighted some of the benefits that that State has in terms of some of its data sources. One of its strengths is the linked government database and it is an enormous strength in terms of identifying the burden of road traffic injury. It is an enormous strength in terms of costing, the efficiency and effectiveness of potential interventions as well. It is something that here in this State, the New South Wales Injury Risk Management Research Centre as we have been talking about at the moment, has been focusing on with support through government and they have initiated a steering committee that I sat on , and I am glad to say that we are moving

forward. We have currently got linked data but that linkage is in its infancy here in this State and we have got a long way to go before we can see ambulance data linked to hospital morbidity data and mortality data. There is the potential for insurance data to be linked and a number of States like WA is already leading the way in that regard.

Outside of Australia I have been working on injury surveillance guidelines for the World Health Organisation and again predominantly around road traffic injury. It is a huge public health burden, as you are all well aware, particularly in our neighbouring countries and it is something where we have been assisting in terms of guiding country governments in terms of how do you set this as an agenda item? How do you measure the burden of road traffic injury in particular?

One of the particular areas that I have been working on in Vietnam is around the issue of household surveys in low income countries around road traffic injury, particularly motor cycle morbidity and mortality.

Then we move to the risk factor research. I know my colleagues from New South Wales will be very tired to hear me talk much more about the Drive Study, which is a young driver cohort study, but it is our showcase piece of research here in the State in relation to road traffic injuries. We have recruited around 22,000 young New South Wales provisionally licensed drivers, of which we have got comprehensive data on about 21,000 of them. We will be linking that data this year to hospitalisations and ultimately to coroners' data, just to look at some of the key areas that we do not have a good understanding of in relation to graduated licensing. Some of those areas are around the importance of pre-licence driver training, supervised and non-supervised driver training, whether twenty hours is of value verses 120 hours in the pre-licensing phase of graduated driver licensing.

There are a lot of questions that this huge cohort is going to be actually able to provide answers to, which will directly have implications to in terms of policy and practice in Australia.

I guess the important point here is this State has been powered so that we actually look at very serious crashes, those that are hospitalised, and deaths. So, it has enormous potential.

Another study that I have already briefly mentioned is the mobile phone study we have just finished in the Institute, completing a study looking at hands free mobile phone use and the effect that has on crashes resulting in hospitalisation or presentation to hospital. That was one of the leading pieces of research. It highlighted that hands free mobile phones are equally as bad as the hand held. In fact, hand held increased the risk of crashing four-fold, compared with 4.9-fold for the hand held phones. Again, it has direct implications in terms of policy and practice in terms of the kind of research that we are doing.

If I could just mention a study that we are trying to get off the ground at the moment, the heavy vehicle crash case control study. Again, it is around systems, it is around focusing on not only the human factors component of heavy vehicle crashes in terms of sleep, fatigue, the sleep apnoea aspect, but it is also focussed on the vehicle characteristics and the road environment as well. Again, working with industry, working with the National Transport Commission, working with the Roads and Traffic Authority, VicRoads and a number of others, we are trying to launch a very large study between Queensland Transport and possibly the Roads and Traffic Authority here and Victoria to look at the study. It will be a world first. It is a group examining not only the heavy vehicle crashes but also a sample of controls. So we are particularly excited about that.

We move then onto the effectiveness of interventions. I guess a lot of our work has been focussed on what many of you may know about, the Cochrane systematic reviews. It is a fantastic library that I would urge any policy maker to avail themselves of, because it provides you with the synthesis of the current research that is out there and as research groups, we contribute to them. We actually undertake systematic reviews of the current literature and provide a synthesis of what the findings are.

At the George Institute for International Health we have been working on the effectiveness of motorcycle helmets. Again, it links very strongly with our work in Asia. As many of you would know, motorcycle injury is one of the most significant road traffic injury related conditions that we are working with. We are particularly interested in the effectiveness of helmets. We are particularly interested in the effectiveness of helmet use legislation, as well as the rider training aspects. Those will be published. They are generally available to everyone who wishes to log on. There is a parallel to the Cochrane systematic reviews, it is very medically focussed but there is also social science systematic review library as well.

Moving then on to the efficiency of interventions. I agree totally with what Ian Johnston was saying around the usefulness of seatbelts and what we have achieved here in Australia, but when we work particularly in Asia, where you are getting restraint abuse rates of somewhere around 15 to 30 per cent. We need to implement an intervention that has known effectiveness, is efficacious. We do not need to re-invent the wheel but we do need to actually show best practice in terms of how you et behaviour changes occurring in these countries.

What our work has been doing in China is particularly focussed on well-known efficacious interventions and getting uptake of those. We are working on a very large scale China seatbelt intervention, which I will talk about tomorrow, which is being funded by BP China. It is an exciting initiative, I do not have the results of it yet, but I anticipate that it will be successful.

Again, we are replicating that in the Middle East as well Abu Dhabi, and we are also looking at our motorcycle surveys in Vietnam, as well as interventions around the use of an uptake in motorcycle helmets in Vietnam.

Really just moving on to monitoring these interventions, what is key to what we do is establishing advisory committees, ensuring that we have the consumers talking with government and talking with the researchers right from day one when we are undertaking this research. There is a lot of work we are doing in China that has that mix. We have an advisory committee for a number of projects where the government officials - and particularly we have some very senior government officials within the police and ministries of public security sitting with us, the researchers, in terms of trying to move the agenda. It is certainly in its embryonic stages but I think what we are trying to do is take some of the areas that we have gained here in Australia and replicate them elsewhere with our neighbouring countries, with some degree of success.

Evidence to Policy

P-plate driver crash toll grows

By TONY VERMEER

ANOTHER P-plate driver died in the early hours of yesterday ahead of planned moves by the NSW Government to introduce a curfew on young drivers.

A 26-year-old man was killed when he lost control of his car and crashed into a tree at Port Macquarie at 1.28am.

Police said the car caught fire. Bystanders tried to save the man, but were unsuccessful.

Witnesses said the man was seen speeding in a 60km/h zone just before the crash.

The Carr government has foreshadowed a 10pm-to-6am curfew on P-plate drivers, as well as curbs on the number of passengers they can carry and the power of vehicles they can drive.

The move follows The Sunday Telegraph's campaign to save the lives of young people on the road by adopting measures that have been successful overseas.

Statistics show that despite improvements in road safety, young drivers are still over-represented in motor accidents.

They are particularly vulnerable overnight on Fridays and Saturdays. Of 107 fatalities involving drivers aged 17 to 20 last year, 35 occurred between midnight and dawn.

In 2002, 28 young deaths occurred in crashes in these hours, with 41 in 2001, according to the Australian Transport Safety Bureau.

The RTA is preparing a discussion paper on the proposals.

Night-time fatality: The P-plate's car after the crash


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An International Health

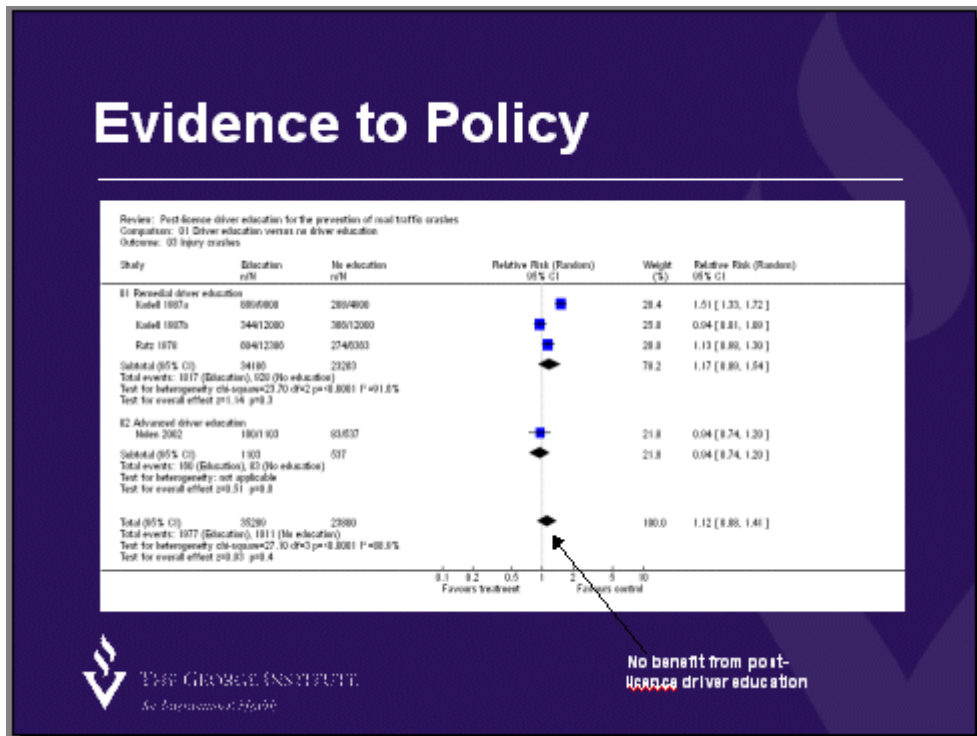
Back home here in New South Wales what we have been focussed on is a lot around the young driver issue and this is an area we have been working on for a number of years now. What we have been wanting to do is, look at the research, take case value and actually look at how it gets picked up in the media and try to understand how we can move the agenda in terms of ensuring that governments pick up the evidence. I think that is again what Ian Faulks, Iain Cameron and Ian Johnston have basically said—it is important that we have an evidence base to what we are trying to guide in terms of policy and practice.

It is our responsibility as researchers to ensure that you know what the evidence is. Part of that, I believe is for us to make sure that the public also know what that evidence is. We certainly work very hard at the Institute to ensure that we disseminate those findings very widely and monitor them.



Moving then to the issue of graduated driver licensing. One of my passions in the road traffic injury area is really where we know that there is a great deal of evidence that was taken from Victoria, knowing in terms of where we might be able to achieve some gains in terms of changes in legislation and changes in licensing practice. Certainly, we are at those early stages of graduated driver licensing and working with the policy makers to move forward with that. What I am trying to highlight here, this is a study that has been published in the Cochrane library that synthesises a lot of work around post-licensing driver education and training. What it highlights here is that there is not a great deal of benefit from implementing that sort of program in relation to young driver fatalities and serious injuries.


We are basically trying to move that sort of information through to policy makers to ensure that we do not continually re-invent the wheel and go back to initiatives that really have not proven to be particularly efficacious. I can assure you that a lot of the work that we are doing at the George Institute for International Health will keep these sorts of pieces of information on the agenda either through forums like this, through the media, but continually undertaking population based research that has direct practice implication.



I just finish with this quote and again, it goes back to what Ian Johnston has been saying, with regard to excellence, it is not enough to know. We clearly do know a great deal in relation to road safety and what gains we can achieve in the next ten years but we must try to have and use it, and that is they key. I really feel that is where we are falling down. We are not using it. We are not taking it on board.

Conclusion

“ With regard to excellence, it is not enough to know, but we must try to have and use it ” (Aristotle, 384 BC)



THE GEORGE INSTITUTE
for International Health

Chapter Twelve—

GLOBAL ROAD SAFETY AND THE ARRB GROUP

Ms Lori Mooren
ARRB Group

Mr FAULKES (Manager, STAYSAFE Committee, in the chair): Our next speaker will be Lori Mooren who is the international business development manager for ARRB Group. The ARRB Group, of course, is the current incarnation of the Australian Road Research Board, which probably has the pre-eminent place in the history of Australian road safety, being involved in particular, given that we were talking about seatbelt interventions, in the Snowy Mountains construction process and advising the construction authority with regard to the kinds of injuries that were occurring to Snowy Mountains workers during the 1950s and 1960s. That was probably I think the first large scale requirement that was brought in by the Snowy Mountains construction authority for its workers to actually use seatbelts that were fitted in the authority's vehicles during the construction phase. I have always liked that story because I am a big fan of using work-related interventions to achieve road safety objectives. Ian Johnston spoke about the problems that are occurring in the road transport area of regulatory reform. Well, one of the mechanisms that you can use in essence almost going sideways is to look at occupational health and safety laws to deliver similar sorts of benefits. Iain Cameron may well refer to that because Western Australia has been particularly prominent, as has Queensland, in those areas.

Thank you, Ian. Some of you would remember me in my role as a policy maker. I am sorry I missed what I understand to have been excellent presentations earlier today. I did catch I think most of Ian Johnston's presentation. I was recalling, when Ian was going through his three or four wishes, that in 1998 I went on an overseas study tour. I was with the Roads and Traffic Authority, and pre-developing the New South Wales Strategy to 2010. I went to good practice countries like the United Kingdom, Sweden and the Netherlands. When I came back, the directors of the Roads and Traffic Authority said: "Okay, Lori, what is it? What is the next step?" And I said: "It is technology. Absolutely technology. We have to remove the discretion from the humans." However, I believe there is still a case for a bit of social marketing as well. I think we have to bring the people along with the technology, otherwise they find ways of stuffing it up.

I was originally brought into the ARRB Group to build up the fleet safety function because a lot of the work I have been doing as a private consultant has been in the fleet safety area working with companies to improve occupational driving safety and their management systems. I more recently worked with the Global Road Safety Partnership, which I will be talking about in a minute - you have probably talked about it earlier - so I have also taken on the role of international road safety coordination.



The slide features a dark blue background with a white and yellow gradient bar at the top left containing the text "ARRB Group". To the right, a white box contains the tagline "advancing safety and efficiency in transport through knowledge". A bulleted list of five points is centered on the slide. At the bottom, there are three small images: a group of people, a road scene, and a tunnel. The ARRB logo and website URL are at the bottom left, and the tagline and page number "2" are at the bottom right.

ARRB Group

advancing safety and efficiency in transport
through knowledge

- Established in 1960 as the Australian Road Research Board
- Owned by the Federal and State Road Authorities of Australia
- Research Institute background
- Providing Transport Solutions through Technology, Research & Development and Practical application
- Over 150 staff

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In his introduction, Ian Faulks pretty much described what the ARRB Group is. It was established in the 1960s as the Australian Road Research Board. It is jointly owned by the Federal and State road authorities of Australia and it operates as a company, but any profit that we make from our work goes back into the research institute, so it has a research institute background, it provides solutions through technology, research and development and practical application. We have over 150 staff. This is where we are: Our head office is in Melbourne where the big part of our research institute is based. We have an office in Sydney, which is where I reside. We have an office in Queensland in Brisbane, in Perth and Adelaide as well as in Djakarta. We have a small office in Beijing as well.

I left the Roads and Traffic Authority in early 2000 and I had been involved in road safety consulting myself divided between occupational driving safety or fleet safety and international road safety. One of the first things I did, when I had the freedom after parting ways with the New South Wales government, was to make contact again with my colleagues internationally. There were a couple of frustrations I had as General Manager (Road Safety) for the Roads and Traffic Authority—well, probably more than two, but two of them were that I had a number of employers coming to me

and saying that they would like some help, what could they do, what should they be doing to improve occupational driving safety. I also had a number of delegations, a number of groups from overseas that were coming and saying, "Well, how did you do it? You have been very successful in Australia. How did you do that?" I was able to provide a little bit of time every now and again, but I never felt that I was able to give enough.

Lori's Global Road Safety Work

- Australian Advisor to GRSP
- Led Road Safety Technical Study for Vietnamese
- Advisor to Asia Injury Prevention Foundation
- Lead Road Safety Specialist in Honduras Project

Resolución Ley de Tránsito

- Critical Review of Sri Lanka Road Safety
- Fleet Safety with Multi-national Companies

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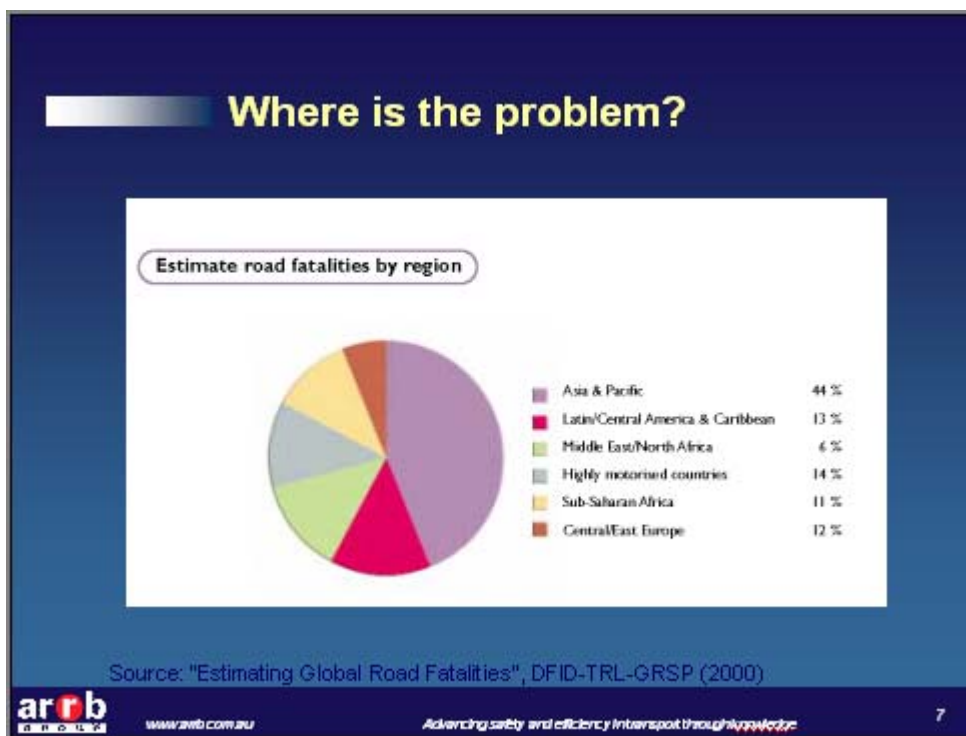
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So one of the things I did was I became the Australian adviser to the Global Road Safety Partnership. I have been involved with them for many years and I will be talking a little bit about them later. I did a road safety technical study for the Vietnamese Government and they are now about to embark on a major World Bank project—A\$5 million worth—to really boost their road safety strategies program. I have been an adviser to the Asia Injury Prevention Foundation, and I will tell you a little bit about them, and because I speak a little bit of Spanish I have also been used in advising Honduras on road safety. I did some work in Sri Lanka. The Asia Development Bank and SETA and others have been funding a project that has really not taken off too well in Sri Lanka, so I came in and did a review of what they were doing. I also do a bit of fleet safety work with multinational companies: Shell, BP, BHP Billiton. I find that often it is the companies that have zero accident goals who are the most committed and put the most resources into fleet safety.



I want to talk a little bit about the Global Road Safety Partnership because I think it is a very good model. I am very committed to the whole idea of partnering between the different sectors. There are a number of sectors in the community, who have something to contribute to road safety. The Global Road Safety Partnership was a World Bank initiative looking at finding ways to animate road safety in developing and transition countries in such a way that capitalised on all the best things that the three main sectors could contribute, those being Government, private sector and civil society, supported by the multi-bilateral organisations. The program was initiated in 1999 and it is still going very strongly, in fact it is going stronger than ever, and it is a really good model. Governments are involved by way of contributing expertise and funding. Part of my role as the Australian adviser was to try to get AusAid involved and I am pleased to say that they are finally seriously considering joining the Global Road Safety Partnership. It has been struggle because—and this is true of a number of aid agencies—they say: "We're about poverty reduction". So I decided that I was going to take this on and I will talk about that in a minute.

In the public health area I think what has happened is that our colleagues in WHO have really taken on board much more strongly now road trauma because they discovered that in fact road trauma is becoming or already is the major killer amongst men aged 17 to 25 in the world and it is rapidly moving towards number 3 by the year 2020 that road traffic injuries will be the biggest cause of productive life years lost.



So where is the problem? Well, a big part of the problem is in the Asia-Pacific region.

What is the Problem in Asia?

- Volatile traffic mix
- Poor road user behaviour
- Poor road user skills
- Lack of traffic regulation
- Lack of traffic enforcement
- Unsafe vehicles & equipment
- Poor traffic management facilities
- Lack of road safety expertise
- Rapid economic and consequent infrastructure growth



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What is the problem in Asia? Well, there is a whole range of problems in Asia. As Mark Stevenson knows very well, there is a volatile traffic mix, poor road use behaviour, poor road user skills, lack of traffic regulation and enforcement, unsafe vehicles and equipment, poor traffic management facilities and there is a real lack of road safety expertise. The other thing that has happened is that China and Vietnam are actually the most rapidly growing economies in the world and, as they grow, they are rapidly developing their infrastructure, hence more exposure, hence more trauma. Huge problem.

I would like to address the problem of how road injury relates to poverty because I was getting a little frustrated with AusAid because the Australian Government was saying, well, we're all about poverty reduction, we're all about governance and we're all about public health, and it was actually a seminar that the George Institute hosted some years back and a senior AusAid person came and said, "We are very committed to funding public health things, but not road safety", and it astounded not only me but a number of people. It was amazing because, as we know now, 85 percent of road deaths occur in developing and transition countries. It is a poverty issue. Road injury costs have more than doubled the total amount of all donor aid to developing countries. Road trauma affects the young productive male disproportionately as we know, so this becomes another drain on capital, and it affects people who cannot afford safe forms of transport, so it is kind of a double-whammy for them.

How does Road Injury relate to Poverty?

- **85% of road deaths** occur in developing or transition countries
- Road injury **costs more than double the amount of all donor aid** to developing countries
- Road trauma affects young productive male road users disproportionately – a **drain on human capital**
- It affects people who **cannot afford safe forms** of transport



How Does it Affect Poor Families?

- **Loss of the breadwinner** to road death or permanent disability can be devastating to a family
- Reports of **deliberate manslaughter to avoid paying** support to accident victims
- Intrinsically dangerous forms of transport are often the **only options**



How does it affect families? Well, the loss of the breadwinner to road death can be absolutely devastating, it can plunge a family into poverty that they can never get out of. I did some work in Nepal and in Nepal they actually have a law that, if you hit someone, you injure somebody with your vehicle, you are responsible for paying for their family to survive until the person can sustain their own income. What they were

finding was that people were then reversing back over the body because if you kill somebody it is a fine, but it is a lot less, so it is like my family or yours. It is that serious, and that is quite recent, it is not in the distant past. I think it still happens.

Often, as Mark Stevenson was saying earlier, motorcycle travel is what they have. Motorcycles are family transport in south-east Asia.

How Does Road Trauma Affect Poor Countries?

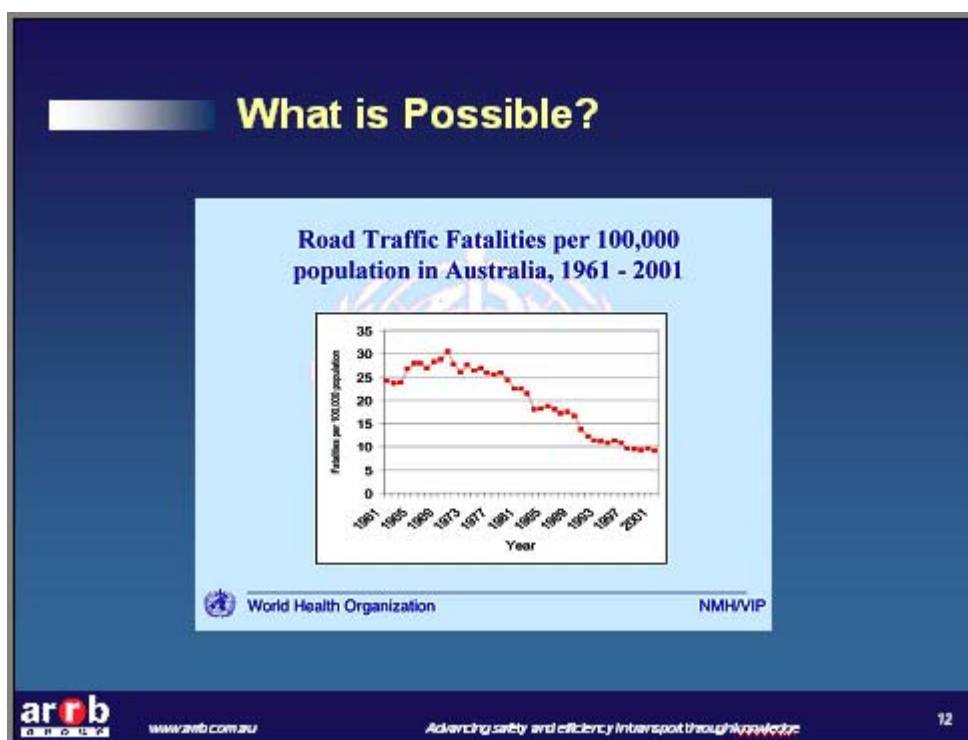
- Costs between 1-3% of GDP
- Larger burden on health and medical services
 - (Up to **30% of hospital beds** are occupied by road crash victims)
- Reduces economic activity



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We also know that the costs on a macroeconomic level are between 1 and 3 percent of GDP. It can be as high as 4 percent of GDP. It is a great burden on health and medical services. Up to 30 percent of hospital beds are taken up by crash trauma victims.

What is possible? I think it was at a conference in Bangkok a few years ago where Richard Schofield from the World Bank stood up and said—this was a conference of ASEAN nations—"Take heart. Look at what Australia has achieved". We have achieved quite a big downward curve on the road toll. That is not to say that we have finished, we still have a long way to go and there are a lot of things that we can do, but we did in fact introduce interventions that brought down the road toll.



The other thing that is significant about that is that, as Ian Johnston was pointing out, Australia does not have the tax base to do that by engineering ourselves out of the problem. We have to do that in more cost effective ways.

A lot of those were behavioural interventions and there were things like introducing seatbelts and helmet use back in the early 1970s and random breath testing in the 1980s. The Parliamentary Road Safety Committees were absolutely instrumental certainly in bringing random breath testing and the .05 blood alcohol concentration (BAC) legislation into play.

As I said before, I am a great believer in partnership models, the well worth safety partnerships. As some of you would know, after World Health Day in 2004, where a major report on world trauma, which Mark Stevenson and others were involved with, convinced some of the policy makers, I guess, in the United Nations to really embrace and take road safety seriously and so established a United Nations road safety collaboration. That collaboration will be meeting for the fourth time in Bangkok in May 2006 and we will be talking about the six elements that they have set for member nations to improve road safety.

Partnership Models

- Global Road Safety Partnership
- UN Road Safety Collaboration
- Global Knowledge Transfer Program



ASIA INJURY PREVENTION FOUNDATION
Saving Lives Through Road Safety

- "Helmets for Kids"
 - Working with companies
- Road Safety Education
 - Working with schools
- First child motorcycle helmet standard
 - Working with Government



World report
on road traffic
injury prevention



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The Asia Injury Prevention Foundation – when I discovered them, it was like the embodiment of GRSP in practice in Vietnam. They are actually a non-profit organisation. They involve the private sector by way of - it is almost like Adopt A School. They provide all the helmets. A company can sponsor a school and provide all the motor cycle helmets for the children. Motor cycle helmets are produced by Protech, which is a company that is affiliated with Asia Injury that produces good quality low cost topical helmets and they work with governments to introduce policies and helmet legislation, helmet standards and work with the schools as well.

What AARB Group does is it affiliates and establishes relationships, and is very keen to work with people who are doing something with similar aims to ours. So we have worked at peak level with a number of professional organisations and associations. We also work together with partners, including the George Institute for International Health and TRL Limited from the United Kingdom. We believe strongly, particularly when you are working in countries in South East Asia and elsewhere in the world, you need to have local partners so that they will be able to translate all the good interventions that we have developed in Australia to something that is really workable in the local context.

Key affiliations and organisational relationships

- **Peak Professional Road Safety Associations:**
 - Austroads and its member authorities
 - Australasian College of Road Safety
 - Global Road Safety Partnership (Red Cross and Red Crescent Societies)
 - PIARC (Permanent International Association of Road Congresses)
 - REAAA (Road Engineering Association of Asia and Australasia)
 - UN Road Safety Collaboration
- **Delivery Partners**
 - Research Institute of Highways (RIOH, China)
 - Research Institute of Transport, Science and Technology (RITST, Vietnam)
 - Asia Injury Prevention Foundation (Hanoi based NGO)
 - TRL (UK)
 - The George Institute (Australia)
 - Kumpulan IKRAM Sdn Bhd (IKRAM, Malaysia)
 - Standards Australia
 - Transportation Research Board, USA



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Key affiliations and organisational relationships

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 - Kumpulan IKRAM Sdn Bhd (IKRAM, Malaysia)
 - Standards Australia
 - Transportation Research Board, USA



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Transport safety at ARRB

- ARRB's multi-disciplinary team includes engineers, behavioural scientists and economists who provide holistic solutions for transport safety issues.
- ARRB assists Australasian and overseas governments, businesses and communities develop innovative transport safety programs and solutions.



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Road safety and traffic engineering

Our expertise includes:

- Accident analysis and countermeasure development
- Provision for vulnerable road user groups
- Development of road design and traffic management guidelines and practices
- Roadside hazard management
- Evaluation of remedial treatments and traffic control devices



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Transport safety at AARB Group. As Ian Faulks was saying, we have got a multi disciplinary team, including engineers, behavioural scientists and economists who provide holistic solutions for transport safety issues. We assist Australian and overseas governments, businesses and communities to develop innovative transport programs and solutions. We are big players in developing technology and tools to

enable road safety practitioners to implement things more easily. We hold the guidelines for road safety audit and we have developed some tools to make it easier for people to use. We have helped countries like Malaysia to adapt those tools.

Road design and traffic engineering

A range of software tools have been developed to assist road safety professionals to:

- Identify hazards and deficiencies in the road environment (Road Safety Audit Toolkit)
- Proactively assess hazards and treatments (Road Safety Risk Manager)
- Set appropriate speed limits (X-Limits)



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Road safety – Road user behaviour

Projects in areas including:

- The 'big 4' behavioural issues – speed, alcohol, fatigue and restraint use
- Work related road use/fleet safety
- Novice driver issues
- Community road safety
- Pedestrian and cyclist safety



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Road safety experience

ARRB experience:

- Analysis of crash and traffic offence data
- Social research methods
- Development of road safety strategies and action plans
- Road safety program evaluation
- Driver training and testing
- Road safety education programs
- Video monitoring of pedestrian and vehicle movements
- Stakeholder and public consultation
- Fleet safety systems and benchmarking





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Behavioural issues, of course we do a lot of behavioural research and advise on policy matters and programs, and we do a fair bit of analysis of the data. We actually can do accident investigations and reconstructions, social research and benchmark practices nationally and internationally.

Developed and Pilot Teaching Materials in Kerala, India

- Teacher Lesson Manual (Scope and sequence, links to curriculum, lesson objectives, teacher lesson plans and extension activities)
- Discussion Posters (Road safety issue, teaching points, discussion starters, local photos)
- Student Workbook (Lesson worksheets, lesson resource sheets, take home activities)
- Optional Road Signs (durable scale model of principal road signs used in Kerala)
- Optional Video (Limitations of children in traffic, rationale for road safety education and training)

- Conducted after training and material implementation
- Evaluation feedback form used
- Teachers, coordinators and principals rated 21 items (Rating scale 0 to 10)
- Comments and suggestions for improvements were provided
- Mean scores and qualitative common themes technique applied

RESULTS:

- Training and material evaluation were very positive
- Overall, both training (M=8.53) and material (M=8.47) items rated highly
- Results suggest high satisfaction from teachers and principals

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This is one example of a program that we implemented in the state of Kerala in India. Again, translating the Australian road safety education programs that are in place in most, if not all, Australian states, to the context in India. So we are providing and developing the tools, training the teacher, pilot testing them and evaluating them. This follows a similar project that we also did in Thailand.

International Training & Developing - Road Safety

Professional development and training in developed and developing countries:

- Development of road safety action plan including a road safety education program in Kerala (*Government of Kerala – Public Works Department, India*)
- Development of a road safety program in China (*Public Security Bureau*)
- Development of road safety education package for Thailand (*Ministry of Education*)



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Capacity Strengthening

- In the role as trainers ARRB trained nationals to work with ARRB staff in undertaking the various components of a project.
- This was evident in the recently completed World Bank-funded Automated Road Monitoring System project in Indonesia and also in projects undertaken in:
 - India
 - Thailand
 - Malaysia
 - Tanzania
 - Bangladesh

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We also have worked again with the George Institute China and are big believers in capacity building. In other words, not just going in as consultants and doing this for them but leaving them with some skills that they can carry on road safety programs and policies. We have worked in a number of different countries right throughout the world.



What Can We Do?

- Convince the Australian Government to contribute more to road safety
- Promote and provide Australian expertise and methods
- Advance a partnership approach to assisting high risk and low income nations

Road Safety Seminar, Bangladesh 2003

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I guess just finishing up, saying what can we do – I am very committed to a greater Australian participation in the global scene in imparting and sharing what we have learnt. I will be continuing to lobby the Australian government to commit more funding to road safety. I am pleased to say that they are actually really listening now. There are some people in Canberra that want to get involved. There is a white paper I think in development that is circulating at the moment that is looking at doubling AusAid funding and committing a whole lot more resources to road safety, so watch this space on that one, because I really believe that the research institutes that are represented in this room, as well as the road authorities and others, have something really important to contribute internationally.

I very strongly believe in a partnership approach. I think that if we do things together and get that synergy we can really help improve the global situation.

Chapter Thirteen—

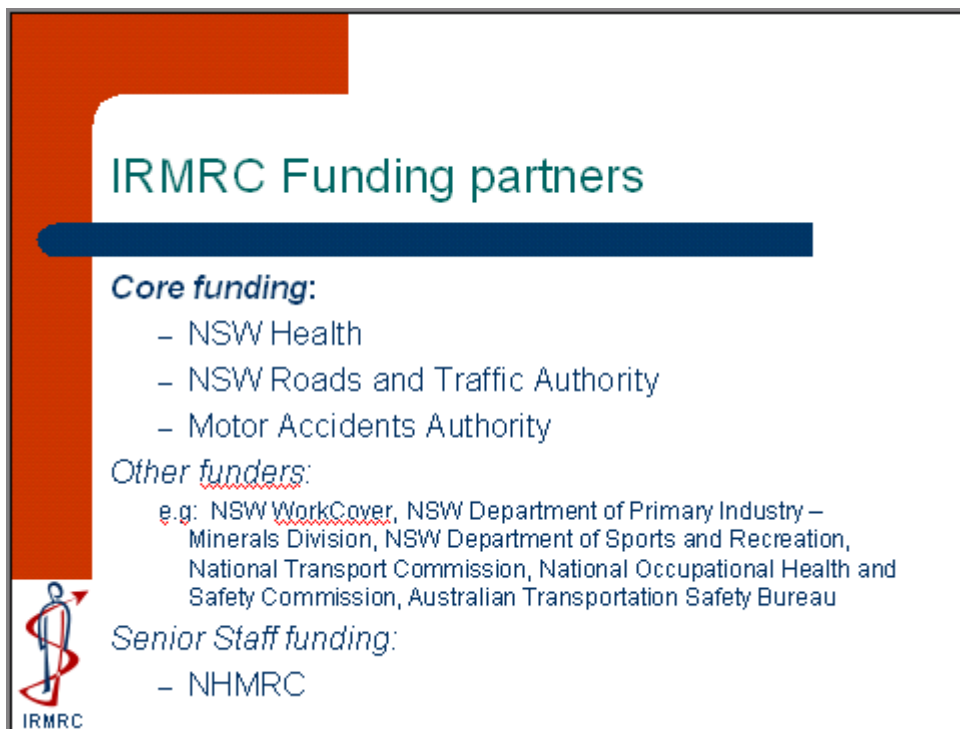
INJURY MONITORING AND PREVENTION: ROAD SAFETY RESEARCH AT THE IRMRC

Associate Professor ANNE WILLIAMSON
New South Wales Injury Risk Management Research Centre

Mr FAULKS (Manager, STAYSAFE Committee, in the chair): I would like to move onto the Injury Risk Management Research Centre, which, given my proclivity to stealing everybody's opening thunder, I will inform you is a collaboration of New South Wales agencies that are really starting to try and tackle the fundamental building block that we need if we are going to address road safety questions, which is data, data, data.

The New South Wales Injury Risk Management Research Centre was set up in 1999 as well. We are an independent research centre at the University of New South Wales and we are set up basically to take advantage of the multi disciplinary nature of a university and apply it to the multi disciplinary problem of road safety. We sit in a sort of a difficult place, in some ways administering within the university but we have very strong links with the engineering faculty, with the medical faculty and the science faculty. The idea is that as problems come up, as issues arise, as research projects are needed, we can draw on the right kind of people to address those sorts of problems. That was the original idea behind the setting up of the research centre and it has continued to be so.

As Ian Faulks said in his introductory remarks, the Injury Risk Management Research Centre was established through a collaboration between three government departments in New South Wales: NSW Health; the Roads and Traffic Authority and the Motor Accidents Authority. They have continued to fund us. We have core funding from those three organisations. They sit on a board of management, along with the deans of the faculties that we also collaborate with within the university and they basically are a committee that steers us, advises us and funds us to some extent, but we also have projects that come up from time to time. We have pretty much ongoing funding from the funders.

A presentation slide titled "IRMRC Funding partners". The slide has a large orange L-shaped graphic on the left side. The title is in green text. Below the title is a dark blue horizontal bar. The slide lists funding partners under three categories: Core funding, Other funders, and Senior Staff funding. The IRMRC logo is in the bottom left corner.

IRMRC Funding partners

Core funding:


- NSW Health
- NSW Roads and Traffic Authority
- Motor Accidents Authority

Other funders:

e.g. NSW WorkCover, NSW Department of Primary Industry – Minerals Division, NSW Department of Sports and Recreation, National Transport Commission, National Occupational Health and Safety Commission, Australian Transportation Safety Bureau

Senior Staff funding:

- NHMRC

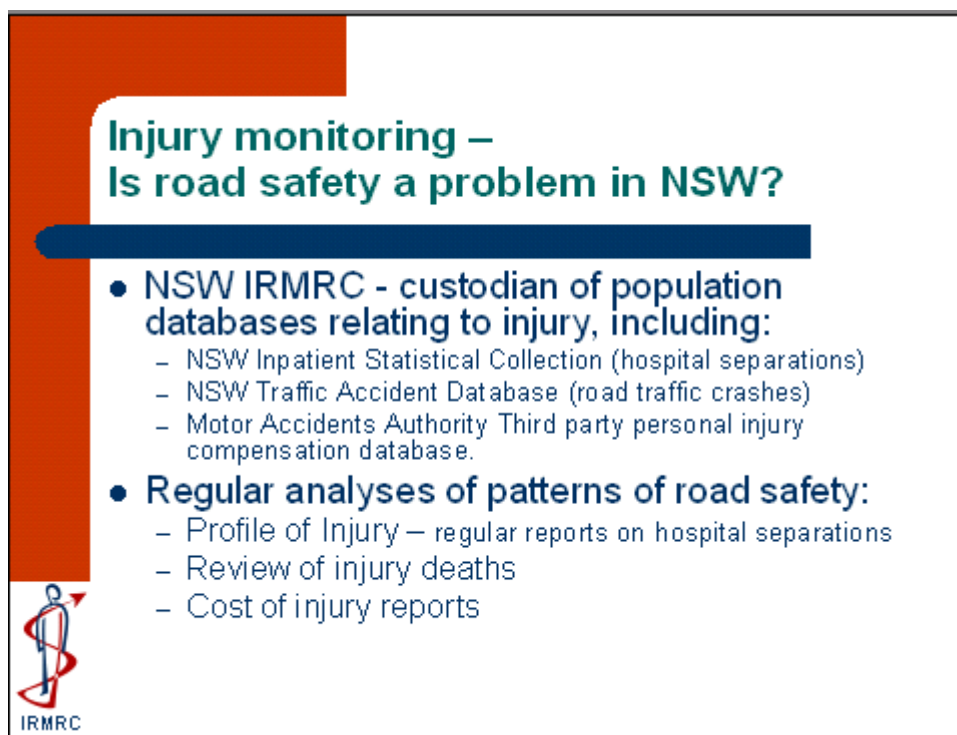


As you can see, a large part, perhaps if not all, are government organisations of various sorts, ranging from the mining industry through to other organisations that are in this room, not just road safety but occupational health and safety and health related organisations. I should also say that all of our senior staff are funded from NHMRC funding, which for a 'soft money research centre it remains one of the difficulties to obtaining funding and keep funding for good senior staff. We manage to do it so far.

What do we do? I just thought I would briefly mention a whole range of projects that we are doing currently. Any of them I can talk about in a lot more detail – but I will not. If anyone is interested in anything in particular, some of it will be on our website but other bits will not be, because I am really talking about stuff that we are doing right now. If you wanted to know more about other things, we can send you the information.


A number of these projects I am going to be talking about are actually presented for the first time at the Durban injury prevention conference that is on at the moment. In fact, a lot of our staff are there at the moment, and we can certainly send you copies of presentations and so on if you are interested.

I will just quickly give you an overview of the sort of flavour of what we do.



**Injury monitoring –
Is road safety a problem in NSW?**

- **NSW IRMRC - custodian of population databases relating to injury, including:**
 - NSW Inpatient Statistical Collection (hospital separations)
 - NSW Traffic Accident Database (road traffic crashes)
 - Motor Accidents Authority Third party personal injury compensation database.
- **Regular analyses of patterns of road safety:**
 - Profile of Injury – regular reports on hospital separations
 - Review of injury deaths
 - Cost of injury reports

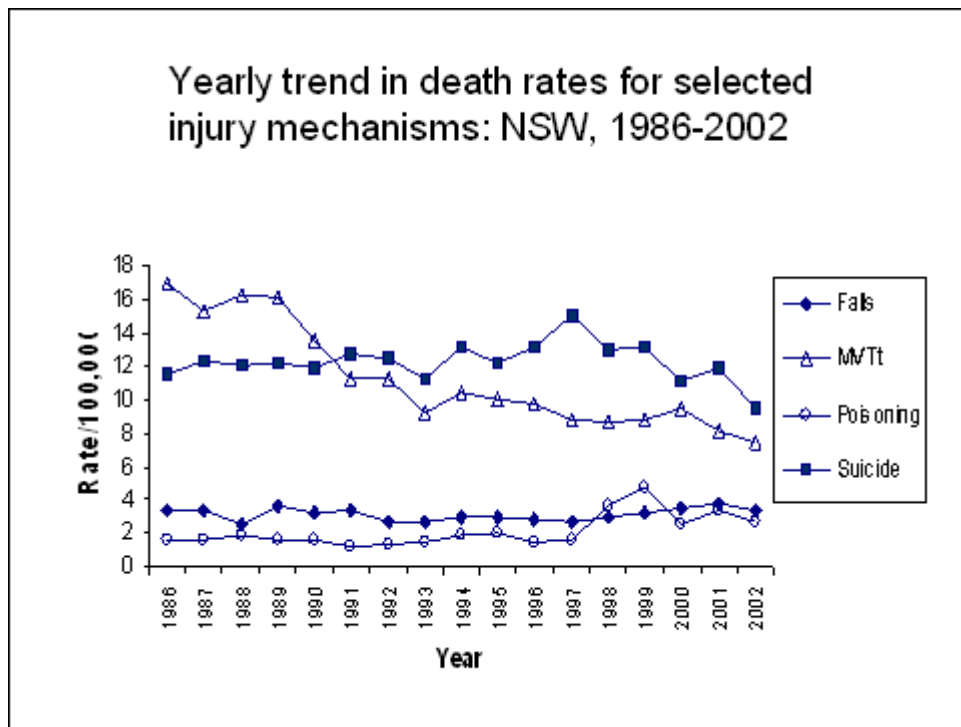


IRMRC

One of the things we were set up to do was to be the custodian of data or relevance to injury in New South Wales. We are not just a road safety research organisation, but as you will see, it is a very large part of what we do.

The population data base sort of came with our funders, that is, the in-patients statistical collection, the Roads & Traffic Authority's accident data base system, the Motor Accident Authority compensation data, all now reside with us—while residing with the organisations themselves. We actually have access to that information which has been an essential starting point for New South Wales because really no-one had actually looked at, for example, in-patient statistical data. We did not know too much about road safety and who was presenting in hospitals in New South Wales, but we now do.

One of the first things that we did when we were initially set up in the first couple of years, was to start an ongoing data reporting system and as you can see down the bottom there, I have listed the sort of things that we are doing. We put out a regular profile of injury, which is basically a summary of what is in the hospital data with respect to all injuries, including road safety. We are currently doing a review of injury deaths, including road safety and we are also doing some quite innovative work looking at the costing of injury, which is something that had not been done to any great extent previously.

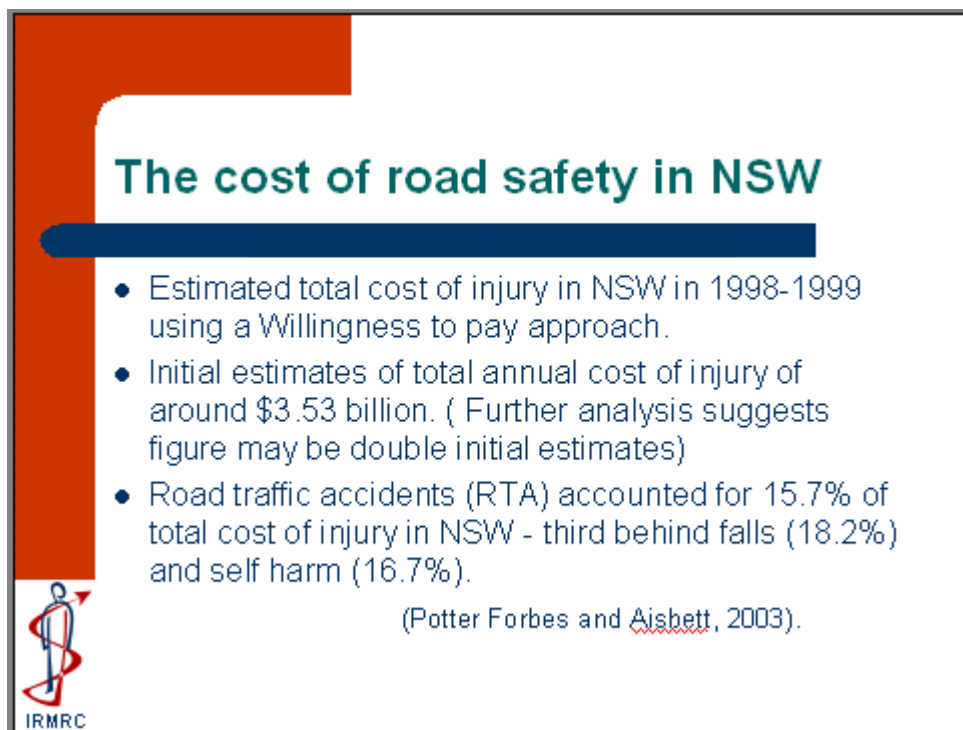


I thought I would just briefly show you some of the data that we have been collecting and reporting on. I briefly thought we are a road safety interest group here. In New South Wales, to put road safety in perspective, the sort of data that we have been showing has consistently been showing – I don't know if you can see very well but the lines with triangles are the motor vehicle traffic injury and you can see over the years, and it is sideways so it is a bit hard to see, it is 1996 at one end and 2002 at the other. We have some more data for you, but this is the leading statistic and it is more or less the same since then, but you can see, if you look at industry as an entity and you break out say the four top injuries, road transport comes out as the second most important in New South Wales, but that is because issues to do with suicide and self-inflicted injury have certainly - while road safety has gone down or remained static, suicide has remained high. What it means, though, is that road safety in New South Wales is the primary reason for traumatic death in New South Wales where the deaths are to do with unintentional injury. Of unintentional injuries in under-45 year olds, the most important one is certainly road safety.

If you look at the analysis that we have been doing with things like the cost of road safety injury in New South Wales.

This slide is work that was done by Mary Potter-Forbes and Chris Aisbett and I think is quite novel in Australia. They have been able to put together information using a 'willingness to pay' approach to the cost of injury, which there is a lot of debate about and certainly since this report was produced in 2003 there have been some revisions of the numbers that they are putting on the cost of injury, but certainly the report that they produced, which is available on our web site if you are interested, came up with


some initial estimates of about \$3.5 billion a year being the cost of injury with about 15.7 percent road traffic injury, so a large proportion.



The cost of road safety in NSW

- Estimated total cost of injury in NSW in 1998-1999 using a Willingness to pay approach.
- Initial estimates of total annual cost of injury of around \$3.53 billion. (Further analysis suggests figure may be double initial estimates)
- Road traffic accidents (RTA) accounted for 15.7% of total cost of injury in NSW - third behind falls (18.2%) and self harm (16.7%).

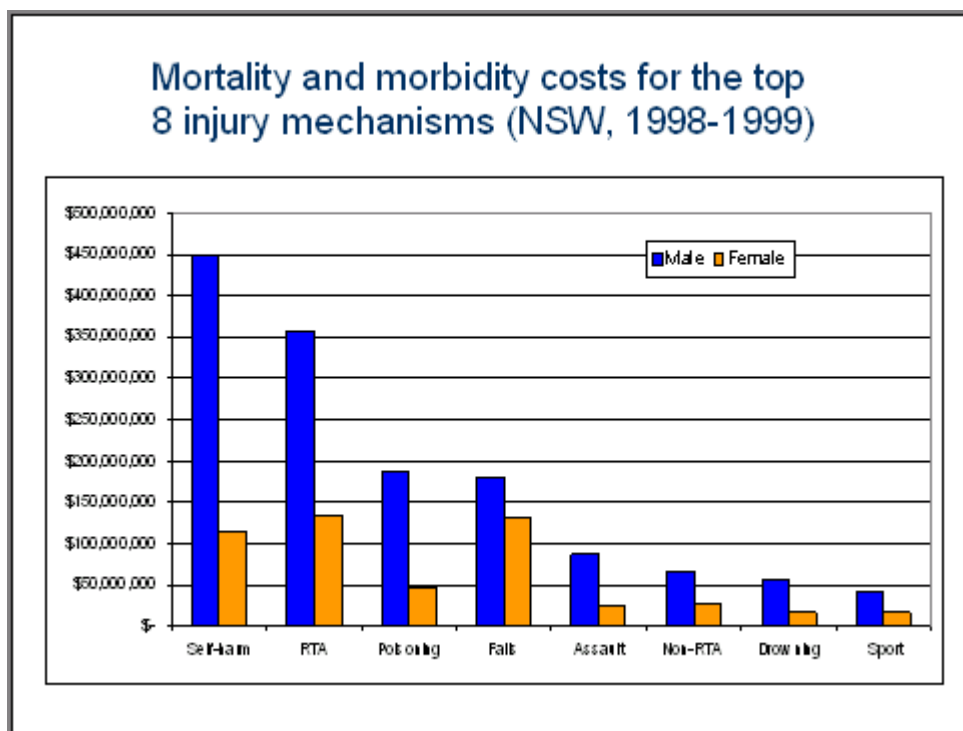
(Potter Forbes and Aisbett, 2003).



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Apart from falls, road traffic injury is one of the major sources of injury costs in New South Wales. Since that original work there have been some revisions in estimates and I think they have only gone up, so that we are talking about a serious problem both in terms of numbers but also in terms of the costs of injury.


This slide is just to give you an idea of the male and female break-up. You can see that this is suicide, but road transport, with males being very much dominant in terms of the cost. This is not surprising, this is something I think that we all know about, but it is useful I think. If we are trying to make a case for road safety being an important component of modifiable risks, if you like, certainly road transport is something we need to be thinking about.



The other thing we have been able to do, as I think was mentioned earlier by Mark Stevenson, because we have custodianship of data and separate data sets, we have been in the fortunate position to be able to make a case for actually linking data sets.

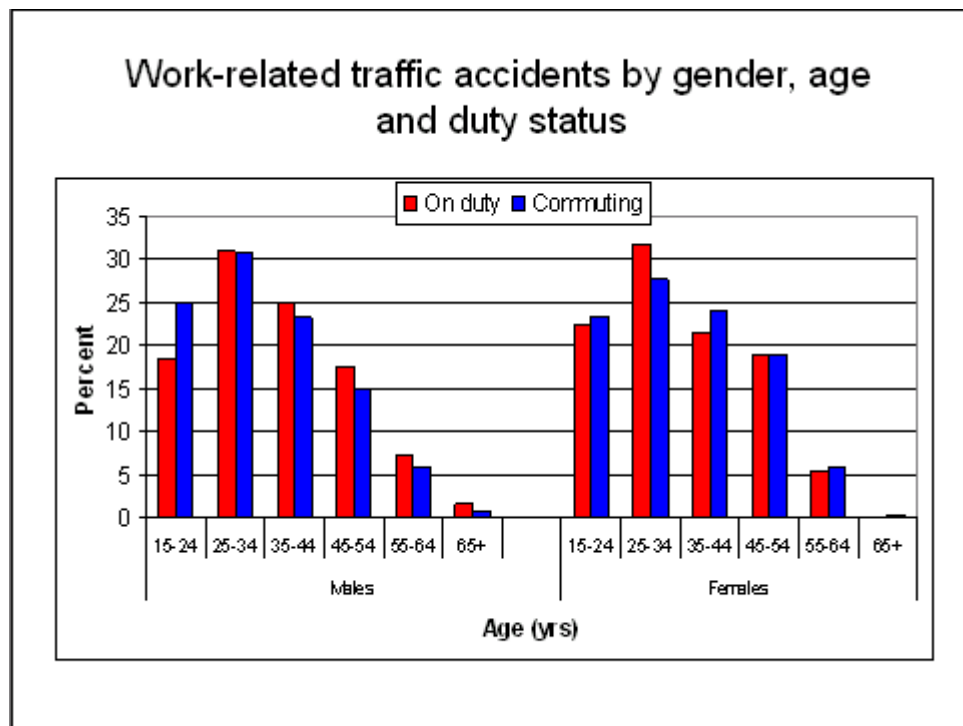
Injury monitoring – Increasing value of statistical information by linking datasets

- **Linking of RTA's TADS database with the Workers Compensation dataset from NSW WorkCover**
 - Working crashes compared to nonworking crashes
 - Commuting crashes compared to on-duty crashes
 - Fatigue-related crashes – comparing working and nonworking crashes.



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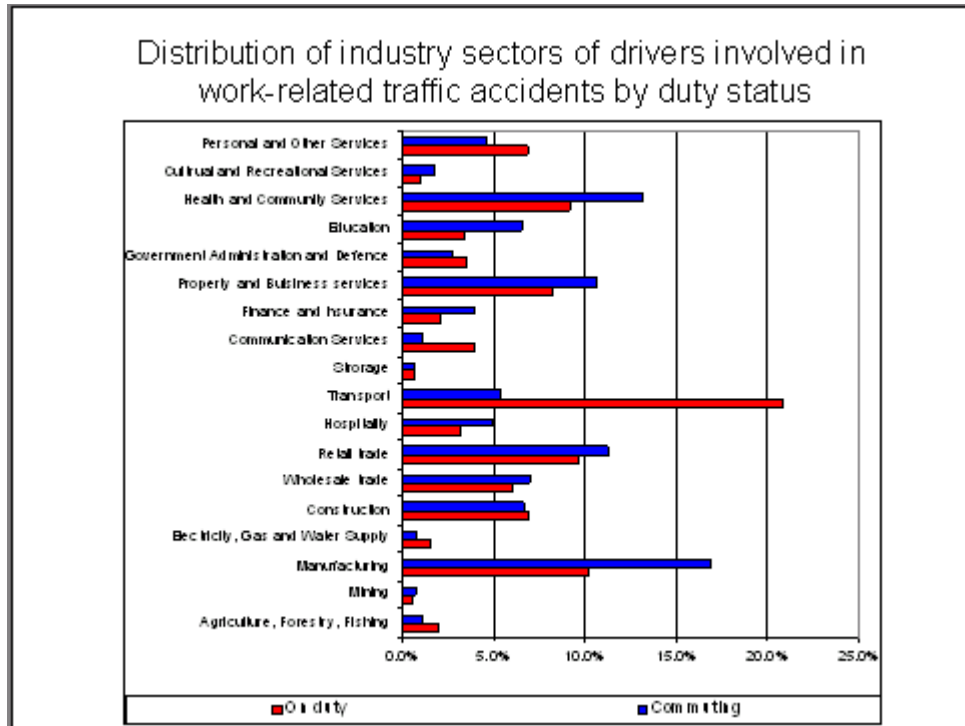
Now this has been something that has been mooted for some years in New South Wales. I think the first attempt was some time in the early 1990s where the RTA attempted to implement a linkage between the roads and traffic data set and the hospitals data set simply because it was the only way that they were going to have any idea about issues to do with severity of injury. We would know about deaths and know about road traffic injury, but those injuries could have varied from a cut finger to something severely life threatening. So we were actually able to get ethical approval to link both the hospital database and the roads and traffic database, which I will talk about in a minute. Prior to that, we have ethical approval to link two data sets that had not been linked before and that was looking at the workers' compensation data set and the roads and traffic crash data set. Again, if you look at the roads and traffic database, it tells you about crashes and a lot of information about why they occur, but we had no idea of which ones were work-related and which ones were not, so if you are interested in issues to do with work-relatedness and road traffic crashes, which you should be because clearly a number of people who are on the road are working, not just heavy vehicle drivers, and also from an occupational health and safety point of view, if you are looking at occupational fatalities statistics, for example, the biggest proportion of those are on road fatalities and these are people who are working. So it is an OHS issue as well as a road safety issue.



We were actually able to put those statistics together, that is WorkCover and the TADS data set and we have so far done an analysis of a number of things. We have been able to look at working crashes compared to non-working crashes. I think for one of the first times there have been a few studies looking at commuting crashes compared to on duty crashes and we have also done some analysis looking at fatigue related

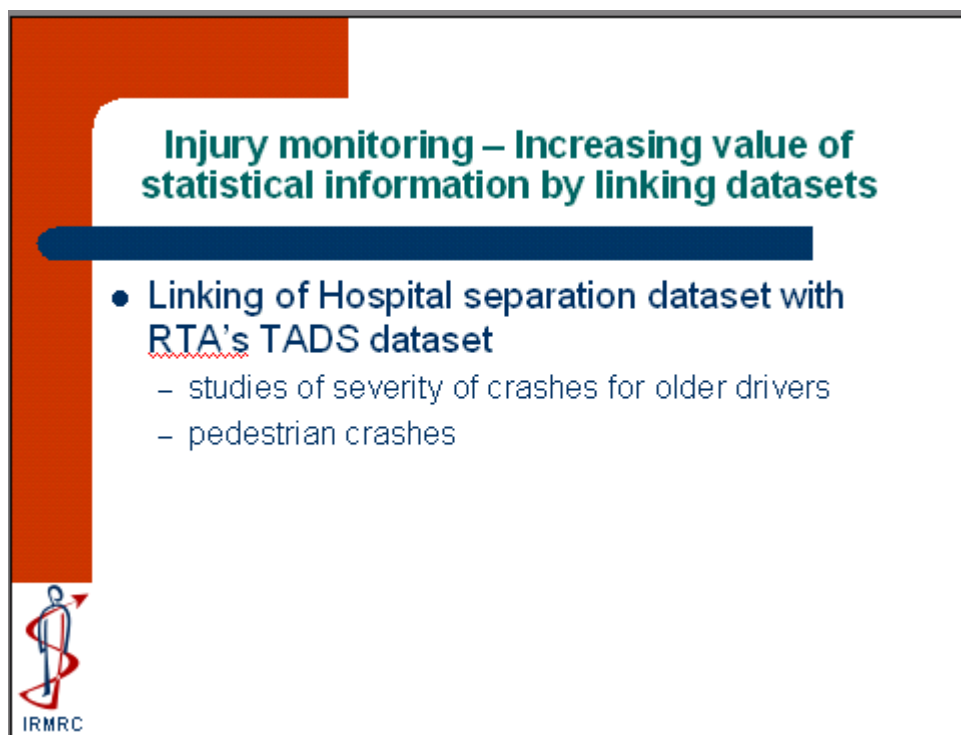
crashes, asking the question whether or not fatigue plays a role that is different if you are working than if you are not working.

Let me briefly show you some data. This is just duties data, so commuting, which I think is the blue lines, and on duty crashes, which are the red ones, and you find that apart from very young males there is pretty much the same age distribution of on duty and commuting crashes across the board, and the same for males and for females.




What you do find, though—and this is not surprising I guess—is when you look at different occupational groups, you get a very big difference between whether you are more likely to be in the TADS database because you are on duty versus commuting. For example, if you worked in the transport industry, you are much more likely to be on duty. That is not really surprising. But if you are working in the manufacturing area, it is the other way around, for example. There are differences right across the board and in some places you might not expect. For example, health and community services are more likely to be commuting whereas some personal and other service industries, it is the other way around. So as usual this kind of data just starts you with some hypothesis generation. It says: Oh, that's interesting, we didn't know it before. Why is that? This analysis has been able to do that.

If we move on, we are in the process of linking between the hospitals data set and the roads and traffic data set, which is where we originally started in the attempt to link, and at the moment there have been two pieces of work that are either about to be published or are in the process of being so.



Injury monitoring – Increasing value of statistical information by linking datasets

- **Linking of Hospital separation dataset with RTA's TADS dataset**
 - studies of severity of crashes for older drivers
 - pedestrian crashes

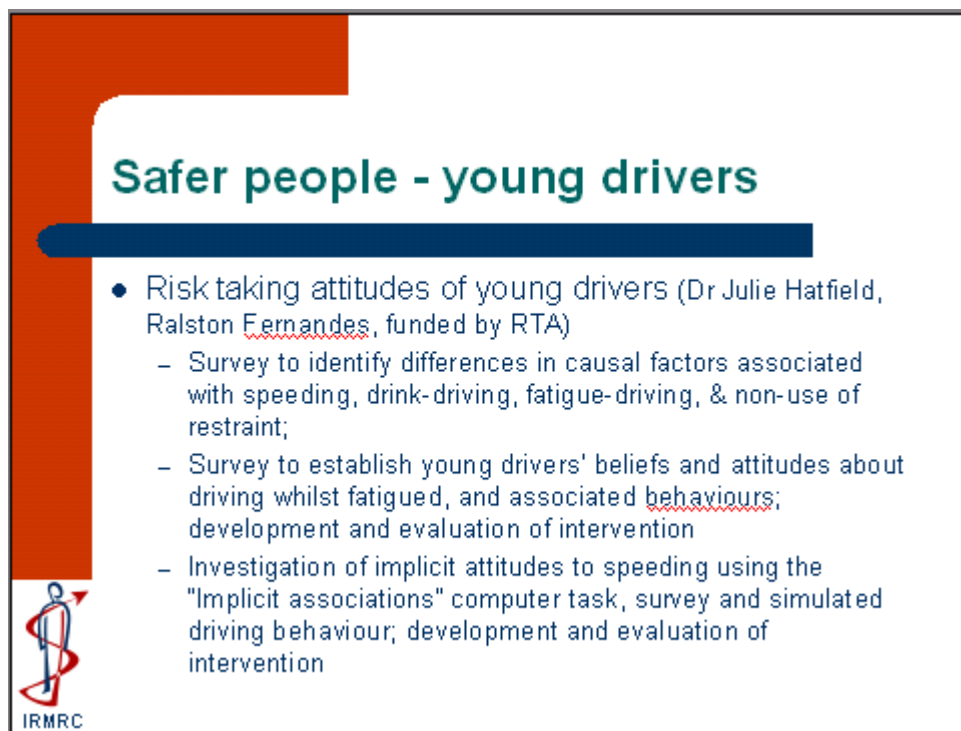
 IRMRC

One is a piece of work that has been done on the severity of crashes for older drivers. That is clearly the important impact we can do with this linked data, we can look at severity of crashes and look at different groups and ask the questions of when and where are crashes likely to be more severe, but we have also done some work looking at pedestrian crashes. Again this information is work that will answer questions that we have not been able to before using population databases.

That is the sort of work - some of it population and statistical databases - that we have been doing, but we also do an awful lot of work that is actually out there in the field, so all the things I am going to talk about now are actual research projects. I apologise, I am going to have to go through them fairly quickly and just give you a bit of an idea of the sorts of things that we are doing.


I have divided it up into safer people, safer roads, safer vehicles, et cetera. Most of our work I guess is on the safer people issue simply because a lot of our expertise lies in that area, but also I think some of the major research questions that we have been interested in and our farmers have been interested in too have lain in that area. So we are currently doing quite a lot of work on young drivers. Julie Hatfield, who I am sure many of you in New South Wales know, has been doing quite a lot of work with a doctoral student of hers looking particularly at risk attitudes of young drivers. One of those major issues I think is: Is it risk-taking or is it lack of experience? What is the issue with young drivers? Certainly understanding more about risk-taking attitude and risk-taking behaviour is the objective of the study and it is looking at using a number of methodologies, including surveys, and there are a couple of major surveys that they are doing, but also they are using some rather interesting computer-based

methodology to look at what are called implicit attitudes to things like speeding where you do not actually ask direct questions about speeding but you ask about young people's attitudes about things related to speeding and other activities, the idea being trying to understand a bit more about asking the question: Is it risky behaviour or is it risk-taking behaviour? I do not think we know the answer to that question nearly as well as we need to if we are going to have real implementations that are likely to be successful.




Safer people - young drivers

- Risk taking attitudes of young drivers (Dr Julie Hatfield, Ralston Fernandes, funded by RTA)
 - Survey to identify differences in causal factors associated with speeding, drink-driving, fatigue-driving, & non-use of restraint;
 - Survey to establish young drivers' beliefs and attitudes about driving whilst fatigued, and associated behaviours; development and evaluation of intervention
 - Investigation of implicit attitudes to speeding using the "Implicit associations" computer task, survey and simulated driving behaviour; development and evaluation of intervention



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Along the same lines we have one major project in the centre and another one that we are involved in, the DRIVES project, which Mark Stevenson has already mentioned. The project that we are doing in the centre is again one that Julie Hatfield is doing and it is looking in particular at what is called illusory invulnerability, looking at the extent to which you can get over the propensity that young people have, but not just young people, that is, to think that this won't happen to me, that road traffic accidents are things that happen to other people and nothing I do is likely to increase the chance that I am going to crash. So what this work is doing, and this is I think being funded by the Roads and Traffic Authority, is attempting to develop ways of getting around that illusory invulnerability. How do you portray messages that will not just simply feed into: Oh well, that's someone else's problem, not mine. There is a report being given at the Durban conference at the moment.



Safer people - young drivers

- **Development and evaluation of messages and experiences to**
 - reduce road-related illusory invulnerability and risky driving for school aged children and young drivers; assess simulated and on-road driving (Dr Julie Hatfield, funded by RTA).
- **DRIVES project - cohort study of young drivers** (with the George Institute).

Moving on very quickly, talking about the area that I work most in, that is driver fatigue, there are a number of projects we are doing at the moment.



Safer drivers - fatigue

- *Psychostimulant use in long distance road transport* (A/Prof Ann Williamson, funded by NSW Health)
 - study of the prevalence and predictors of psychostimulant use by long distance truck drivers.
- *Fatigue in the light trucking sector* (Ms Rena Friswell, A/Prof Ann Williamson, funded by ARC Linkage grant)
 - study to identify the important OHS issues facing drivers in the light trucking sector in NSW and to assess the importance of fatigue as a risk factor.
- *Studies of potential countermeasures to fatigue in long distance road transport* (A/Prof Ann Williamson, various funders)
 - Studies investigating the effects of night and day work, regulated and unregulated approaches to fatigue management

We are just finalising a project at the moment into psycho-stimulant use by long haul, long distance truck drivers and that has been the result of three surveys we have been

doing funded by NSW Health attempting to answer the question: Why do truck drivers use drugs? If they do, how often, when and what are the predictors? That report should be out some time in the next couple of months.

We are also doing some work looking at light trucking. We have done a lot of work over the years looking at heavy trucking, but there has been very little work done looking at the extent to which light trucking is a problem in relation to fatigue. That is work that I am doing in conjunction with a PhD student at the moment and again there will be a report on that in the next couple of months as well.

Lastly, we have been continuing to attempt to develop model countermeasures for fatigue management for this group, the long distance road transport industry. We have been doing quite a few on-road evaluation of things like 12 hour drives, night work versus day work, long shifts of 18 hours or more, regulated versus unregulated, working hours models and so on, so there have been a lot of projects looking at various attributes of different ways of managing work and risk for that particular group.

Safer people - Effects of distraction

- Investigation of the effects on driving of distraction due to
 - In-vehicle audiovisual systems (Hatfield et al)
 - Music intensity and music tempo (Williamson et al)
 - (all simulator studies)

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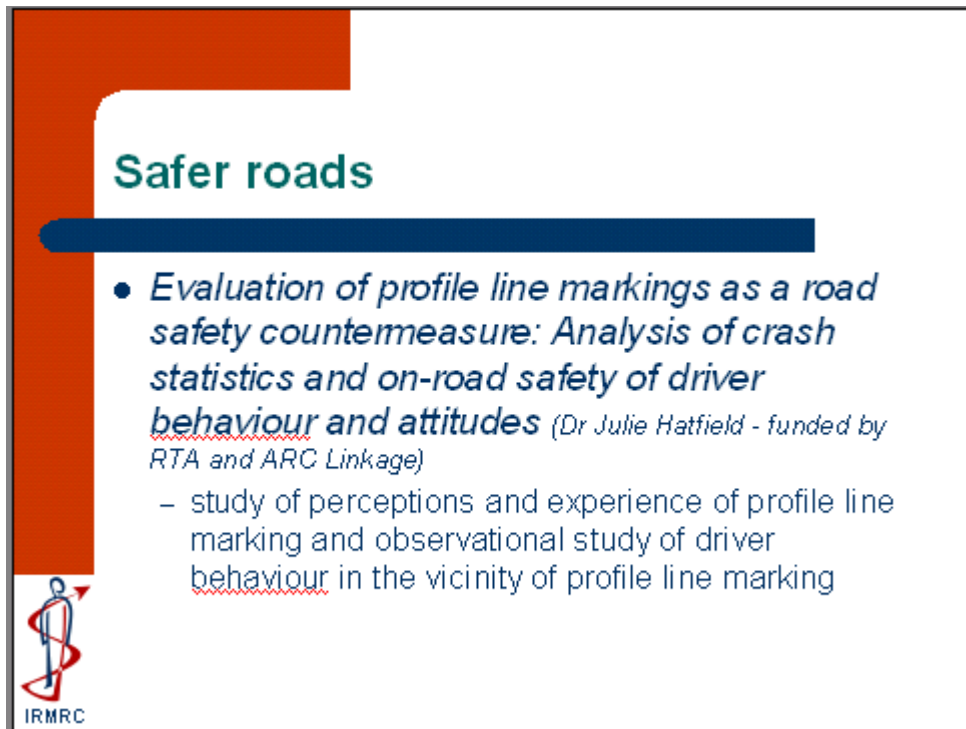
Very briefly, we have also been doing some work looking at the effects of distraction. It is a hot issue. We heard from David Shinar recently and certainly we have looked at it too. We have done a review of the literature for one of our funders on driver distraction and since the year 2000 when there were very few studies reported in the literature there has been an absolute explosion of the amount of work done on driver distraction. We, fortunately or unfortunately, are adding to it. Julie Hatfield has been doing a project for the Roads and Traffic Authority, which again is being presented to the Durban conference, looking at in-vehicle audio-visual systems and their effect on

driving and we have also been doing a little bit of work on the effect of music, music intensity and music tempo on drivers, particularly young drivers.




Most of those studies have been done in a simulator and, just to break up the talking, that is a picture of the simulator.

We are also doing a little bit of work looking at safer roads. Julie and the group working with her are doing a project at the moment that is funded by the RTA and an ARC linkage grant looking at profile line marking or rumble strips, attempting to evaluate their utility. There was some concern about the actual road safety impact of rumble strips, that is, do people get a fright when they get on to rumble strips and swerve back into the middle of the road? The original object was that we do not go into the path of an oncoming vehicle, which was the major reason for the research, and there have been surveys and some observation studies in the Snowy Mountains region attempting to look at what actually happens with rumble strips and profile line marking.



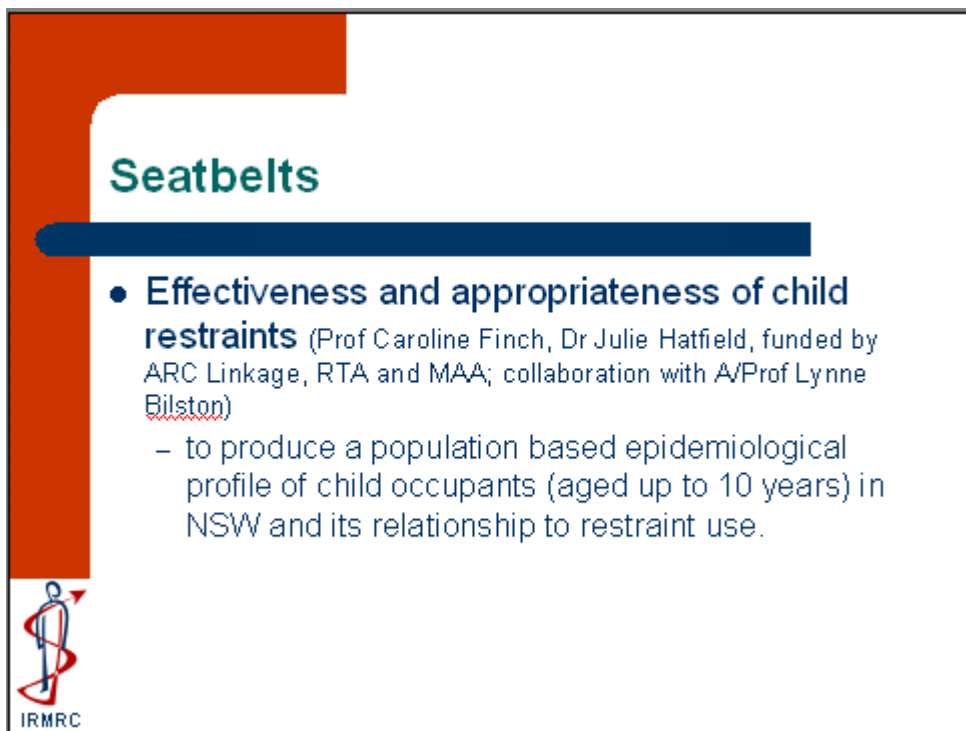
Safer roads

- **Evaluation of profile line markings as a road safety countermeasure: Analysis of crash statistics and on-road safety of driver behaviour and attitudes** (Dr Julie Hatfield - funded by RTA and ARC Linkage)
 - study of perceptions and experience of profile line marking and observational study of driver behaviour in the vicinity of profile line marking




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Lastly, we are doing some work on seatbelts.



Seatbelts

- **Effectiveness and appropriateness of child restraints** (Prof Caroline Finch, Dr Julie Hatfield, funded by ARC Linkage, RTA and MAA; collaboration with A/Prof Lynne Bilston)
 - to produce a population based epidemiological profile of child occupants (aged up to 10 years) in NSW and its relationship to restraint use.



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Professor Caroline Finch and a consortium of others, including Professor Lyn Bilston from the University of New South Wales, are attempting to look in more detail at the safety of child restraints, simply because it is recognised that there have been

problems with the standard for child restraints, particularly as children get older and move from one kind of restraint to the next and this work has taken the form of an entomological study and also looking at population data.



Overview

- Road safety is one of the major research themes of the NSW IRMRC, consistent with being one of the major injury issues in NSW
- IRMRC research is attempting to investigate some of the major problems in road safety in NSW and to develop better approaches to overcome them.
- For more information:
www.irmrc.unsw.edu.au

Certainly road safety is one of our major research themes and will continue to be, not just because we are partly funded by the Roads and Traffic Authority and the Motor Accident Authority, but because it really is, as I said earlier, a major injury issue for New South Wales and also the sort of approaches we are taking are really an attempt to look at what are some of the major problems in the area and if you asked us in six months' time to talk about what we are doing, there would be more projects added because it is an evolving research program.

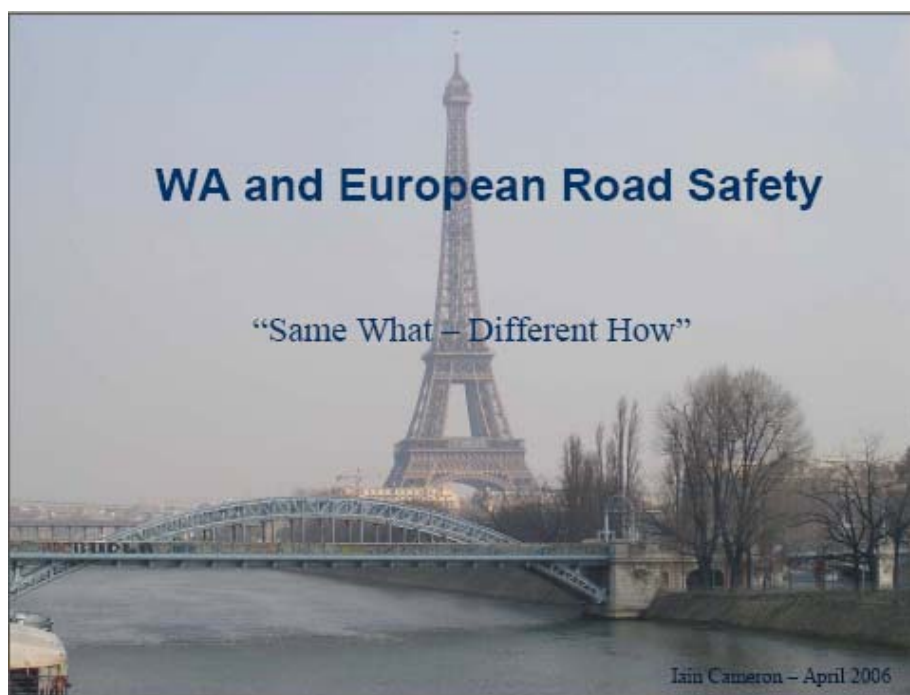
At the bottom is our website if anyone is interested in following it up or certainly you can contact me about any further information. Thank you.

Mr FAULKS (Manager, STAYSAFE Committee, in the chair): Could I just indicate that while we have showcased some of, what I think, are our superb research institutes and organisations in New South Wales, but there are a couple of others. One is the Commission for Children and Young People, which in New South Wales operates the child death review team, which investigates all deaths of children up to the age of 18, of which a reasonable proportion, of course, are road traffic related. In New South Wales we are lucky to have probably, if not the best, then one of the top three or four transport institutes in the world, which is now renamed the Institute for Transport and Logistical Studies, run by Professor David Hensher and his group at the University of Sydney.

Chapter Fourteen—

THE ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT WORKING GROUP ON ACHIEVING AMBITIOUS ROAD SAFETY TARGETS

Mr Iain Cameron
Western Australian Office of Road Safety



This session is a little bit about the OECD work that I am involved in, along with David Ward, who is in the same group and it is chaired by Eric Howard from VicRoads. That is a little bit about the what, but a key feature of that work has been more about the how as well. When I say the how, how we implement it.

Just going back and recapping, just to show I have been listening to the previous speakers, Ian Johnson—and I am paraphrasing—talked about we have the knowledge but lack the will or the commitment or in some cases perhaps the ability to implement. Mark, who has just left us, I saw a quote there from Aristotle which was something like “It is not enough to know but we must try to have and to use it” and

Lori talked about occupational health and safety environments and zero tolerance achieving. We can achieve much more in those environments but they are obviously closed environments.

What I want to do is talk about – a bit of a shift now in the emphasis of this talk – not so much about what do we need to do in road safety or what works, but more around how do we implement it. Our political leaders here and others, we are always relying on and asking them to take something else and make decisions on something else and implement it for the good of the community.

I want to spend a little bit more time on that item because I think eventually it is going to get harder and harder for us to keep approaching things as we have in the past. So, research into practice for community benefit, I guess is what I would like to talk about. Nothing actually works unless you implement it properly. It does not matter how well designed or researched it is, unless it is actually out there on the ground and being implemented effectively, the community does not get the benefit. We do not get any road trauma.

I will speak to you – you can label me with various labels – as an implementer, working with our political leaders, who are implementers in this sense versus a bureaucrat or an office boy driving a desk, not on our roads, as what I have described recently.

This talk is a compilation of some European experiences I have had over the last eighteen months. A couple of you may have seen some of this – I know Ian has seen pieces – but it is a compilation of a couple of different presentations. I guess what spurred me on was back in March, twelve months ago, some time I had in Sweden, like a lot of us, I have been there. I have read and I have seen and I have listened and I guess what influenced me the most was some discussions I had with the people there around what they kept telling me was the Scandinavian pragmatic way they had of doing business and I went there for Vision Zero and all of those sorts of things but I kept hearing some of the keys to their work was their Scandinavian pragmatism and this is the way we just get on do things. It is our culture and all the rest of it.

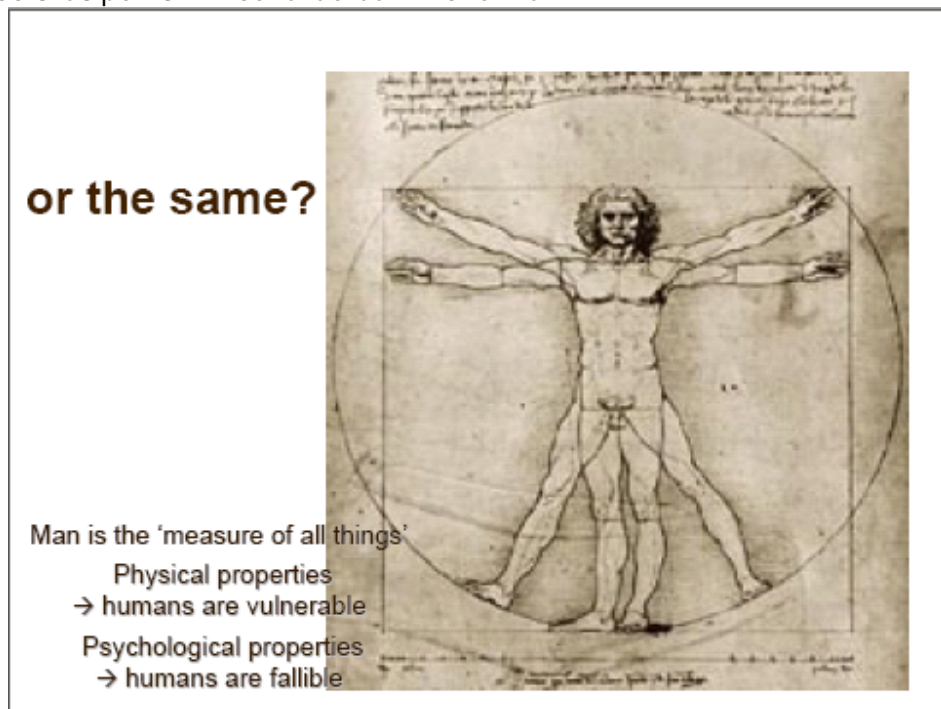
That began to rub me a little bit I must say, in terms of I kept thinking of the Australian way and our practical approach and all the rest of it to solving problems, etcetera. So these are some of the thoughts based on those experiences and I am not here to tell you that we implemented these fully or that I have got a scientific research base for all of them, but I think of what might be possible with a fair blend of pragmatism and we start focussing of how we implement, not just the what.

Are we different or are we the same? As I say, I went there thinking that probably Europe – and I have been criticised recently in the West Australian press, you cannot apply what is happening in Europe with here – I think the laws of physics apply in every country in the world, no-one had disproved that yet. There are a lot of

differences in what I saw in Europe in terms of the traffic environments, the Arch de Triumph, the amazing way that all those roads come in and around there, but at the end of the day there are two same things, we are vulnerable as humans no matter where we are and we make mistakes. That has come up in a number of the presentations, particularly Ian Johnston's presentation this afternoon.



I reinforce that point in Leonardo da Vinci's Man



I also, while I was there, did take the opportunity to see where Australians had fought. This particular cemetery had 40,000 – I was going to say graves, but they were not all graves, they were acknowledging people who had died, they could not always find enough to have an actual grave site, but it got me thinking that this is the end we wish to change and in Europe the European Union, as a number of you are aware, the numbers they are dealing with are 40,000 deaths a year. So the aim is obviously to prevent crashes but also try and reduce the severity.



The end we wish to change

- Death and serious injury on our roads
- Eg 40,000 deaths/year in EU

Aim:

1. Crash prevention
2. Severity reduction if crash cannot be prevented

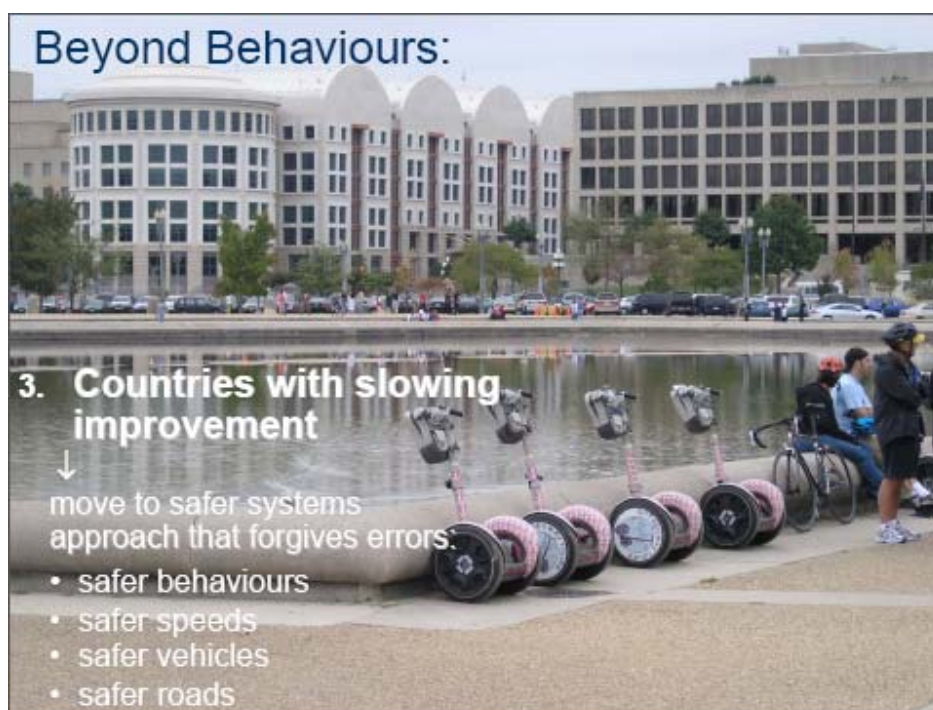


The journey to improved safety

1. **Set ambitious targets**
2. **Countries with large problems – focus on seatbelts, drink driving, speeding. Legislation, enforcement and education most effective.**

The interesting fact of this OECD work and the project or the activities is entitled Setting and/or Achieving Ambitions Road Safety Targets, and the report has to be prepared and presented to the European Minister for Transport. While that work is in progress, I guess some of the key points that have been discussed will most likely emerge out of that work – and this is a bit about the what and we will move onto the how – but as I said earlier, set ambitious targets.

The countries that have set more ambitious targets achieve more than the jurisdictions that do. Countries, as David Ward said before, with large problems, in particular, really need to address seatbelts, drink driving and speed. Behaviours must get under control through legislation and typically enforcement and education are very effective strategies, as we have heard here today and we have used.



Eventually though, beyond behaviours, there is a slowing down of that improvement. We may or may not be there yet in this country. We are certainly not there in Western Australia but we are thinking about what happens, do we want to get to that point and then do something about it or start anticipating what might be. So the safest system approach is what we have been talking about.

Just a quick example there, and to revisit the European Union, 50% reduction by 2010, and you look at the list of actions they have got, they are all sorts of things we have been talking about today.

Some of their numbers are still continuing to stagger me.



Example: European Union

Aim:

- 50% reduction by 2010 (= 20,000 lives)

Actions:

- Behaviour (campaigns, enforcement, licences)
- Vehicle safety (active and passive safety)
- Road infrastructure safety
- Commercial transport
- Road safety charter
- Observatory

This is a photograph from a car I where was a passenger in Munich, being escorted out to a vehicle crash testing facility. We were doing between 140 km/h and 160 km/h on what was a very different engineered road to what we would have in Western Australia. Their numbers are enormous. 11,000 speeding deaths. Drink driving—10,000 lives a year. Seatbelts, etc.. Big numbers.

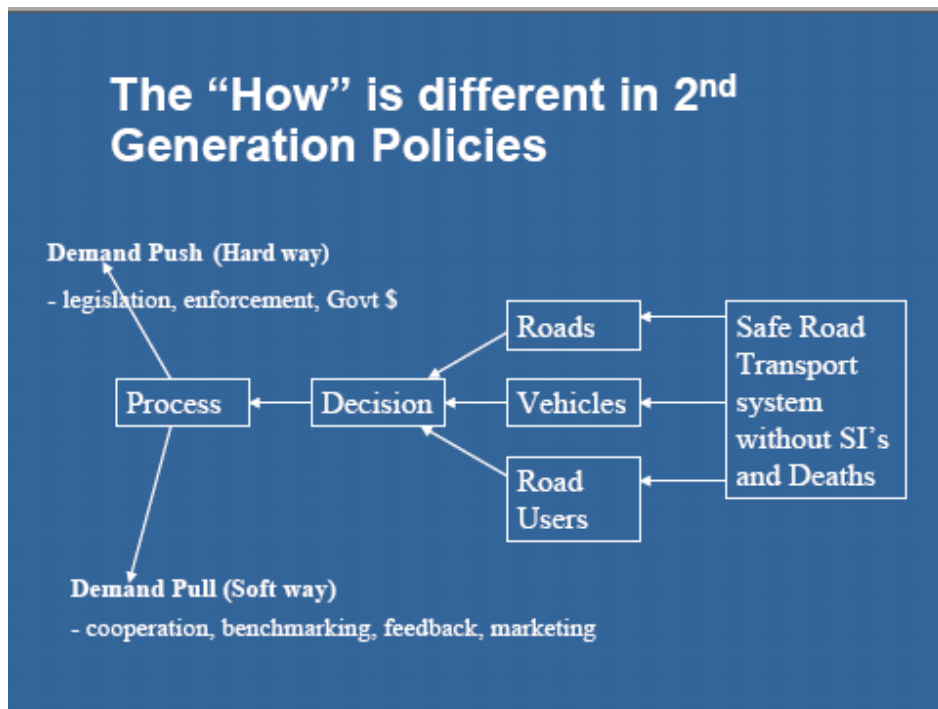


European Union road safety issues

• Speeding	-	11,000 lives/year
• Drink Driving	-	10,000 lives/year
• Seatbelt	-	10,000 lives/year
• Pedestrian Collisions	-	2,000 lives/year
• "Saturday Night Fever"	-	2,000 lives/year



Interestingly as we have heard today, that where they are going to save those lives, the biggest one there, the electronic stability program is where they are estimating up to a quarter of that improvement will come from, and to add to Ian Johnston's figures, I think across Europe they are estimating about 50% of the fleet, Sweden being higher at 75-80%, but 50% of the European fleet has that fitted.



This is the key point I guess I wanted to share with you in this presentation, and this is my interpretation of some discussions with the Swedes, particularly Mathsuki Belen who is out here in Melbourne at the moment, but in an earlier meeting we had this discussion at the OECD meeting and the interesting thing about this, on the right hand side they are all talking about getting safer road transport systems, lowering deaths and serious injury, we are all talking about using road improvements, vehicle improvements and behaviour improvements, but the decision making process there at the end, typically in a lot of cases that has been trying to push demand.

What the Swedes were telling me was the hard way, the hard way of doing road safety business, legislate, enforce and tip buckets of government dollars in there to improve road safety.

As you would be aware, some of the differences with Europe and here is there are 25 member countries and legislative change, they believe we can do at a drop of a hat. They believe it is very easy and I am sure we disagree with that at times, but from their perspective of getting 25 countries across the line to change legislation is extremely difficult in comparison to what we deal with.

They can go it alone and try but I guess particularly that begins to fracture the European Union and certainly in terms of making the road rules, it is not something that they would be looking to at all do.

The demand push or the hard way, the Swedes and a number of the other European countries have talked a lot about creating demand for road safety, the soft way of doing things, can we get demand pull through co-operation, benchmarking, getting a lot of feedback and marketing coming through. I want to talk and show, I guess a few examples of that coming through but it is about creating demand to pull road safety outcomes and implement it, rather than trying to push the hard way.

I might say, it is not one or the other, and certainly our discussions in the west, they are not about abandoning what works or the successes we are getting, but we are beginning to challenge and think about is there something else we should be doing while we maintain the gains that we are getting from those tough strategies we manage to get through.

Swedish Vision Zero, most would be familiar with in this room. I am not going to go through that but it does set the background for some of the interesting discussions I did have with the Swedes. I went there thinking that they had established this and set goals and targets and they had a plan to achieve all that specifically, and no surprise to some of you, but to me it was a bit of a revelation, but no, it was an Act of Parliament and a debate and a vision and literally that, it was an ethical debate through their Parliament and their community.

Swedish Vision Zero



- Act of Parliament 1997
- Shares responsibility among road users (legally) and system designers (policy)
- Death and SI's are not acceptable
- Ethically only choice
- Community and opinion leader awareness high and supportive

For example: Sweden

Traditional Approach	vs	Vision Zero
Focus on: <ul style="list-style-type: none">• Accidents• Road user behaviour• Individual responsibility (blame)		<ul style="list-style-type: none">• SI's and Fatalities• Human tolerance of force• System designers shared responsibility (control energy in system)
<ul style="list-style-type: none">• People don't want safety• Enforcement + education• Risk reduction		<ul style="list-style-type: none">• People want safety• Market forces (demand driven)• Eliminates risks

They thought they might set specific targets or be about to change specific laws and all the rest of it, and at this stage they are certainly not looking at that, they tried to look at it, but it was an ethical debate.

There are some examples of those differences and traditional approach focusing on accidents; Swedish Vision Zero, looking at the tolerances that Ian Johnston was talking about in terms of the human body, tolerance of force. One of the key things that I am going to illustrate is this notion of shared responsibility in terms of system designers and their terminology. A system designer I thought was just a road engineer or a planner or someone like that, but the definition I will keep coming back to: A system designer in Sweden is anyone that is in a position in that community to exert influence on the way that the road transport system is used. So the head of IKEA, for example, is a system designer because his company employs about five different trucking companies to transport furniture and other goods all over Europe. So that head is a system designer. Vision Zero talks about people wanting safety and using market forces to create demand.



Comparisons with the Dutch sustainable safety, again not so much a vision set but a philosophy underpinning their strategy. Again it relates to infrastructure, vehicles and man, but there are some interesting aspects of that that serve to create demand.

A simple example of that, and Ian Johnston has touched upon it: In Sweden there was a lot of discussion around speed as an essential plank in that safer system and it is important in both the traditional responses and the more Vision Zero perspectives, but there is a difference in terms of the way it is interpreted or applied.





Traditional speed management: A lot of what we have done has really been about targeting the individual road user and their capacity, particularly young men, or their ability to handle speed. The Swedes talk more in the context of what is the system designed to cater for given trucks, small vehicles, heavy vehicles, wet roads, dry roads, old road users, young road users, et cetera, people with varying stages of vision and mental capacity to drive a motor vehicle. They talk a lot about what is the capacity of the system to handle speed and volume of tracking, avoiding just this focus purely on the individual, so it is relating speed to the design of the system.

Again, there is shared responsibility, and I know that we have had discussions earlier today around the EuroRAP and other things, but system designers and the shared responsibility for safer use of our roads. A lot of what I kept hearing and what appealed to me in EuroRAP and as AusRAP comes now is really trying to get messages through to the consumers about what is a safe road all about. We have identified here that the star ratings for vehicles are not widely known by the community; even less so with roads. The ideal speed limits, which Ian referred to earlier in his presentation, basically as we all know coming back to the limits of the human body to tolerate that kinetic energy transferring into the body. I understand that they are based on healthy adults rather than necessarily any application for young or elderly or frail and I think, interestingly enough, the red flag argument comes up quite often and why isn't there a red flag and just get rid of cars all together. It really comes back to this scientific basis of what the capacity of the body to survive that trauma is.



What interested me, and this is a Dutch example, about how we implement and how we engage the consumer or the community in these road safety changes - this is a Dutch 70 km/h road. There are no speed zone sign there. It was explained to me - and they don't have these everywhere, but they are certainly working on these - that if you see that road layout in Holland, that tells you that the maximum safe design speed for that road is 70 km/h. You saw the earlier slide about man/infrastructure/vehicle. The Dutch sustainable safety is saying a lot about what is evident to the road user, whether it be in the vehicle or on the road? In this case 70 km/h is defined by a dotted white line on the outside, two solid white lines separating traffic with a green belt in the middle. That is grass, which would not work in Western Australia for about eight months of the year, but in other cases they do paint the centre of that median divide green, and you will see on the left a segregation of cyclists and vulnerable road users. Around that absolute limit that Ian was talking about before, if there is a chance of vehicles colliding head-on in this one, the maximum safe design limit of speed is 70 km/h. That will still give a much higher force if they hit at that speed, but presumably there is some chance to brake. The important point about that slide is their efforts to actually make the infrastructure self-evident to the user and get some feedback about what is the safe design limits from a safety point of view.



Similarly here, this is a 30 km/h environment. There is actually a sign there, but it was explained to me that they are spending a lot of time looking at road pavement. In this case, we had just entered through a gateway and we had to go over a ramp and all the rest of it to get off what was a high-speed road and on to a lower speed road. What I took out of this again was self-evident feedback to the road user about what is the safe maximum speed and in this case the example given is determined by either cobblestone pavement or in some cases brick paving or, where like us they have asphalt and they cannot give you that cobblestone feedback, they would actually spend a lot of time with systematic traffic calming measures that really indicate to you that you must slow down, again trying to make this road hierarchy, which every State and Territory in this country has, self-evident to the road user. I would argue in Western Australia - it may be different in other States, but in Western Australia - it is certainly not self-evident to the road user in terms of providing consistent feedback about what safe maximum speeds are.

Second generation strategy is what is being talked about, moving beyond what we have traditionally done, and there are some big messages for us. We are starting to look at our communication strategies, but the Swedes were giving me examples of intelligent speed adaptation. There was an Austroads report a few years ago and our thinking when I left was around, "Well, let's get this implemented for the recalcitrants or the recidivist speeders on our roads". We will get an Intelligent Speed Adaptation (ISA) system in place and that will control them. The Swedes threw up their hands. I am sharing with you a learning curve because I certainly have changed my thinking on a lot of things as a result of some of these discussions. They said: "Well, why on earth would you do that? Why on earth would you implement something like that and

try to get support for it? Who is going to want to have one of those systems in their car if it has been associated with recidivists or people who have problems or whatever?"



The Swedish approach to this, and again they do not have a mortgage on it, they were emphasising in their trials - and they ran a trial with 5,000 people in about three cities - it was much more about the consumer uptake of this and what the consumer reactions were or the drivers' reactions were to using these systems. They trialled the different systems, the one Ian Johnston talked about with the Safe Car project in Victoria which includes the accelerator that pushes back when you exceed the speed limit. They also trialled the light and the buzzer on the dashboard and those sorts of very simple low-level intervention driver support through to something a little bit more big brotherish. The feedback from the Swedish community was: "We don't like the accelerator one. It's too big brotherish and makes the driving a bit jerky." They got I think a 20 percent reduction in travel speed across the network just from people being able to identify what speed zone they were actually in.

To take that application further, as most of you would know, Sweden has done very little systematically with enforcement, certainly not to the same extent we have, and they either have or are about to introduce a big roll-out of fixed speed cameras across their network. I don't know if they have done it yet, but they were certainly talking about it when I was there. The point that they were making was that if an intelligent speed adaptation system will help them implement some other measures, they will get a benefit out of intelligent speed adaptation by creating demand. Their approach was: "We don't want you to speed because it will cause deaths and injuries. We are going

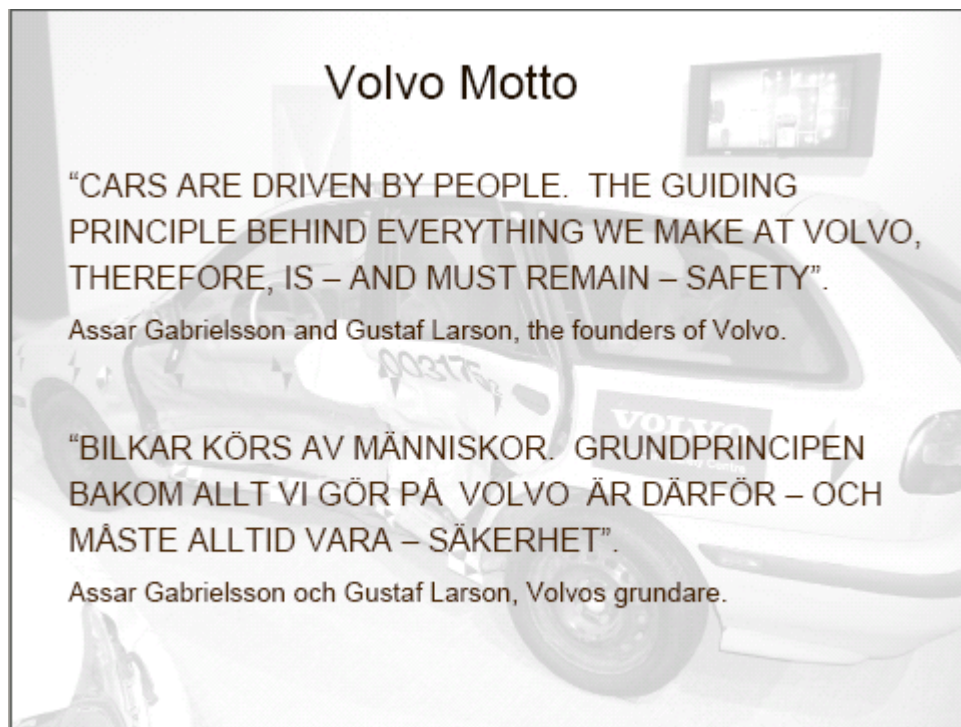
to put more speed cameras out there and catch you if you do speed, however, we do not want to catch you speeding. If you are concerned about getting caught speeding, why don't you fit an ISA system to your vehicle?" Creating that demand for it, they are setting it up, creating a network for it. Obviously it will take a while, but they are using market forces to roll that out.

We are looking at that model in Western Australia and certainly our roads authority is talking with the industry at the moment to see whether or not there would be support initially to have the initial high costs per unit costs progressively rolling out and it would not take too many speeding fines, particularly if we get support to increase traffic penalties in the next few months, to recoup the cost of fitting what can be a simple after-market system. So it is not so much the "what" here in terms of the technology, but more about how do you use that in your basket of road safety tools? We need to roll more speed cameras out in Western Australia, there is no doubt about that. Monash is doing some work with us at the moment in terms of what we need across the network to lower those travel speeds by another two and a half percent. It is going to be very tough and we keep saying to our politicians, yes, accept it, lead it, it will save lives, but we keep putting them in that situation and they have been very good, but eventually at the end of the day that gets harder and harder and the community will wear less and less and that makes it more difficult for our political leaders to back some of these things. So if we are able to match it with an alternative strategy at the same time we will get a different result I am sure.



The Swedish again, Vision Zero, just some safer vehicles. It is a very different way of getting strong support. It helps when the central motto dating from 1927 in Volvo is

all about the interaction of the driver with the vehicle for safety. I am sure most manufacturers have safety somewhere in their mission statements or whatever, but it is probably not the central tenement or plank on which everything else revolves.



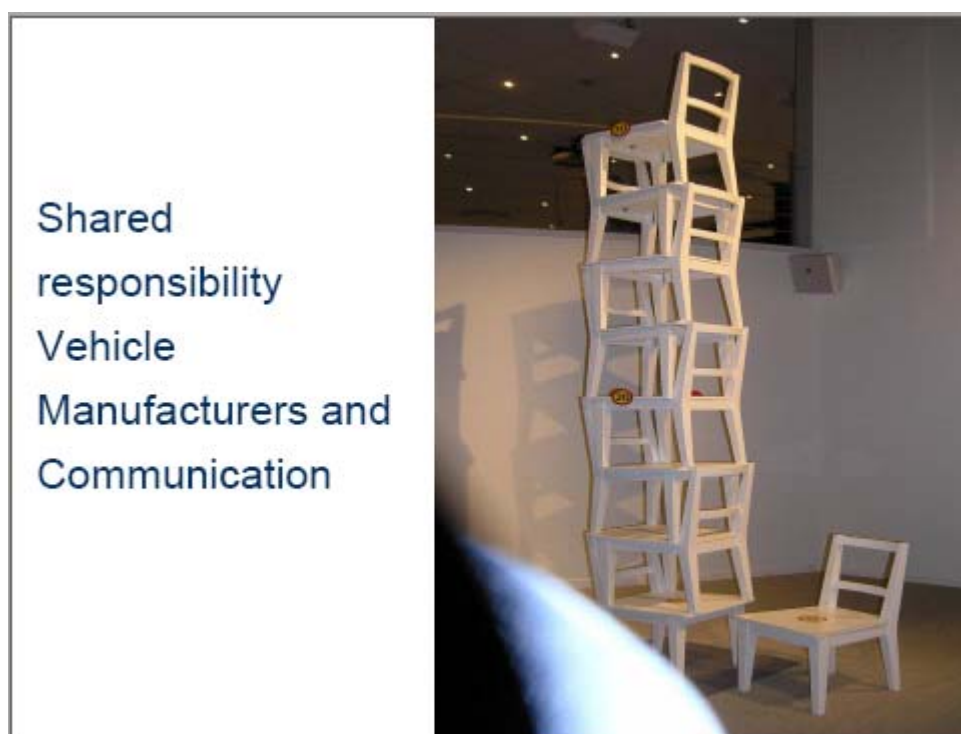
Volvo Motto

“CARS ARE DRIVEN BY PEOPLE. THE GUIDING PRINCIPLE BEHIND EVERYTHING WE MAKE AT VOLVO, THEREFORE, IS – AND MUST REMAIN – SAFETY”.


Assar Gabrielsson and Gustaf Larson, the founders of Volvo.

“BILKAR KÖRS AV MÄNNISKOR. GRUNDPRINCIPEN BAKOM ALLT VI GÖR PÅ VOLVO ÄR DÄRFÖR – OCH MÅSTE ALLTID VARA – SÄKERHET”.

Assar Gabrielsson och Gustaf Larson, Volvos grundare.



Shared
responsibility
Vehicle
Manufacturers and
Communication



If you have been to the crash centre you will recognise these. They are playing a role in trying to engage the community in some of the key road safety things and that one there has a 30 km/h speed limit on the top of that chair, which indicates that if you dived head-first off those eight chairs and your head hit that hard concrete floor, that is the force at which, unrestrained in a vehicle impacting at 30 kilometres per hour, your body would hit. They are looking to create different ways to reach the community.



It is a long time since my feet did not touch the floor. That is a mock-up of the back seat of I think a Volvo station wagon, but again just showing the lengths that they are going to try to look at some of the design problems from a different perspective and engage people in that in understanding the road safety problem. It was interesting, I sat in that and I had my camera with me and I said, "Please take a shot". They took a shot and I had sat there without a seatbelt and they asked me to wipe that photo and retake the photo with me wearing a seatbelt, so they are not just talking about it, they are on to it every time.

I would like to talk a little bit now about this cooperation and commitment to action which I saw happening and some differences that I saw in what they were doing compared to what we in the west are doing. I will give you a quick anecdote: I stayed in Gothenburg to start with. It was not far from the roads authority and I had a shopping centre nearby. I went as a tourist to buy a present for my wife and I walked into a clothing store and got talking with the lady behind the counter and she said to me, "What brings you to Sweden" and I said, "Road safety", and she said, "Well, you know we've got Vision Zero?" I said, "Yes, I do, that's why I'm here", and I said, "What do you know about it?" She proceeded in the next couple of minutes to give me a

fairly reasonable summary of what Vision Zero was all about. If I did that in Murray Street in Perth I would probably get some feedback about what you can do with your speed camera, Mr Cameron, and it would be anatomically very painful I am sure, but that would characterise what most of the Western Australian community would recognise as road safety strategy other than don't speed, drink and drive, put your seatbelt on, through the mass media campaigns. I went on to ask this lady, "Do you believe it is possible?" She said, "Yes I do. It won't happen straight away, but we're moving towards it, we've made a start." Now I thought that was a set-up. I challenged the Swedes the next day. They explained that by saying the Parliamentary debate that went on, the ethical debate that went on about preventing serious injury and death on the roads certainly would have helped and, more recently in that city, the efforts by the local government to start applying some of the Vision Zero initiatives with particularly some of the road engineering treatments. That was quite a remarkable turn around for me.

All the way through I found examples of where senior stakeholders and leaders actually had a reasonable understanding of what broad road safety strategy was all about and I am going to give some examples of how they got to that point. They are not there yet but there is a very big difference between some of the moves they are making to implement and what we are doing in Western Australia.

Our approach, not dissimilar to some other States, has been very effective. We have largely targeted a lot of social marketing, there have been a lot of individual hits, targets, points in mass media getting in, Put your seatbelt on, put your seatbelt on.

We have won advertiser of the year for two years, one of only two companies in Western Australia to do that. So we keep reinventing the same message and delivering it more effectively. It is about hitting the individual, about getting them to do something or not do something, whatever the case maybe.

In Sweden they have done less of that, even vehicle campaigns, we are going to run one, but they have done very little in terms of mass media marketing of vehicles. They have used opportunistic media, they have worked with the car manufacturers and they have worked with five or six key journalists in Sweden and created a lot of public expectation involving vehicle safety by running not one single campaign. They told me they had not run one mass media campaign promoting the safety of vehicles, certainly in recent times anyway. That co-operation and work with journalists and the car manufacturing industry is significant.

Just a couple of things there, in terms of getting that commitment – and this is not Swedish-specific, European examples as well, broadly they are spending more time with the system designers, whether it be the heads of Ikea or others – and I will come back to that in a moment – to try and get active commitment involvement in road safety.



Some of you would be aware of the European Union Road Safety Charter, which is identifying commitments and organisations are able to sign up to that. The Swedish OLA, which I am going to talk about now – our road safety council and I think I have put in a bit of weight in the last five years – we have had breakfasts, lunches and dinners with stakeholders throughout the State, whether they be regional – our council is very supportive, we go three times a year and have regional meetings in different parts of WA, tremendous support – but I could not tell you in the five years that I have been doing this job, much about what action has actually resulted as a result of all those breakfasts, lunches and dinners, beyond the government departments who traditionally are under the finger to deliver on these road safety outcomes and by default then the government of the day.

With all the private stakeholders and others, yes, there are examples of things that are happening but what have we initiated and what has actually happened – I could not tell you and that is five years of breakfasts, lunches and dinners sharing road safety experiences with them.

The Swedes shared with me what they call OLA – I believe it is a Swedish boy’s name as well but it is a remarkably pragmatic process. It is fundamentally based on the premise that a serious crash or some particular series of crashes or issues, we do not want these things to happen again. It must not happen again. We are not going to blame you. I mean they still have similar I believe, not exactly the same, responsibility, as Ian was saying before, individual road user is responsible. The legal basis in Sweden has not changed. I thought it had, they looked at doing legislative share responsibility and they have backed away from that.



Essentially it is a policy framework and an approach that they are taking with their road safety, it is not legislated. The individual road user is still responsible if there is any blame to be apportioned, the driver can be sued or prosecuted as the case may be.

The OLA system is remarkably simple, a three step process. The O stands for getting some objective data together – don't spend all day tell a group just about road safety outcomes, whether it is a regional group of a key group looking at moped safety or vehicle safety or drink driving – short, sharp, objective presentation. Get your data together that tells a picture. These are senior leaders of organisations, whether they be bus companies, truck companies, moped manufacturers, helmet manufacturers or whatever – depending on the issue – they get a cross section of 12 to 15 key leaders together. They can include government leaders, whether it be police or education officials, but they spend a fairly concise amount of time painting a very accurate road safety picture from the helicopter view, not the individual road user view formed by what they see on the road – and those CEOs and leaders are the same as any other member of the community, they have their own opinions.

They present this short, sharp, concise helicopter view. It can be regional, on a particular crash or series of crashes, or it can be national, an issue like motoring safety. They then begin to brainstorm lists of recommended or effective actions and the facilitation of this is absolute crucial. It is not about saying to the head of Ikea, that's a really dumb idea, where'd you get that from, it'll never work, through to, well Ian, that's an interesting idea, have you ever seen any evidence or any examples of where that's worked in the past. Can we learn from what someone else has done? It

is about how they facilitate that. They spend perhaps half a day with them. They might extend that over a couple of periods of time, spread out by about three weeks.



Towards the end of that three step process, I am asked, well as an organisation in Ikea, is there anything that we believe we can contribute further to improve this safety situation? Go away and think about it. The CEO, he is not asked to do it on the spur of the moment, he is asked to think about a few things and go away and talk with his key advisers and others and he comes back and there is a letter of intent or some commitment that is made, two or three commitments, Ikea or the bus company or whatever, the bus manufacturer might make, to doing what we can do to stop this from happening again.

The last bit is that they get the CEO and the 8, 10, 12 colleagues in front of a microphone and a camera and they make a combined press statement. We are dramatically concerned about bus crashes, the type of crashes that have been happening here, we don't want them happening again and this is what we each individually and collectively are committed to do. Something about shared responsibility. What can we each do? They are now looking at some follow up monitoring but this is all around shared responsibility and not blaming key stakeholders for a situation or looking at the negative or finger-pointing. It is about trying to move things on.



There are some examples of the OLAs that they have conducted in the last couple of years. It has been going about three years now I think, but heavy vehicles, mopeds, alcohol. They have got a manual and all sorts of things produced. The advice was if you are going to start doing this sort of thing, start simple. Pick something concrete that you can get some results in. Do not pick the toughest nut that you have got to crack. It could take you years and you will get no results. You need to pick off something.

In Western Australia, without giving away too many trade secrets, we are looking at a regional one. We believe, to engage regional communities and the key stakeholders. We think that might be an effective way to go. 60% of our deaths occur on country roads. We certainly believe there is an opportunity there.

We are looking at that and we might add some different flavours to it. Things that we were not doing, but particularly around the involvement of young people, as well as business leaders and key stakeholders.

When they kept talking about pragmatic, no blame, evidence driven, practical sort of solutions, I kept thinking – well, it is not a Scandinavian mortgage on that, why can't we do more in that line as well.

Just to finish off, I guess in terms of the focus of this talk, it is really around some of the how. It is challenging our thinking. We have been going on this for about twelve months. It is flowing onto a number of areas. Ian's comments before around drink driving and others who keep doing the same sort of mass approach, social norm sort of

approach, in a couple of areas we have got there we need to do something else in terms of technology but this is challenging us in terms of the how. Our political leaders have been great, they have supported us a lot. We keep going with tougher and tougher measures, which often have less and less community support, but we know in the fullness of time they will make a difference, but how can we keep asking our political leaders to keep taking it on the chin for a longer term benefit that may be beyond their term in Parliament and things like that.

So we are looking, the Young Driver Strategy, the work that we did last year on that, is an example of us approaching the how and becoming much more community engaging. Beyond a mass media first generation individual hit to how can we engage you more in actually helping us to work through these solutions?

In terms of where we are going, there is now discussion around our next road safety strategy, Beyond 2007. How we get much more effective community engagement in setting the parameters and the development of that strategy and whether or not it should include some vision beyond the five or ten year plan as well, whether it should have some sort of ethical debate running in our community. Ian Johnston was saying earlier today about how much is acceptable. If you run that discussion to its logical conclusion, nobody accepts any road trauma.

Is that a pie in the sky, well probably a few years ago it might have been but why can one country or a couple of countries have those debates? Why can't we have that debate? How do we have that debate? How do we progress with it, etcetera, what does it mean? They are all the sorts of things that have been done elsewhere. In lots of ways we are no different to Sweden, their cultural issues, I kept thinking they were different, their country is smaller. Well, it is not so small when you look north to south, it is pretty skinny east to west but they have got low volumes in the country and all those sorts of issues. We are more similar and certainly rules of physics and all the rest of it apply.

What we are looking to do now, is without abandoning what is working very effectively in terms of our strategy, to start to look at in the second generation terms, how can we be more community engaging and how can we create more demand in the community for some of these road safety measures? Part of that will be about how do we effectively share what is a helicopter view of road safety with the community, so they can start to see things in context.

None of our community would ever see any road safety measure in the context of any overarching plan. We do not want to have them all understanding 15 pages of red tape strategy but it would help if they saw it. At the moment they describe road safety as your multi nova speed camera and the TV campaign, is essentially where most people are forming their road safety – in Western Australia – view of the world and other than what they see in front of their bumper.

Recommendations

- Focus on effective implementation of current “safe system” strategy.
- Stimulate demand for safety by using 2nd generation methods for safer roads, vehicles, reducing travel speeds.
- Promote shared responsibility for active commitment to action. How can we work together?

Just to finish that off, we are obviously continuing on our targets but how do we effectively implement them is the key that we are left with and our Young Driver Strategy gave us results so far beyond what you would have reasonably expected. Thank you.

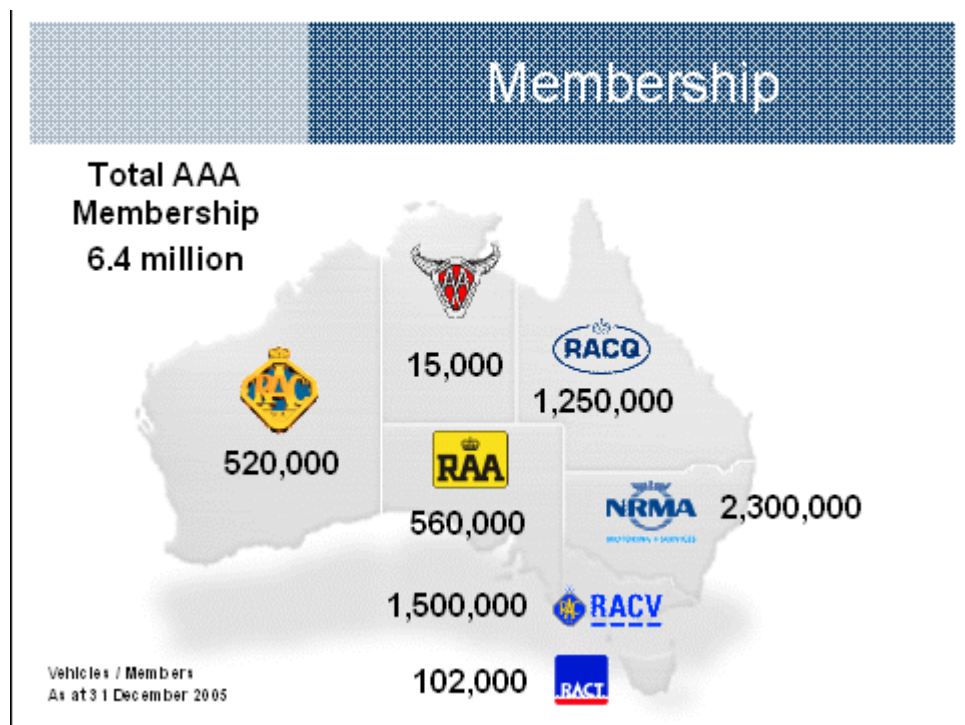
Chapter xxxx—

EYES OFF THE ROAD AHEAD?

Mr LAUCLAN McINTOSH
 Australia Automobile Association

Thank you very much for the opportunity to speak to you this afternoon. I just want to really run through some of the issues that we are doing nationally and with a certain link to our international activities, so that you can see where the motoring clubs collectively in Australia fit into the picture and I will try to be as brief as I can.

From the point of view of the Parliamentary Committee, I really want to talk about this report, *Eyes on the Road Ahead*. It was a very comprehensive report that the Federal Parliamentary Committee put out. It got caught in the new election process in the last Howard government, the Parliament was revoked, so therefore the document was lost in effect, but it was resurrected and the Government did respond. I just want to look through what are some of the issues in this.



The motoring clubs in Australia, just as background, really have a very high penetration of the total motoring public. About 60 percent of Australian households

have a motoring club member, so we really have a very high penetration, and all the clubs are involved in giving submissions to local parliamentary inquiries in every State. We have been doing so for 100 years. That has basically been our core business and nationally we present to the Commonwealth government through the Australian Automobile Association (AAA). We are linked in the activities. I put the Federation Internationale de l'Automobile (FIA) logo here, I am sorry but I didn't put the FIA Foundation for the Automobile and Society logo here, but there is a clear distinction, as David Ward said this morning. The motoring clubs collectively in Australia belong to the Federation Internationale de l'Automobile as an international body, and it has the FIA Foundation for the Automobile and Society off to the side, a separate charity, and we also are members of that separate charity. There are about 150 motoring clubs worldwide, there are about 150 million members and we are all in the same business of generally providing advice to governments on behalf of motorists. In May 2006 I will be chairing a conference in Cologne, where there will be about 50 different countries represented. They will be focusing on a range of issues, including some road safety issues, with the help of the FIA Foundation, so there is a lot of background in what we are doing.



Let's look at the issues of safer drivers, safer cars and safer roads. We have a program I will talk about, Think before you Drive, the Australian New Car Assessment Program (ANCAP), AusRAP, and we have the Safer Roads Partnership. The Safer Roads Partnership is the partnership we established in 2003 - the George Institute for International Health forms a part of that, the Royal Australasian College of Surgeons, the Australasian College of Road Safety. Like all partnerships, it is hard work.

AAA and FIA Foundation

- **Drivers:**
 - Think Before You Drive in 30 Countries

- **Cars:**
 - ANCAP, EuroNCAP, JNCAP

- **Roads:**
 - AusRAP, EuroRAP, usRAP, iRAP

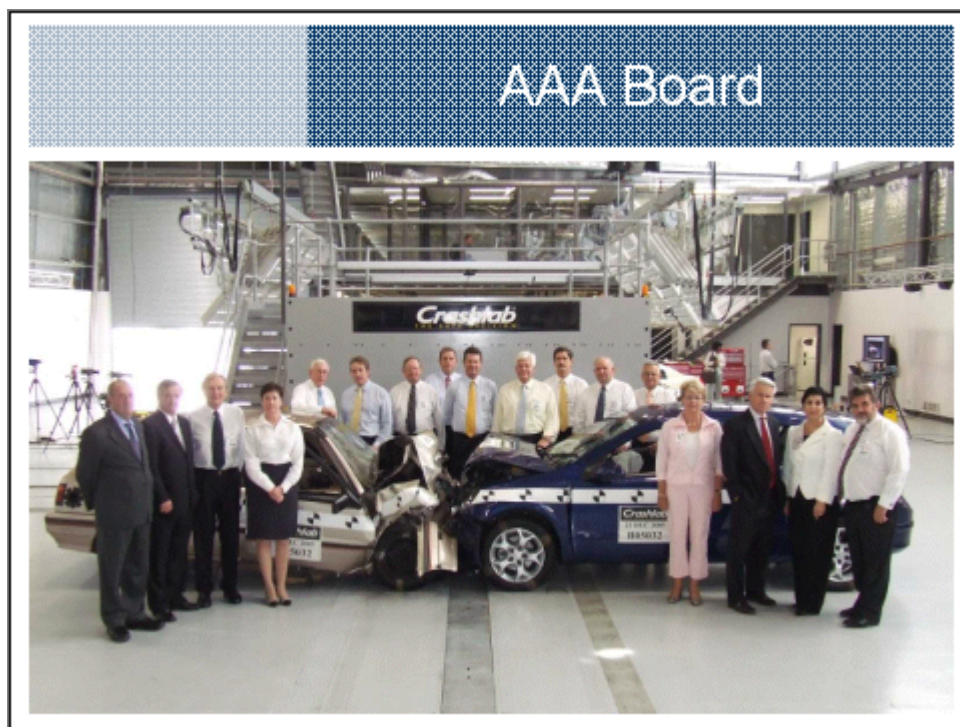
- **World Health Day**

The FIA Foundation for the Automobile and Society and ourselves are involved in a 'Think before you Drive' campaign. I think it is in 30 countries now, but the aim is to get it to 60 countries.

We are doing work with the Australian NCAP, Euro NCAP, the Japanese NCAP; we're crash-testing cars so that consumers can have that information, and also, more importantly, the manufacturers actually compete to get themselves a five-star car. Sometimes we are concerned that people don't know. Maybe that is not as important as making sure the manufacturers actually compete. We know who are the manufacturers trying to get five-star cars into the market, and a lot of them are and a lot of them are working hard to get four-stars into the market. The difference between now and 10 years ago is that almost every manufacturer is desperate to have a four-star car and, whilst the people might not know it, the facts are that they are making those changes.

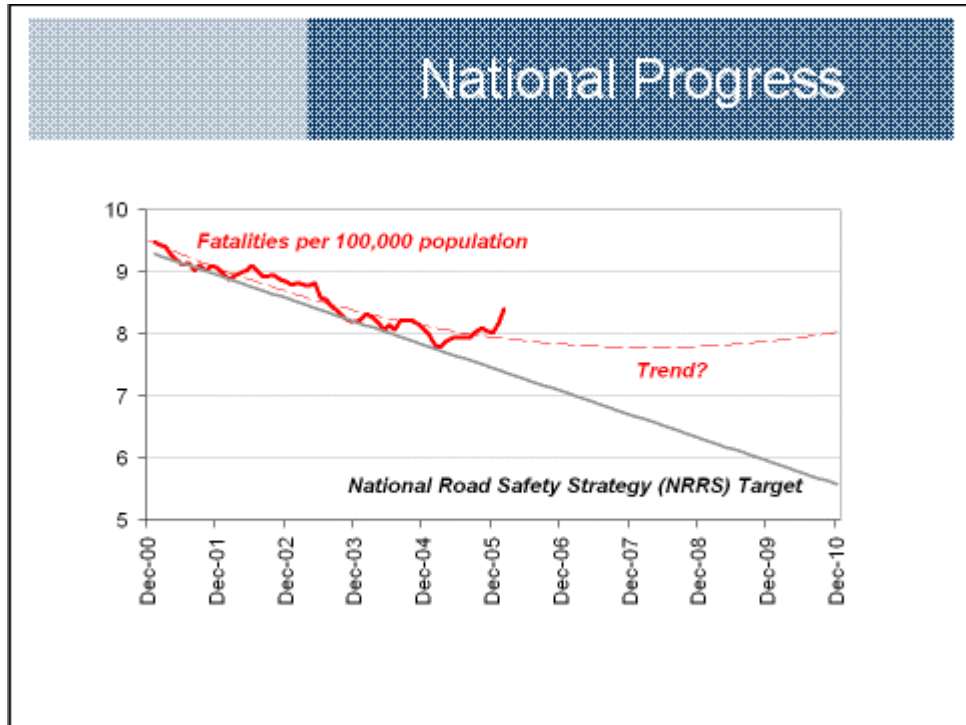
As David Ward said this morning, we are involved in iRAP, the international road assessment program, and AusRAP, which is how safe are roads. It has been published here in Australia and that is with the help of the State governments. It does not work unless the State governments are part of it. They provide the data and we do the analysis. Greg Smith is doing a lot of that work (see Chapter xx of this report). We have been looking at the risk rates of different roads, just getting into people's minds the risk rates. There is a different risk rate on different types of roads. It is something we have not thought about. I think in Europe it started when people started to question the safety of tunnels and they said, "The tunnel is really unsafe, so

let's drive around the top of the mountain". Of course, that was much more unsafe, but people do not think about how safe is the road itself. So it is really important that we start to get people thinking. World Health Day, I think, was very important and the FIA Foundation for the Automobile and Society did a great job in getting that started. We heard earlier how important that became and the World Health Organisation itself found it to be the most important activity they had done. But going and seeing and having a look is really important.

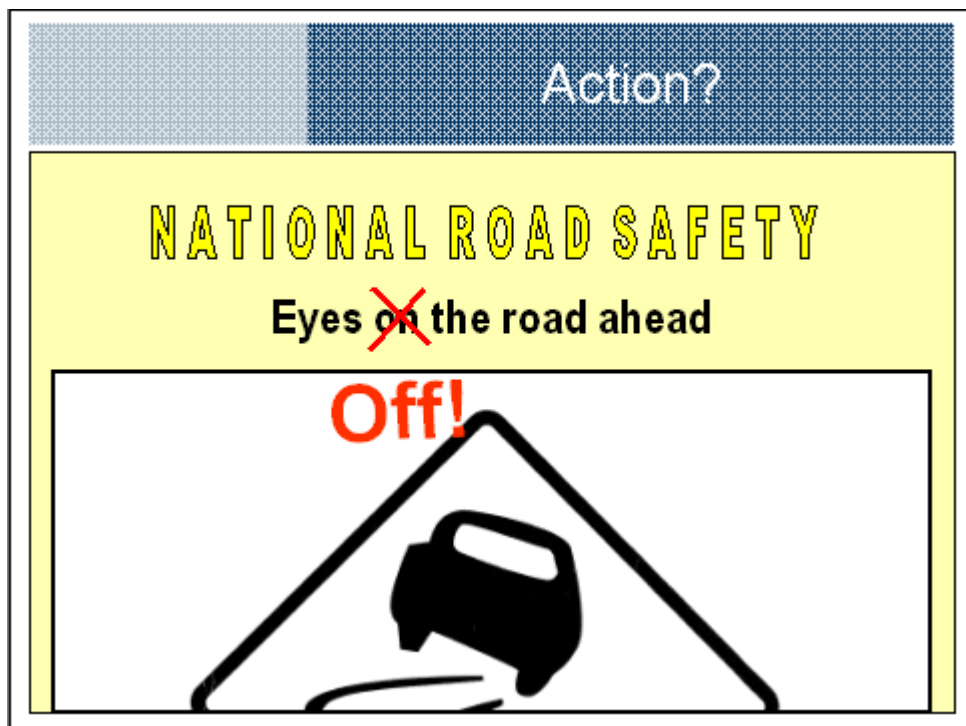


This is the AAA board, the presidents and chief executives of the Australian motoring clubs and the chief executive of the New Zealand club is there as well. These are two vehicles crashed. It looks like the speed was about 56 kilometres an hour. The vehicle on my right, the little silver one, you can see on that basis the occupants would have died. That is a 1987 model of the same car. That is a 1985 model, the blue one, and you can see the difference in the two cars. It is a very sobering message to see the significant change in the engineering of the cars in that time. Engineers are responding, they are making cars better. The reality is that we can have cars like that blue car, we should have all cars like that blue car, but probably both of those cars meet the Australian Standards. That is a fairly disappointing thing because it is so difficult to change the standard because everybody has to agree and it takes forever to do it. But the AAA board was able to see that and also saw an actual crash test. That is at the Roads and Traffic Authority's Crashlab facility in New South Wales, which I think it is a great facility and a really important part of the national road safety strategy processes. This is the thing that we have seen this morning, the national progress against our target is slipping away from us and for a wide range of reasons, but it is really important that at least that message be taken, that is straight

from the Australian Transport Safety Bureau (ATSB) figures and you can see where the trend perhaps is not as good as we might like to think.



The question is that maybe the eyes are not on the road ahead, we have actually taken our eyes off it, and it is time we actually made some changes.



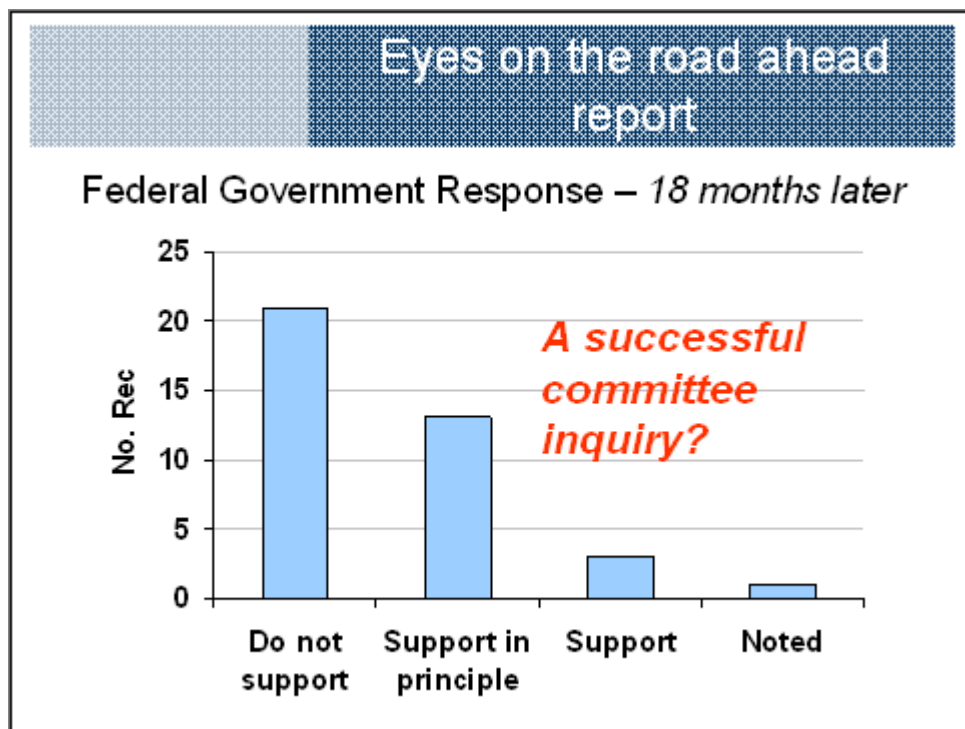
Eyes on the road ahead report

- “This report will provoke further examination of matters pertaining to road safety and lead to advances in an issue of concern to all Australians.”

Paul Neville MP, Committee Chair, June 2004

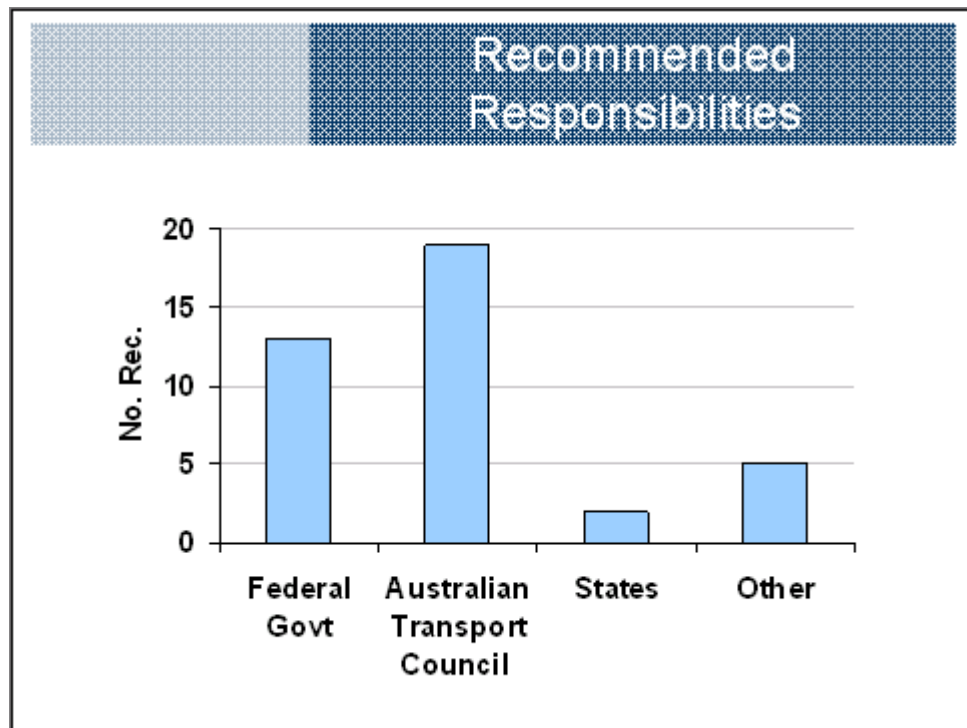
- Where are the advances?

Paul Neville MP, the committee chair, said when the report was released that it would provoke further examination of matters pertaining to road safety and lead to advances in an issue of concern to all Australians. Where are those advances today? He said this in June 2004—it is almost June 2006.




Every day five people die—1,700 people die a year in Australia. It is a very sobering situation. It was a very important report and really it was ignored.

The Federal Government responded 18 months later. They did not support twenty one of the recommendations. They supported in principle thirteen recommendations and they only supported five recommendations. They said No to the others. Again, it is pretty sobering. What is the point of having a parliamentary inquiry? Both parties, multidisciplinary, a lot of involvement, a lot of submissions and they said they would not support it. If you then say, well, maybe it was not very successful, if you look at what were the responsibilities in this report, who was to do things?



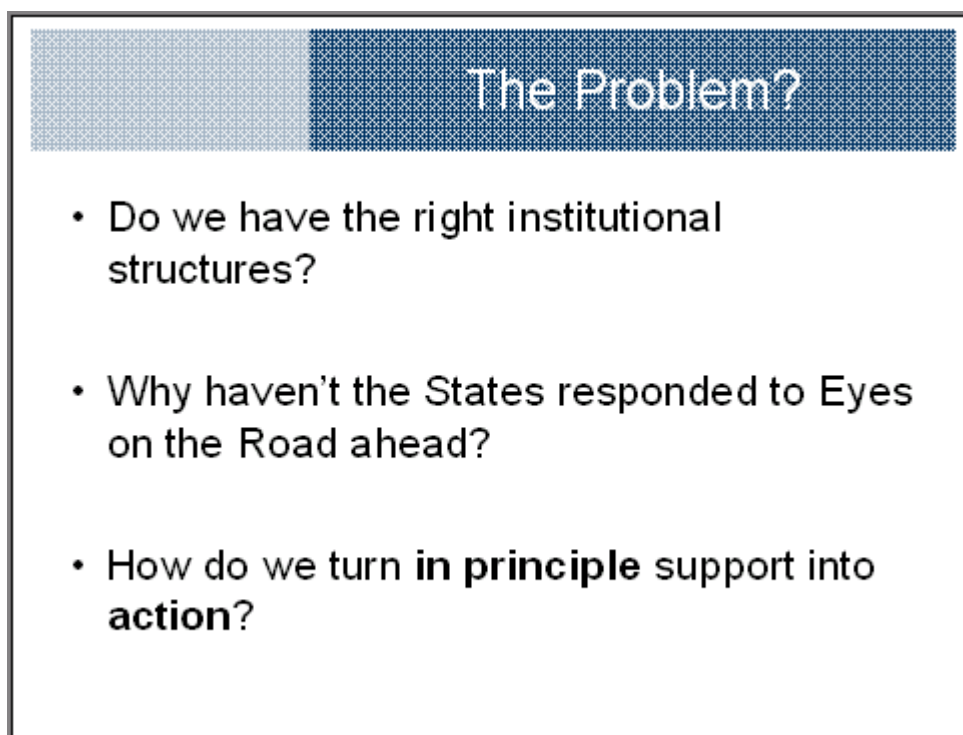
The Federal Government had to do twelve of the recommendations. It recommended about twenty actions to the Australian Transport Council, which is in effect a body of the States and the Commonwealth. It is a joint body. So the Australian Transport Council was asked to consider a lot of these, the States individually were only asked to consider two or three and there were some other ones relating to the Australian New Car Assessment Program and a few others.

There was a newspaper report just recently on 15 March 2006 that said Canberra rejects the raft of safety calls. It took a long time before the newspapers picked it up and maybe that is our fault, perhaps we did not push it as hard as we could have.



The image shows a screenshot of a news article from 'The Australian'. The article is titled 'Canberra rejects raft of safety calls' and is written by Robert Wilson. It was published on Wednesday, 15 March 2006, in the 'All-round Country' edition. The article's text states that the federal government has rejected more than half of the road safety proposals from its own parliamentary committee, including measures for alcohol locks on car ignitions, reversing cameras, and rollover protection standards. It also notes that the government's reply to the House of Representatives Standing Committee on Transport and Regional Services National Road Safety Inquiry quashed 21 of the committee's 38 recommendations and gave unqualified support to only three.

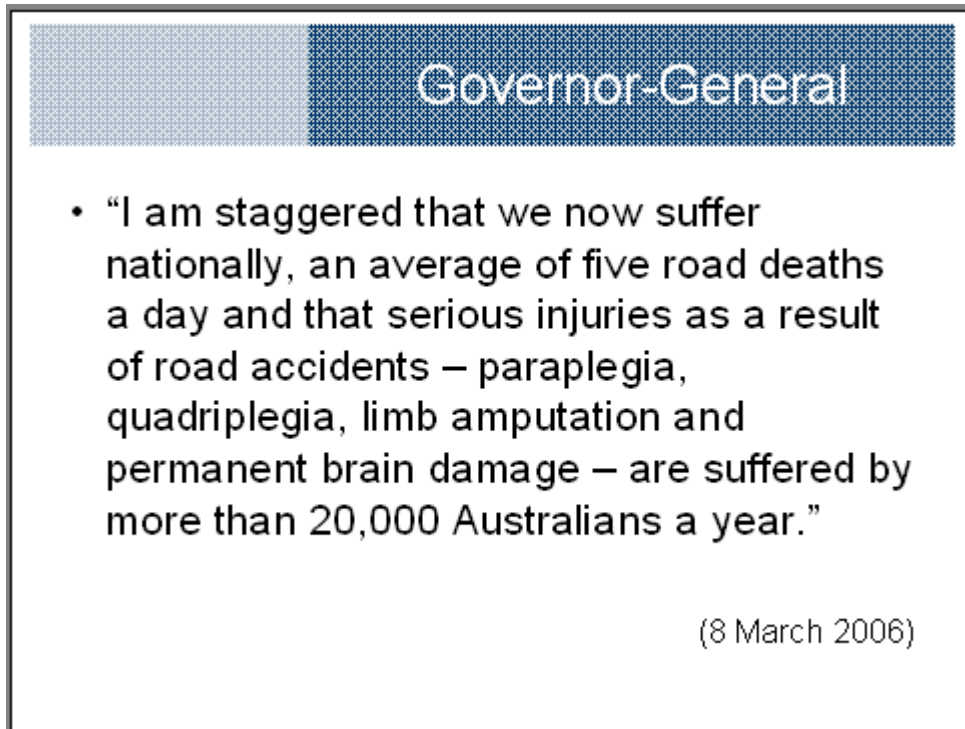
The question is: Do we have the right institutional structures? Why haven't the States responded to the Eyes on the Road Ahead report? How do we turn support into action?



The image shows a slide titled 'The Problem?' with three bullet points:

- Do we have the right institutional structures?
- Why haven't the States responded to Eyes on the Road ahead?
- How do we turn **in principle** support into **action**?

That is the real issue here. The parliamentary inquiry that this group represents I think is very important. There is one in Federal Government, but what have we done? What happens? It was mentioned this morning: So many times you make a report. Everybody I think said euphemistically, well, you know, we get something done, but everyone wants something done quicker. Five people die every day and continue to die. People are making recommendations and it is time we really moved ahead.



Governor-General

- **“I am staggered that we now suffer nationally, an average of five road deaths a day and that serious injuries as a result of road accidents – paraplegia, quadriplegia, limb amputation and permanent brain damage – are suffered by more than 20,000 Australians a year.”**

(8 March 2006)

This is what the Governor General said recently to the AAA Board: "I am staggered that we now suffer nationally an average of five road deaths a day and the serious injuries as a result of road accidents - paraplegia, quadriplegia, limb amputations and permanent brain damage is suffered by more than 20,000 Australians every year". The Governor General was staggered. He said: "If anything requires a great national effort, it is road safety". He said it is awful to think we have lost more people to road deaths than the number who died directly in the battles of two world wars.

Governor-General

- **“If anything requires a great national effort, it is [road safety].”**

It is awful to think that we have lost more people to road deaths than the number who died directly in battle in two world wars.”

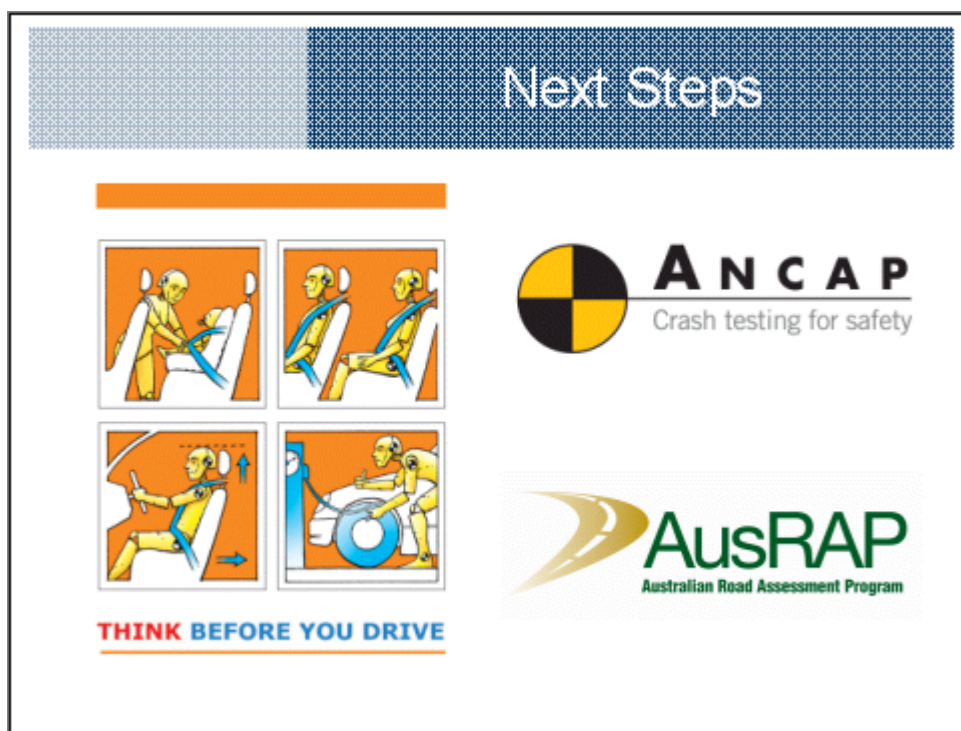
(8 March 2006)

So what do we have to do? What should we do? We want to get our eyes back on the road ahead. The Prime Minister, the Council of Australian Governments - we have to do it.

Next Steps AAA and Clubs

- **Eyes BACK on the road ahead!**
 - Prime Minister? COAG?
- **Reinvigorate SAFEROADS**
 - All partners to have a task

The AAA itself has to reinvigorate our Safer Roads Partnership. We have to do more about it. We have sort of let it slip and we have to do something. All parties have to have a task. We have to continue with the Think before you Drive; we have to continue with NCAP and we have to continue with AusRAP, the road assessment program, so this is the drivers, the cars and the roads. We have three programs and we are focusing on them. We are going to stay on those and keep doing them, and we are going to try to engage our partnership to do some more.



What do parliamentary committees do? Well, I mean it is difficult I guess, but as I said earlier, all our clubs are in the business of making submissions. Perhaps these committees should actually ask themselves: What are our responses to this? What was the New South Wales response to the Federal Government's view that said this is a State matter? Is it? Nobody said. If we say anything, if the clubs say, well, you know, why don't you do it together, all those things were recommended to the transport council, so why don't you, the parliamentary committees, ask the ministers: What is happening in the Australian Transport Council? Has it taken on board all those recommendations? Has it rejected them? Are things in place? Many of those things are not happening. There are some things that are happening, I don't want to put it in a total negative, there are some things that are happening, but do we know them or do we just put it on the shelf with all the other reports and wait two years and have another inquiry? Let's not have another inquiry, let's use what we have and build on it, and then you have to involve the parliamentary members in the community.

Next Steps?

- **Parliamentary Committees**
 - **Inquire into Eyes on the Road Ahead outcomes**
 - **Ask Ministers re ATC actions**
 - **Involve Parliamentary Members/Community**

In New South Wales, I would suggest that if you want to do a visit - someone said this morning that the committees are going out visiting - go out to the crash lab, have a look at the crash testing, see what happens. Take as many people out as you can and show them what is going on or be part of the activities. I think the NRMA this morning had a youth forum. Be part of that. Get involved. Show the parliamentarians what is happening.

This is what the Prime Minister said just after his Australia Day press conference. He was asked about the recent summer road toll - I do not like the word "toll", it is something you have to pay and you certainly have to pay a lot more than anywhere else - but he said: "It has been distressing, but an overwhelming number of reports point to driver error". There were 78 deaths on Australian roads in that time and he said: "While I accept there is always a strong case for more government expenditure at both levels on roads, I think the attempts by some people to grab hold of a tragically larger than expected road toll as an argument for more roads expenditure does rather miss the point". Mr Howard said, "Most reports pointed to driver carelessness as the cause of many fatal accidents. I have to express the view, just watching the news and listening to the stream of reports, that over and over again when you see examples of cars going off the road in a single vehicle accident on roads that aren't frequently used, you can't help but conclude driver error and driver carelessness is the overwhelming reason". Mr Howard said he would not propose any Commonwealth initiative in relation to a particular road quarrel because it was the responsibility of State Police and Government.

Prime Minister

- **Mr Howard said in his Australia Day address to the National Press Club today that the recent summer road toll had been distressing but an overwhelming number of reports pointed to driver error.**

There were 78 deaths on Australian roads between midnight on December 23 and midnight on January 6 compared with 41 road deaths reported between the previous corresponding period.

"While I accept there is always a strong case for more government expenditure at both levels on roads I think attempts by some people to grab hold of a tragically larger than expected road toll as an argument for more roads expenditure does rather miss the point," Mr Howard said.

He said most reports pointed to driver carelessness as the cause of many fatal accidents.

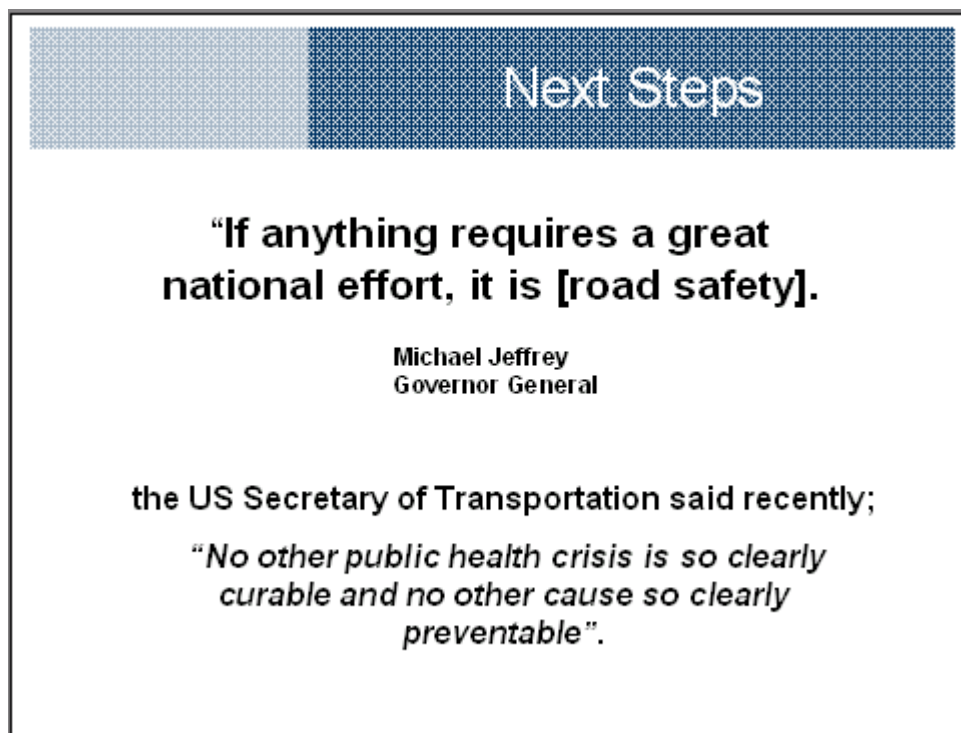
Prime Minister

- "I have to express the view - just watching the news and listening to the stream of reports - that over and over again when you see examples of cars going off the road and single vehicle accidents on roads that aren't frequently used you can't help but conclude that driver error and driver carelessness is overwhelmingly the reason," he said.

Mr Howard said he would not propose any commonwealth initiatives in relation to a particular road toll because it was the responsibility of **state** police and governments.

What have we heard today? Just the reverse. And this is the view of the community. The Prime Minister correctly is reflecting the view of the community. What we have to do is change the view of the community and he will change his view. I think it is very important to recognise that this is the view of the community. Ian made that point quite clearly. But remember the Governor General said that, if anything requires

greater national effort, it is road safety. The US Secretary of Transportation, just to add to that, said no other public health crisis is so clearly curable and no other cause is so clearly preventable.



Next Steps

“If anything requires a great national effort, it is [road safety].

Michael Jeffrey
Governor General

the US Secretary of Transportation said recently;

“No other public health crisis is so clearly curable and no other cause so clearly preventable”.

Chapter xxx—

WHY ROAD FUNDING MATTERS

Mr Alan Evans

President, NRMA Motoring & Services

Thank you for the opportunity which, like Lauchlan, I welcome. Can I just say that we, as the largest of the clubs as you saw, do have those three issues as our guiding principles: Safer roads, safer cars, safer drivers. Just to show some of my favourite data on safer roads and what we want to do there, in terms of safer cars we are very much part of the whole NCAP process and actually promote safer vehicles. Indeed we are working to see all the vehicles in our fleet having at least four stars and, whatever other activities we engage in, the vehicles are at least four-star.

In terms of safer drivers, we actually decided about 18 months ago that NRMA had vacated the learn-to-drive field and the post-licence field and we decided that there was a major issue there, so we actually did some research and found that the quality of driving instruction was less than optimal. Our assessment was that people were being taught how to drive to get a licence, not how to drive a car safely, properly and effectively. So we sent staff and directors overseas looking at all the latest systems and schemes and try to develop our own learn and drive systems and curriculum and accreditation system for driving instructors, including bringing in the latest technology. At our North Strathfield headquarters, for example, we have established a driver training centre, which has two of the very advanced driver simulators, following the example of a number of European countries where young people, in particular those who are seeking to get their licence, spend sometime in the simulators before they actually get on the road.

These simulators are state of the art. The only thing I will say is they are great for young people. I have discovered that I am one of those older people when I get in one, that I am not used to the fact that I haven't got all the signals coming in that you do in the car and we find that older people – experienced drivers I should say – older, experienced drivers suffer motion sickness but the young people do not have any of that and we are going through a whole program and a process to completely evaluate these, and if we believe they are as successful in improving the capabilities of drivers and particularly their attitudes, because the thing we found in our research was attitude was the key. We can provide the technical skills, but attitude was the key. We will extend the use of those driver simulators. I invite any of you, if you want to go and have a look at the driver training centre with the simulators and indeed spend sometime experiencing what it is like in the driving simulator.

As I said, we have developed a new curriculum for driver training and presentation for driving instructors and we are going to roll it out right across New South Wales and the ACT, and everyone will have to meet those standards and we will audit it regularly, so that we have got what we think will be the best driver training system in place. We have also worked with a number of other parties to develop a curriculum for licensed drivers to have advanced driving skills and they are being rolled out across the State as well. So we have got them going in the ACT and Sydney and we have created a situation where we can roll them out right across the State.

In addition, we spent \$1.7 million building a mobile member centre, which has a lot of the latest technology in it, where people can look at what constitutes – and it is interactive – safer cars, safer roads, safer drivers and we are constantly adding new technology to that. The truck was one year old last week. It has been right across the length and breadth of New South Wales, 70-odd thousand kilometres, had 40,000 people through it, been to 38 different towns and cities across New South Wales and we will keep going until every town and every city in New South Wales and the ACT has been visited by the truck at least once in a three year period and we will keep adding to that truck.

So it is all about making sure that we as a motoring organisation are just not standing back and saying that it is someone else's responsibility, we are actually spending our money – and it is in the multi billions that we are spending to do this – so that we can say we are accepting our responsibility, we are doing these things and if you are a member of the NRMA, and some 70 odd per cent of households in New South Wales are NRMA members, at least you have got the chance as an NRMA member to have an improved system of driver training.

When it comes to safer roads, like Lauchlan said, roads just weren't an issue in the community and along with the other clubs we decided to mount a fairly major campaign to try and raise community awareness of the need to spend funds on roads. You all know the data, about \$14 million collected in fuel excise revenue, \$2 million comes back for roads. If we could just double that it would be a significant improvement in road funding and road construction.

To do that you need to have every politician feeling that it is important that the budgets of the future contain additional funding for roads. So we have mounted three major campaigns. We started the safer roads campaign, which focussed on the major highways such as the Pacific, the Princes and the Hume and we campaigned up and down those raising the issue, getting in the media, talking to every community group we could get to and actually raising that profile.

We then went out a bit further and looked at what we call a better roads campaign, which looked at roads other than those three major highways. The focus there, we shifted a little bit, because we realised that just looking at the road trauma and the

consequences of that didn't necessarily satisfy the people in Treasury, be they State or Federal, that you had to look at the economic implications of these.

So we actually then focussed on the economic benefits of improved roads as well as the benefits in terms of avoidance of road trauma. That has been quite effective as well. We set ten up across New South Wales and were able to demonstrate as well as social benefits from improving the road, there were economic benefits from improving the road.

That gave those local communities sufficient ammunition to go and argue with their local politicians, be they State or Federal, of the need for more funding on roads.

We also developed a rather unique campaign called fixourbloodyroads.com, a billboard campaign. I can say that we are pretty wrapped in that because it (a) was effective in that it had tens and tens of thousands of hits on the site, ministers at State and Federal level, shadow ministers at State and Federal level, politicians at State and Federal level were getting emails from people who had locked onto the website and you could send an email expressing their concern about particular roads and wanting some funds directed towards them, and certainly when I walk into Parliament House, be it this one or indeed in Federal Parliament, there are a number of politicians who are less than happy about that campaign because they were getting addressed by their constituents about what they were doing to provide additional funding for roads, and some of them found it a bit difficult because it meant they had to go and argue with ministers who they might have wanted to carry favours for for other reasons within that Parliamentary party, that there should be more funds for their particular area or the major roads in their constituency.

Also, I would say that the campaign, fixourbloodyroads.com billboard actually just won the Australian Advertising Industry's billboard of the year award and they believe it was actually one of the most effective billboards, met the target aims, was the right thing and so we were very wrapped, not only because it was effective from our point of view but the advertising industry itself recognised a very effective campaign.

We then come to the key issue of how do you fund these roads? We have developed, along with our other colleagues in the AAA, a position on funding of roads, which essentially is a hierarchy starting with governments fully funding roads, coming down to situations where there is no other capability or way to fund a road, that we will accept toll roads, but it is not only as a last resort, we have got to be convinced that there is no other way.

That has raised some issues and we have had some fortune in New South Wales or misfortune, depending on your point of view, that recently there has been a major controversy over the Cross City Tunnel and the consequences of the way that has been funded and what was needed to be done to make sure it was actually financially viable for the parties that constructed it.

We are about to see the same thing again happen in the Lane Cove Tunnel, which is due to open probably later this year. If you are going to use private project funding, you are going to get private partnerships to fund your roads, there has got to be some clear rules in place to make sure that we do not see a repeat of the Cross City Tunnel or indeed, something like the Lane Cove tunnel, avoid some of the problems.

For those of you who are not familiar with Sydney, the Lane Cove Tunnel is a \$1.2 billion project due to finish early in 2007. It will connect an existing tollway into the major routes across the harbour, that is the Sydney Harbour Bridge and the Sydney Harbour Tunnel and it is designed to ease traffic congestion along Epping Road in Sydney's north west.

Up until a little while ago I had the good fortune to actually live in North Ryde and I travelled on Epping Road on a daily basis. What I found was I was having to leave earlier and earlier to get to work because if I left at 6 o'clock it was sometimes a fifteen or twenty minute journey, if I left after 7 it was an hour journey, sitting in a traffic jam for anything up to 30 or 40 minutes on Epping Road and I would have hated to have lived in any of the units bordering Epping Road, those residents were quite rightly annoyed.

In a sense it is a good project. It has some defects in it which cause us concern because it is, as I said \$1.2 billion and what we are in essence getting at the end of the day is one additional lane on the road that should probably have had at least two or three additional lanes, because what is occurring on Epping Road itself, one lane is being closed for 24 hours bus lane and there is a cycleway all the way through to North Ryde. We are also seeing a widening of the Warringah Expressway and on and off ramps coming from Falcon Street onto that.

They are all good things but what is going to happen – and this is where the real resentment arises – the cost of all that is going to borne wholly and solely by the people who use the Lane Cove Tunnel. That means they are not getting, in their minds, a fair deal in terms of what they are having to pay to use this section of road, because they are paying for all these other aspects which were deemed to be of significant benefit to the community but just a limited number of people are going to use them.

That really does raise the issue in our minds about how you fund road construction when you go down the private road funding path, how you actually deliver it in an equal fashion, because cyclists get to use it for free, they don't pay any registration, they can't argue that they pay taxes, therefore they are getting something back because we know motorists pay \$14 million and only get \$2 million back, so we are \$12 million short. The community is getting significant benefits because they are getting better road systems and traffic is being cleared from critical areas, but the motorist who is going to use that tunnel is going to pay for the whole. That has raised

a whole host of issues which I will leave in the paper we have done rather than go through all of the analysis we have done and the best way to run roads.

Can I say, from our point of view, it is absolutely critical, this significant expenditure, to make the roads safer. You all know better than I the arguments of what safer roads can do, better road construction, better engineering, simple things like were barriers for prevention of accidents. What are role is, is to actually put all those arguments out in the public arena, make sure they are part of the public debate, but also make sure the community is fully aware of them and are asking their politicians what they are doing. So that we are not getting the situation where there is just the automatic assumption that if you need to build a road, it will be a toll road built by the private sector, owned and operated by the private sector some 32 years in the case of the Lane Cove Tunnel, and the motorists who have been using that have paid for all of that. There will be no cost on the State and the benefit which improves the whole community is borne by a limited number of people. As I said, if those things are not done, people will really run into problems in the future getting people to accept toll roads, to accept the benefit of toll roads and to make sure that we have a better road system.

I will leave it there. As I said, I will leave the paper here and you can look at some of our arguments about the way to fund roads in the future.

THE NATIONAL MEETING OF
AUSTRALASIAN PARLIAMENTARY ROAD
SAFETY COMMITTEES,
TUESDAY 4 APRIL 2006

Mr PAUL GIBSON MP (Chairman, STAYSAFE Committee): Welcome to the second day of the 4th meeting of the Road Safety Parliamentary Committees. It is very good to see you here today. I am the Chairman of the STAYSAFE Committee in New South Wales. Yesterday, we had a private meeting of the Parliamentary road safety committees, and today we have the public seminar and it is great to see so many people here.

Also welcome to the guest speakers, particularly David Ward from the FIA Foundation for the Automobile and Society. Yesterday I forgot to say a big thank you to my Committee Manager, Ian Faulks, for arranging to bring David here. That was a coup in itself so, Ian, thank you for making that arrangement. I would like to also thank the STAYSAFE Committee staff for the last two days, and, of course, thanks to Hansard.

As we said yesterday, with 1.2 million people dying on the roads each year and 50 million people being injured, and with the road toll here in New South Wales on an upward trend, I think it is very timely that we have this seminar.

Parliament is sitting today, so I will have to give my apologies for a lot of the time today and also for my colleagues on the STAYSAFE Committee, but we will be here between divisions hopefully. Thank you, and I hope you have a great day and I hope the outcome is very positive.

Mr FAULKES: Thank you, Paul Gibson, my Chairman of the STAYSAFE Committee. My name is Ian Faulks. I think I know probably the bulk of the people here and to you and to those who I have not met before, a very warm welcome on behalf of the Committee to Parliament House and the seminar today.

We have I think a fairly comprehensive and interesting program for the public seminar. As my Chairman indicated, we had a private meeting of the Australasian Parliamentary Road Safety and Transport Committees yesterday, which was quite illuminating in terms of the views and the information that was passed, but I think today will probably surpass that, to be quite honest. There are some superb speakers—and I thank all of the speakers who have agreed to appear for taking the time and effort to do so. I am very, very pleased about that.

Chapter xx—

THE CHINA SEATBELT INTERVENTION: WORKING WITH GOVERNMENT TO IMPLEMENT CHANGE

Professor MARK STEVENSON

Executive Director, The George Institute for International Health

Mr FAULKES (Manager, STAYSAFE Committee, in the chair): We have heard previously from David Ward, of the FIA Foundation for the Automobile and Society, about the work that is being done at a global level . He made reference to programs being run in nations, or in regions within nations, so we thought it would be useful to have a look at one such program which has been run through a New South Wales research institute, which is the George Institute for International Health. I would like to ask Professor Mark Stevenson, who is also the chair of the New South Wales Chapter of the Australasian College of Road Safety, to give a presentation on the China seatbelt intervention.

This presentation follows well on David Ward's presentation (see Chapter 2 of this report) and it is a piece of research that is being undertaken at the moment in Guangzhou in southern China. Before I give you some of detail on what we are doing, I wanted to give you some background in terms of why we are doing this. Many of you know about the George Institute so I do not want to go into detail. The focus of the institute is to undertake research that has significant policy implications and at the same time build capacity. Much of our work is here nationally but it is also in low-middle income countries in South East Asia.

This work really came about through some high level discussions with Government officials in China and the institute has an office in Beijing and the director of our office has considerable links with government agencies and very senior bureaucrats within the government. That has provided us with the opportunity to move in and have high level discussions with the officials.

For instance, I had on the agenda of road safety in China the need for significant change and how to go about that and after about a two hour conversation with Mr Bu, who is a senior adviser in the Ministry of Public Security, which covers transport as well as enforcement and police, we came about this project, the China Seatbelt Intervention. In China they consider everything a pilot, so this is considered a pilot and we are implementing it in a city of 16 million people.

If some of you have studied American history, you will know that the urban dust bowl

occurred in the 1950s in America where people drifted from rural areas into urban areas for work. The same is occurring in China at the moment and they are expecting in the next 10 years a growth in the urban population in China of around 15 percent, moving from 30 to 49 percent. Associated with that drift from rural to urban areas is that car ownership has increased, estimated around 10 fold, and there is declining pedestrian and cyclist mobility.

David Ward highlighted some of the statistics in his presentation so I will not go through them again. What I did want to highlight from this is the fatality rates from road traffic injury in China at the moment is around 10 percent of what we are seeing globally. That gives you the magnitude of what we are seeing in terms of road traffic injury in China. You have heard about the economic burden of road traffic injury, particularly in low income countries. In China it has accounted for around 1.5 percent of GDP.

Risk Factors for Road Injury

- Driving under the influence of alcohol
- Speed and fatigue
- Inadequate road infrastructure
- Poor vehicle safety standards
- Lack of comprehensive road safety strategies
- Inadequate emergency health services
- Inadequate adoption of known safety devices such as **seat belts**, child restraints and motor cycle helmets

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for Global Health


We have been going through what we can do and what is likely to be effective in China in terms of road safety on the agenda, showing that Governments can be successful in tackling this huge public health burden. There is an array of risk factors that could be tackled. The one that I kept pushing to the fore with the government is seatbelts and the reason for that is quite obvious to us in this audience, but it is clearly something that is currently built into the vehicles, in the front seats in particular in China, in all vehicles, so the intervention was readily available.

The efficacy of the seatbelt is well-known and I will mention that in a moment. The potential for us to get some change in terms of true outcomes in terms of reductions

of injury and in severity of injury would be great if we could implement increased rates of seatbelt restraint use. That was the motivating factor to tackle that issue alone and to show some success from that.

Effectiveness of Seat Belt Use

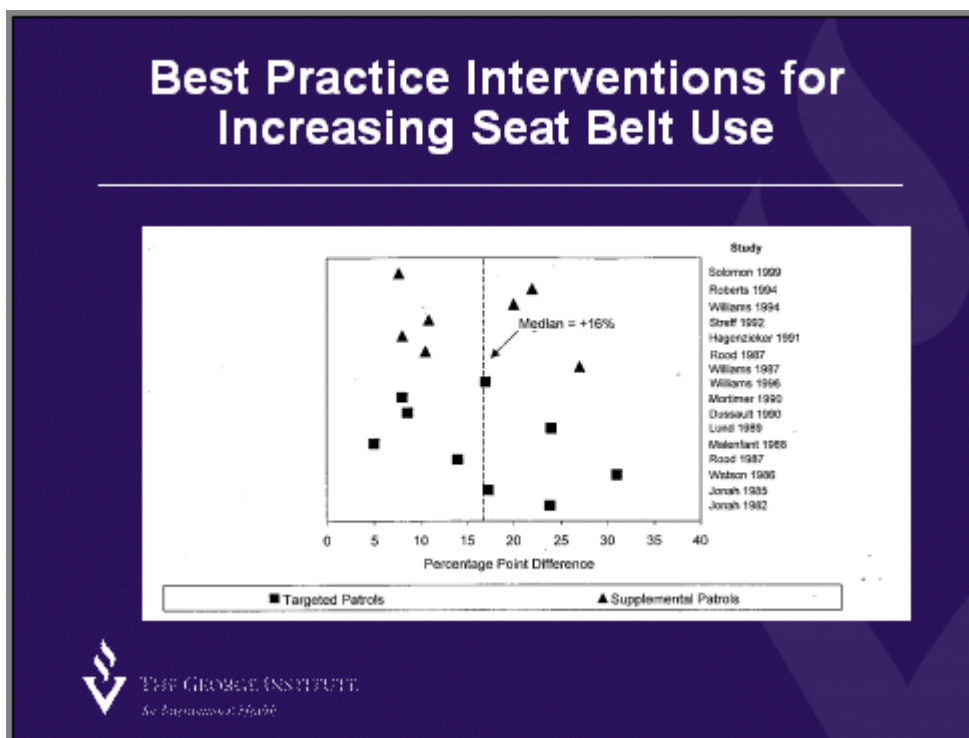
- Risk of death is reduced by 60% in drivers restrained by a seat belt
- Seat belt use reduces serious injury to head, chest and extremities by 50%-80%

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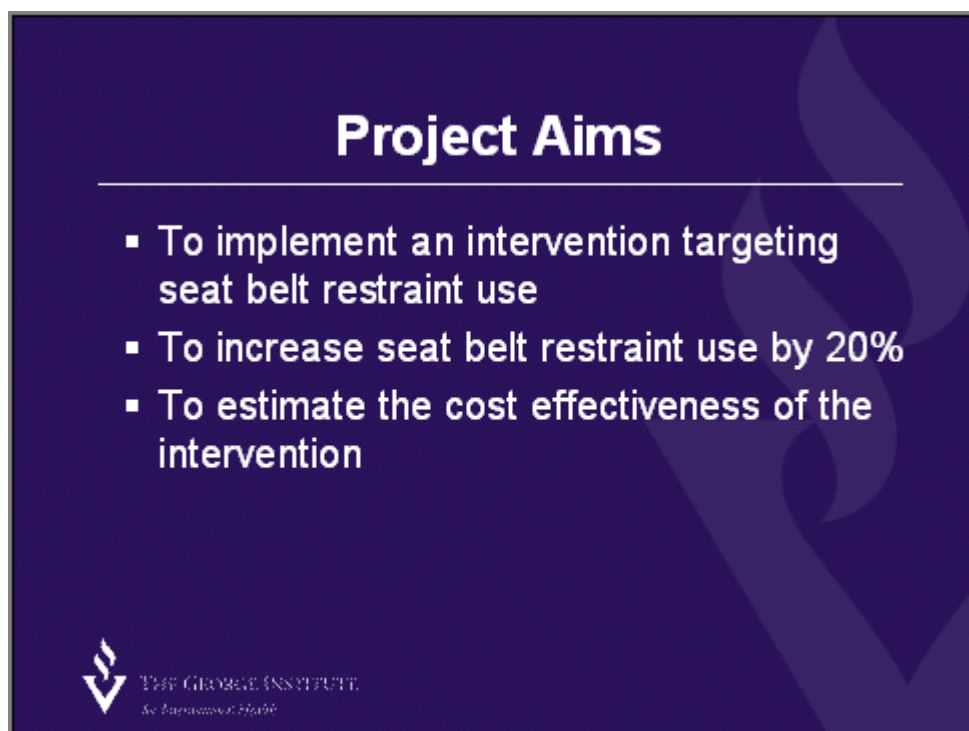
This particular slide shows some of the most recent research, some of the figures or estimates from the most recent research on seatbelts, and a terrific paper undertaken using FARS data - some of you are probably familiar with the Fatal Accident Reporting System in the US. They estimated that the risk of death is reduced up to 60 percent with seatbelt restraint use. It reduces thoracic injuries and head and chest injuries by up to 80 percent, so it is an incredibly efficacious intervention.

Some of the most recent research has looked at how do you get seatbelt uptake, and this was published in the American Journal of Preventive Medicine, which is a systematic review of all pieces of research that have focussed on increasing enforcement as well as social marketing to get those changes in seatbelt restraint use. I just want to highlight from this slide that if you have targeted patrols, this is the US terminology, but targeted enforcement and in some cases increased enforcement in terms of supplemental enforcement, you can get up to 35 per cent change in increased restraint use.

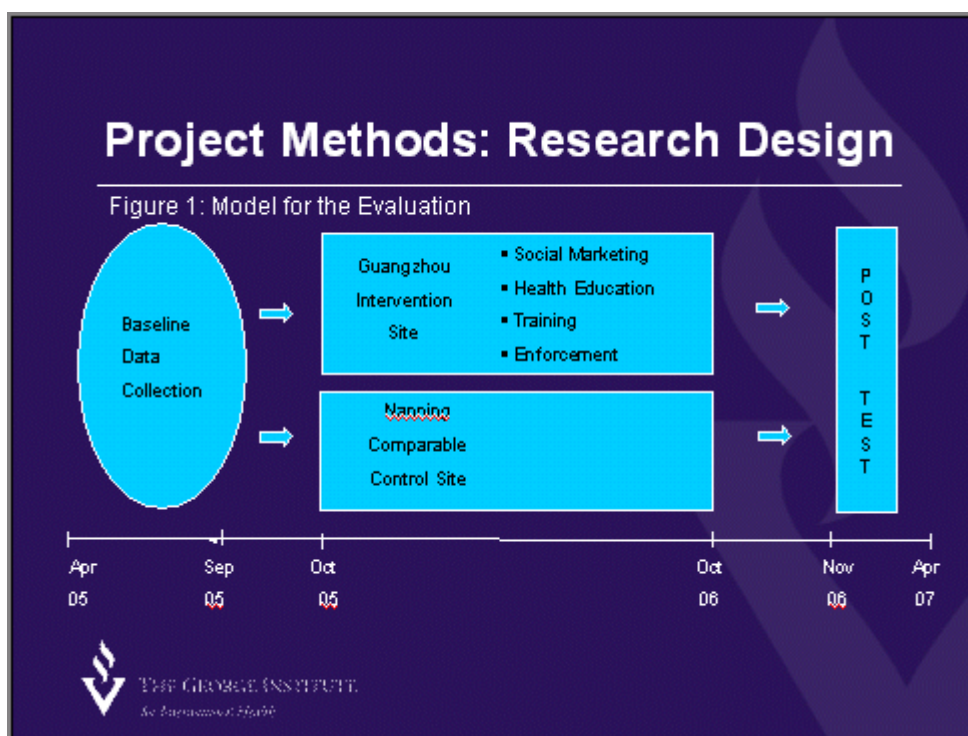
The research has highlighted that there is a number of ways around getting this increased enforcement - with social marketing and increased enforcement you will get significant increases in seatbelt restraint use. The evidence was clear there. It was not something that we needed to go out and undertake.



You have heard from David Ward's presentation that they have also undertaken a pilot and have a manual and a kit that is potentially of use for many of these countries, particularly lower income countries.



What we aim to do in the study is to implement an intervention targeting seatbelt restraint use, to increase it very conservatively by around 20 percent and, most importantly, to cost this intervention out. Because this is an intervention being implemented by the central level government as well as the provincial level government, what we wanted to do was to ensure that we could, at the end of the study, show not only changes in injuries, changes in terms of seatbelt restraint use, but also show them how much this would cost and the cost savings this would have in terms of the government implementation, particularly for rolling it out to other provinces.



This is the research design that we are using. A great deal of base line data collection has been undertaken. Clearly if you were wanting to increase seatbelt restraint use you would not have to be as rigorous in terms of research design as we have been in this case. This is the pilot, as I have said, and what we want to do is capture the imagination of government officials and we truly want to be able to show some change and document as much as we can in terms of the process as well as the key outcomes, namely restraint use, injuries and cost.

For the interventions being implemented in Guangzhou, a city of 16 million, and Guangdong province in southern China, and the neighbouring province, which is Guangxi, we have used a similar city Nanning as a control city so we have undertaken observations in both of those cities, both Guangzhou and Nanning and the intervention has been implemented in Guangzhou. We had a staged approach to undertaking this piece of work. We undertook a qualitative research initially. We are now in the intervention implementation phase and we will complete the evaluation in about five

months, as well as the economic evaluation and report back to the Government. When I say report back to the Government, this project has a steering committee that is chaired by the Government and has representation of police and transport officials on that, we are basically providing advice on strategy - and when I say advice, I mean very broad advice. We are really encouraging a lot of these strategies.

Project Methods

- **Staged Research Approach**
 - 1) Qualitative Research
 - 2) Intervention Implementation
 - 3) Evaluation (Quantitative Research)
 - 4) Economic Evaluation




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Project Methods

- **Staged Research Approach**
 - 1) **Qualitative Research**

Zhang J, Stevenson M, Yu J, Ivers R, Norton R, Ying Z. Barriers to seatbelt use in China: a case study *Journal of Safety Research* 2006 (under review)




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Our qualitative research that we undertook has been submitted to a journal and that was really just some focus groups looking at some of the key barriers to seatbelt restraint use among taxi drivers, professional drivers, what the police perceived as limitations to enforcement practices and the like and it really motivated a lot of what we have targeted in terms of the social marketing aspect of the intervention.

Project Methods


- **Staged Research Approach**
 - 1) Qualitative Research
 - 2) Intervention Implementation



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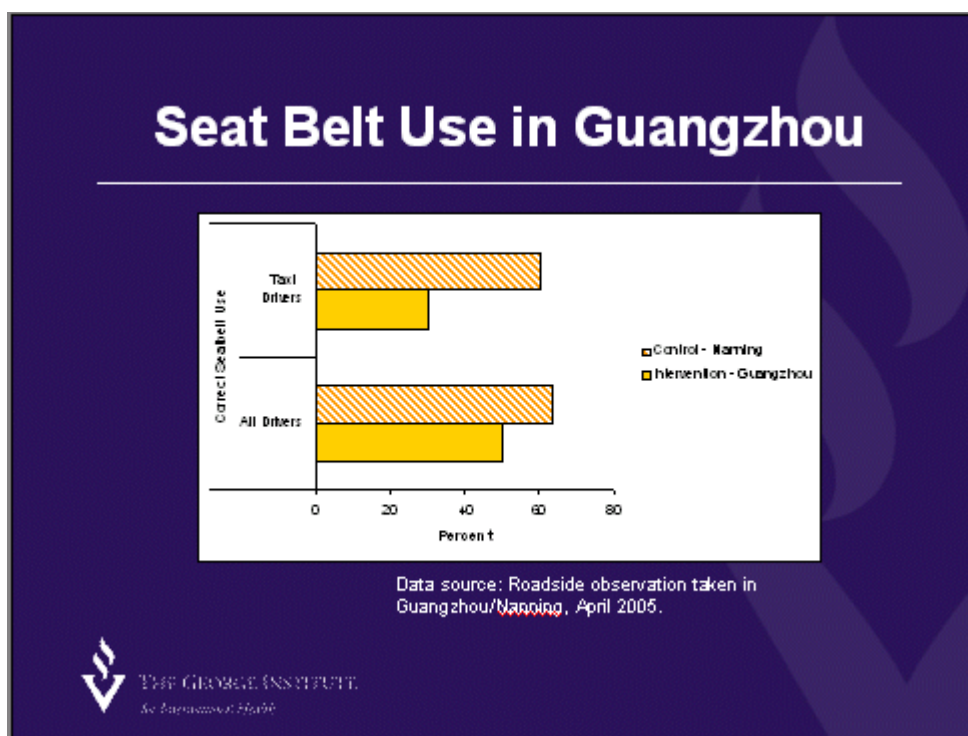
Project Methods: Baseline Measures

- **Hospitalisation Data** – ISS distribution
 - o Period for data collection Nov 04 - May 05
- **Police reported road crash data**
 - o Period for data collection Nov 04 – May 05
- **Observational Surveys**
 - o Pre-intervention roadside observations May/Jun 05
- **Economic Data**
 - o Current expenditure on seat belt enforcement Nov 04
 - o Cost of road traffic injury Nov 04 – May 05

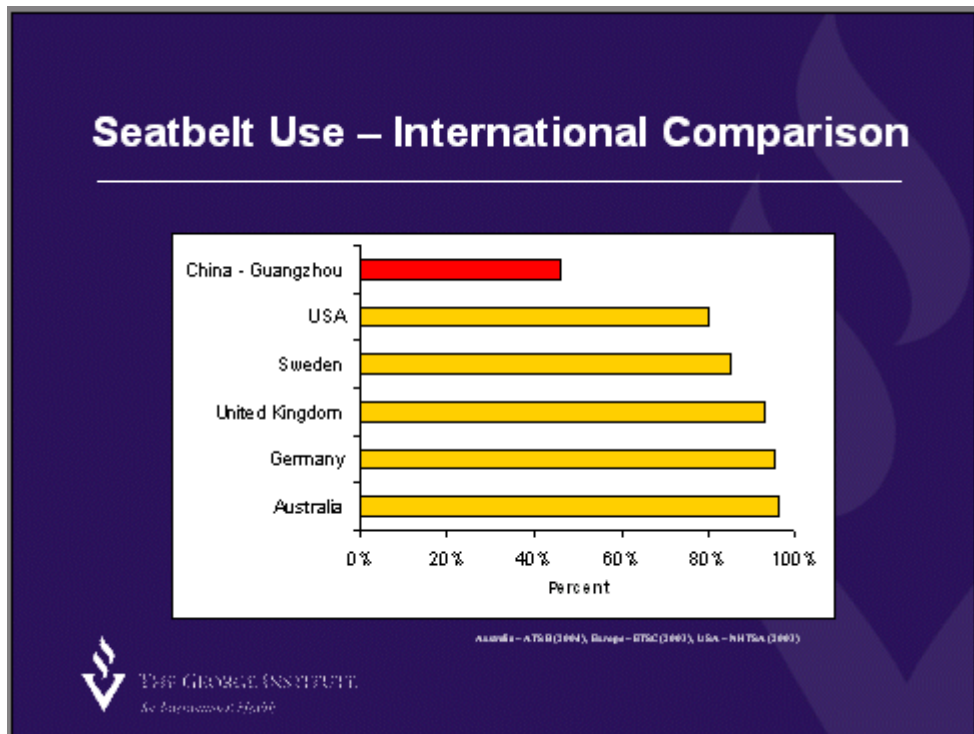


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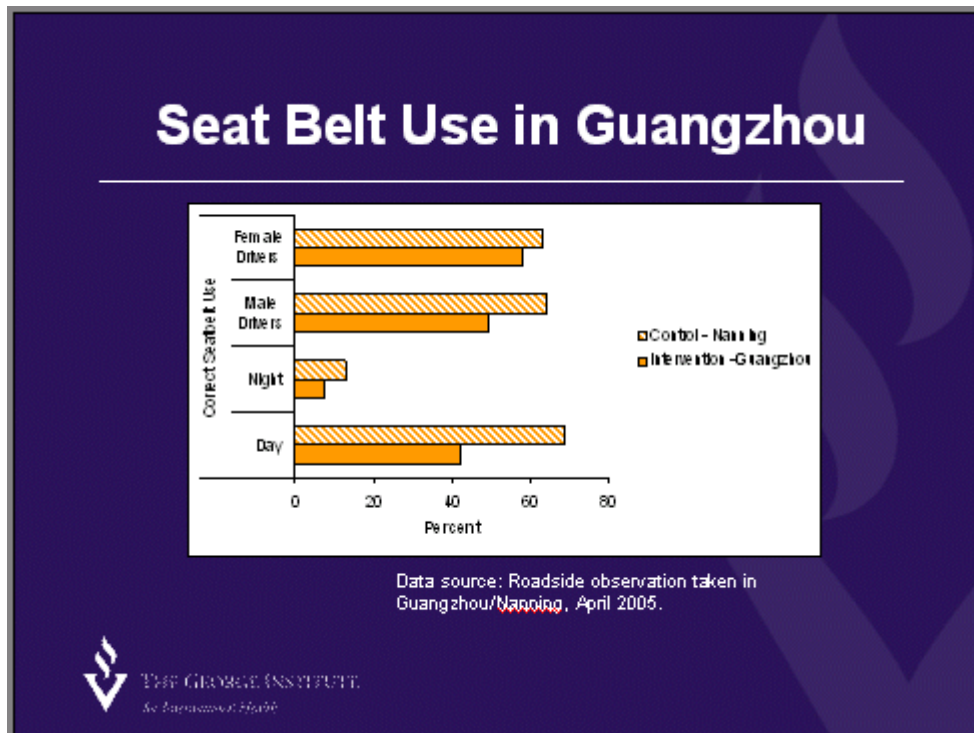
So the intervention started out with, as I said, collecting a great deal of baseline data and normally we would not really go to this extent, but because we want to make this as a piece of research as well as a piece of implementation research we are really documenting as much as we can as we go. We have collected hospitalisation data; we have police reported road crash data; we have undertaken at the baseline stage 36,000 observations of seatbelt restraint use on a random survey taking into account the hierarchy of the road infrastructure, and we are also collecting economic data and we have done that at baseline and will continue throughout the study.



Just to give you some of the statistics we have collected at baseline, this is highlighting what current restraint use is in Guangzhou prior to the implementation of the intervention and it is running at around 49 percent for all drivers. The solid bar here is the intervention group. This is the control group. It is not a randomised study, so you can expect that there would be differences of baseline between the two cities and you can see that there is an issue in terms of restraint use for taxi drivers particularly. Benchmarking that with high income countries and what restraint use they have, you can clearly see that there is a long way to go in Guangzhou. Guangzhou is probably one of the more positive cities, positive in terms of adopting change. It has very well developed infrastructure and I am guessing that road safety is something that they will embrace much faster than some of the other cities along the eastern seaboard of China.

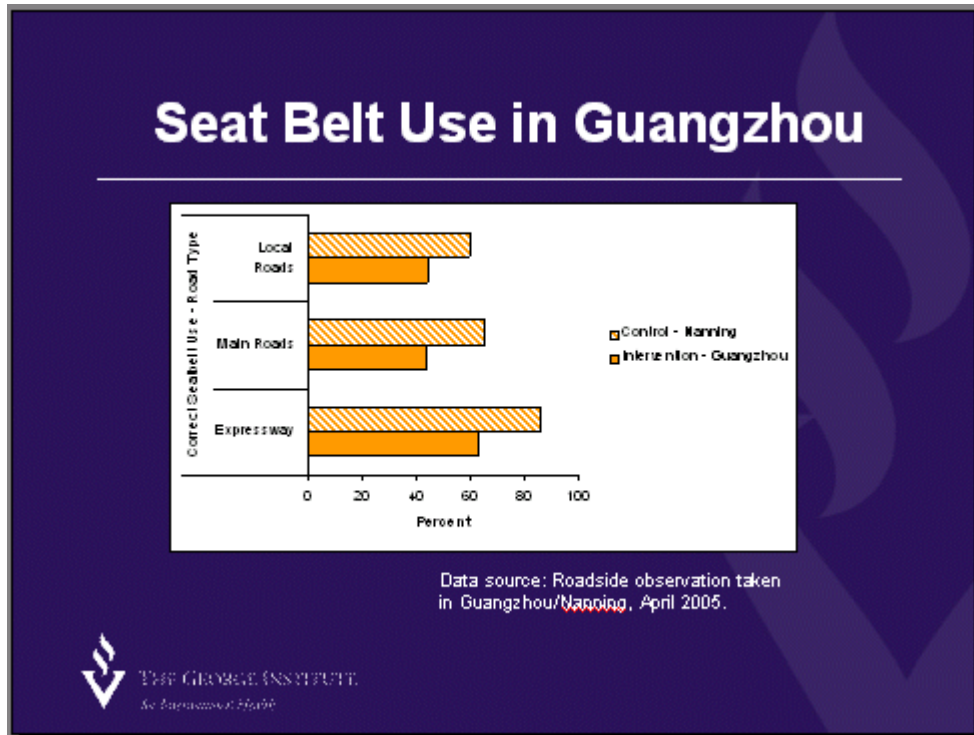


There is still an enormous way to go here in terms of benchmarking against high income countries.



Again you see discrepancies between day and night and these sort of baseline statistics reflect what we found in the focus groups. There is a perception that there

is no need to wear a seatbelt at night because you are not going to be picked up by the police. Police work from 9-to-5, there is little beyond in terms of traffic police in the evening.



There is also a perception in terms of types of roads you should wear your seatbelt on. There is a perception that you should wear it on an expressway because you are travelling at high speed. There is clearly no need to wear it on a local road at low speed. That is what is clearly reflected in the baseline statistics that we have.

We have moved on to the social marketing campaign and the intervention in itself is enhanced enforcement and social marketing.

As an institute we have no experience in how to implement and undertake social marketing, but what we have done is work with a Chinese advertising agency who have a great deal of skill around social marketing in the cultural context and they have basically done some incredibly innovative interventions around marketing and the need for increased seatbelt restraint use. That has been illustrated in terms of TV commercials, radio programs, billboards, advertisements in newspapers, advertisements on the sides of buses.

Project Methods: Intervention




- **Social Marketing**
 - o TV and radio programs
 - o Billboards, road signage and posters
 - o Newspapers and internet websites



We have also focused on some health education with taxi company managers given the low restraint use among taxi drivers and we are undertaking extensive training with driver trainers, so that whilst they are training new drivers there is always this focus that the seatbelt must be buckled up at all times.

Project Methods: Intervention

- **Health Education**
 - o Taxi company managers
 - o Driver trainer teachers



There are a lot of materials that are being developed using the resources to focus on this and you can see here some of the stickers that have been put on taxis to remind passengers to belt-up.

Project Methods: Intervention




- **Training**
 - Ongoing enforcement training by police trainers



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Project Methods: Intervention

- **Enforcement**
 - Introduction of demerit point system
 - Audit of records
 - Targets for issuance of fines




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One of the strong aspects of this intervention is the training component of it and the enforcement component, and we have utilised ARRB associates to work on training the police force in Guangzhou around enhanced enforcement practices and this is really just highlighting it. This is Ray Shui, who is an ex-Victorian policeman. Now he is working with the Guangzhou police on new techniques in terms of enhanced enforcement. As well, though, we have focused on the introduction of a demerit point system as well as targets for issuance of fines, so there are actually set targets that we are asking the police to achieve as well. As I have already highlighted, we are doing enormous amounts of process evaluation and we are auditing on a monthly basis and we know whether the police are actually achieving the targets, so that is what our research staff are doing in the background, collecting the information and reporting it back to senior officials so that they can put their hand on the police in the field to up the ante and increase enforcement. To date it has been incredibly successful. We have had incredible buy-in from the local government, provincial government, the police force and so on.

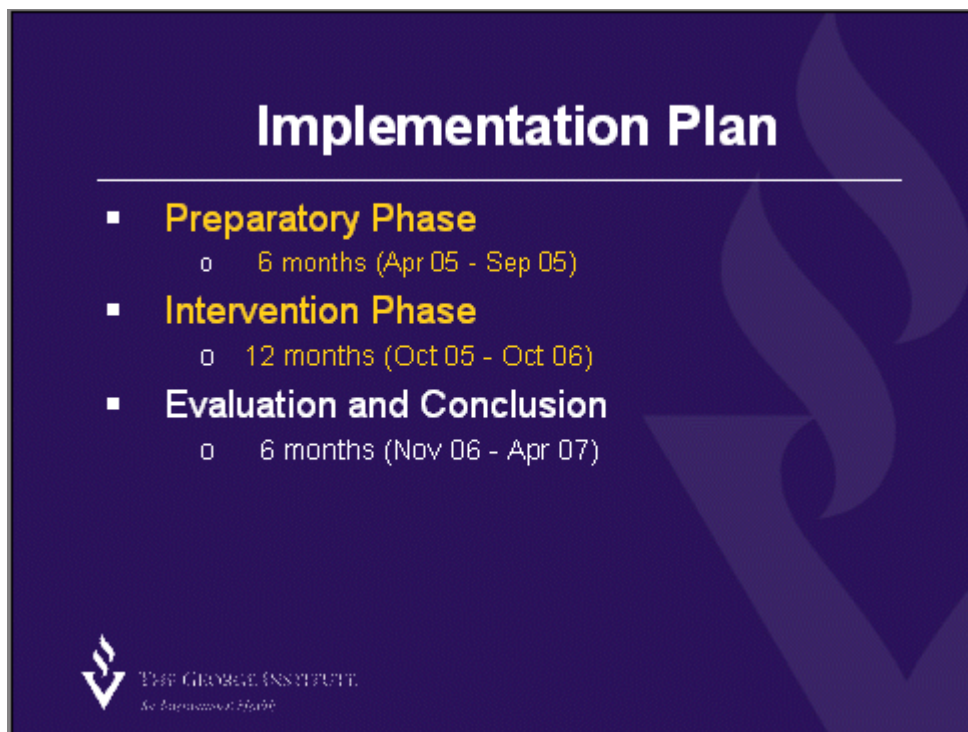
Outcomes for the Evaluation

- **The rate of seat belt restraint**
 - Within (intervention city) and between (intervention and control city) comparisons from baseline to post test
- **Road traffic injury rates**
 - Pre and post intervention
- **Cost effectiveness of the intervention**

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The outcome of this study, as I have highlighted, is to focus on the rate of seatbelt restraint. We have been doing some observational surveys ourselves throughout the intervention and it is pointing in the right direction, so it is looking rather promising in terms of finding a positive outcome. We are obviously going to look at road traffic injury rate pre and post intervention, but one would expect that that may not necessarily change. Having seatbelt restraint use in a car does not necessarily change the behaviour of the driver and the environment, so it is not necessarily going to be the case there, but we are going to look at the types of injuries that are presenting to


provincial hospitals and, importantly, we are going to undertake an expensive cost-effectiveness.



The slide is titled "Implementation Plan" in white text on a dark blue background. It features a bulleted list of three phases: Preparatory Phase (6 months, Apr 05 - Sep 05), Intervention Phase (12 months, Oct 05 - Oct 06), and Evaluation and Conclusion (6 months, Nov 06 - Apr 07). The text is in white and yellow. The logo of The George Institute for International Health is in the bottom left corner.

Implementation Plan

- **Preparatory Phase**
 - 6 months (Apr 05 - Sep 05)
- **Intervention Phase**
 - 12 months (Oct 05 - Oct 06)
- **Evaluation and Conclusion**
 - 6 months (Nov 06 - Apr 07)

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So we have another six months to go and, as I have highlighted, this is an initiative implemented by the government, which is steering the process, and what we will do at the final steering committee is simply deliver the results, like cost effectiveness and change in restraint use and other outcomes, and the potential for them then is that we can actually provide this as a portfolio that they can basically disseminate in every other province that has similar lack of restraint use. This is of particular interest for them in Beijing, given that they are keen to prepare for the Beijing Olympics.

Finally, acknowledging that we would not have been able to do this work without financial support, once we spoke to government and had their buy-in we took it to industry to see what extent they would be prepared to partner with us on this and BP China saw this as a terrific initiative. As you might expect, clearly BP have been able to use social-marketing aspects of this intervention, so it has been a very good partnership, but we have also brought along the WHO and a number of the UN agencies so that they are also party to this implementation. It is really taking on what David has said and expanding it more in a practical way and saying, okay, we've got the evidence, how do we implement it; how do we get the change to occur; how do we measure that change and how do we get governments to continue to sustain it? I guess that is what we are really focused on in terms of this piece of research and it is what we are interested in, in terms of the institute, in undertaking research, that it has direct policy implications and actual practice change.

Questions

Associate Professor GRZEBIETA (Australasian College of Road Safety): On the television advertising and radio advertising, what sort of format did that take? I recall in my discussions they were a bit taken aback when I showed them some of the Victorian Transport Accident Commission (TAC) advertisements, and said that they would not show those in their country.

Professor STEVENSON: It is unfortunate because I was actually sent the television commercial the other day and it is on DVD and I could not get it to play, but I was going to bring it here as well. It is certainly not graphic. Is that what you are trying to get at?

Associate Professor GRZEBIETA (Australasian College of Road Safety): Yes, it seems to be a different sort of approach there from what I gather: Don't defend the driver too much or the family too much. Apparently they had one advertisement they put on a couple of years ago to try to get them to wear seatbelts and it was pretty graphic in the pain and suffering aspects and virtually got howled out, which is not uncommon from our experience in Victoria.

Professor STEVENSON: Yes. It is not that at all. The actual television advertisement is really just illustrating two drivers getting into a car, one without a belt and the other being restrained, and both of them colliding and clearly one being seriously injured, the other not at all, but no blood and guts, nothing like that. It is really just about the importance of restraints, you know, seatbelts save lives, and that was the message and it had nice music and it really just showed the travel of the cars along the freeway until they crashed.

Mr SMITH (Australian Automobile Association): In some western countries there seems to be a strong resistance, particularly in the United States of America, to governments imposing regulations on people that are sort of encroaching on their freedom. Do you find that happening in China at all?

Professor STEVENSON: It is a concern. I mean bribery is a concern, and it is a concern in a number of low income countries in the world. I think part of the reason why this appears to be successful is that we have had to do a lot of training with the police because there is a reticence to actually impose fines. It is fine to pull them over and have a word about it, but it is another to issue a fine. The whole idea around demerit points was also a concern for them, so there is some reticence, but we have been working through that and so many have achieved outcomes, or we hope they would have been able to achieve the sort of outcomes that we are looking for, and I guess it is important for us to do this in China because that is the sort of concern that comes up time and time again, and it does in India and many other countries as well, and it is important to show that we can actually achieve this change and that the

police did have the same concerns as you are raising now, but we were able to work through that, which is the sort of level of enforcement required.

Unidentified speaker: Is that why you had the target for enforcement in there as far as infringements issued, rather than enforcement hours which is what we usually use?

Professor STEVENSON: Yes, it clearly was. We were finding that it was one thing to have hours and we found that they could easily achieve hours, but we were not actually noticing that they were doing what we had asked them to do, so in fact what we have got to now is the infringement points and that seems to be working very well and we are monitoring that on a weekly basis and setting targets.

Chapter xx—

AusRAP

Mr Greg Smith

Australian Automobile Association

For those of you who do not know, the Australian Automobile Association is the national secretariat of the motoring clubs in each state, so in New South Wales that is NRMA Motoring & Services. We also have someone here today from the Royal Automobile Association (RAA) in South Australia. We work on a whole bunch of public policy issues and one of the ways that we determine what we are going to work on is through talking with motorists and conducting surveys with motorists to find out what they think is important. We inevitably find that the costs of motoring is important, the way taxes are spent on infrastructure is important, the environment is important to motorists and road safety has always been a relatively important issue.

One of the things that we decided to do in recent years was to look into what motorists actually do think about road safety. We noticed, like most people, that road fatalities in Australia were not improving in the way that we thought they needed to and we decided to ask motorists what they thought about that and how they thought we could make an improvement.

We conducted a series of focus groups and national surveys to really dig deeper and we found two important things. One was that although motorists think road safety is an important issue they greatly underestimated how big a problem it was in Australia and as an example we asked them to try to estimate how many people they thought were killed on Australian roads each year and the median result was they thought about 500 people were killed each year on the roads, which is about a third or less than a third of the actual number.

We found that motorist interest in road safety was driven by one-off events. When there was a big crash they came to the fore and read about it in the paper but they did not have the inkling that every day people were involved in crashes on the roads. The other thing that we found relates to what David Ward has said, that motorists had a really good understanding of the need for the behavioural issues in road safety to be addressed so they knew they should not speed or drive fatigued or while they were drunk. They had a pretty good understanding of vehicle safety features. They knew that air bags were a good thing to look for when buying a car, perhaps not so much that they would consider spending a lot more money to do that but at least was on the radar.

We found that road infrastructure in road safety was under-recognised. It basically came down to pot holes. We said tell us the one most important feature about a road when it comes to road safety and pot holes inevitably came up as one of the top scores. They never mentioned the importance of having sealed shoulders on the side of the road or putting guard rails around trees. That was not on the radar for them, so we considered this a pretty big hole that we could play a role in filling.



That brings us that AusRAP. Like David Ward said before, AusRAP is part of a bigger Road Assessment Program (RAP) process that is going on around the world. Unfortunately, we cannot claim to have invented the idea. EuroRAP were the first to start it and then became an international road assessment programs group and the United States and Australian programs are following.

The objectives are to improve community awareness about road safety generally and to try to fill the missing gap in road safety, and to try to lift awareness about the importance of road infrastructure, perhaps to the level that is understood in terms of behaviour in vehicles. It is a tricky process. One of the things we found in the focus groups is you have to be careful about saying road infrastructure is really important and you have to make sure you do not do it at the expense of motorists understanding about behaviour and vehicle. They seemed ready to dump existing ideas to take on new ideas. That was no good. We needed to make sure that what we do complements the existing understanding and therefore makes the whole package stronger. Our ultimate goal is to improve safety and see fewer lives lost on the roads and fewer injuries.



We developed two approaches, basically following on from what the Europeans are up to. The first involved producing risk maps which basically plots actual crashes on the road network in order to demonstrate where there are lots of crashes occurring and where there are few crashes occurring. We followed that path because that is one of the things we had a fair bit of data for and we could do fairly quickly and get it up and running pretty early.

The second more longer term approach is the road protection score which looks at the inherent safety of the roads and we aim to give the roads a star rating in the same way we give cars a star rating for how safe they are or how they protect occupants in a crash.

We have an example of one of our risk maps and we have done one for each state in Australia. We produce two risk maps. This is the second kind. The first kind basically we refer to as a collective risk map and it basically plots the number of crashes per kilometre of road, so on a length of road between Yass and Goulburn on the Hume Highway, we count the number of casualty crashes that occurred in a given period and divide that by the length of the road. What those other maps basically show is that most of the crashes occur where most people drive, so in the most populated parts of New South Wales, for example, down the coast that's where most of the crashes occur and the roads inland tend to be coloured green, which indicates low risk. These maps are rated from high, which is black, down to green, which is low.



The second type of map indicates what we call the individual risk and it takes into account traffic volumes as well as the length of the road, so it effectively represents the risk that an individual motorist faces when driving on a road. To many of you this might seem like a pretty straightforward thing and you might have seen it all before, but the point is from our focus groups motorists were not thinking of road safety in these terms, they were thinking perhaps in aggregate and they were perhaps underestimating that. They had an understanding of the concept of a black spot. They had not thought about risk in terms of length of road and as a whole network.

What you can draw from this map is that on the New England Highway, running north from Newcastle up to the Queensland border, there is lots of yellow sections, which is medium individual risk and there is a couple of red sections which represents a relatively high individual risk.


You can see that on the Hume Highway, running down past Canberra, it is basically all green all the way through, which indicates a low individual risk and that is what you would expect. The Hume Highway is built to a fairly high standard. It is largely dual divided carriageway and it has graded separated intersections so you would expect that it would be, for the individual motorist, fairly low risk.

If we were to show the collective risk map, that road is coloured black and red because that is where a lot of the traffic in New South Wales travels and in absolute terms that is where a lot of crashes occur. There is a whole bunch of stories you can pull out of this but the one for me is that it gives proof to the fact that you can be the same driver, obeying all the rules, driving sober, not speeding, in a safe car and the

level of risk that you face actually varies depending where you are on the network so there is actually a link between the risk that you face and the road that you are driving on, so we initially started out with these risk maps as a way of getting AusRAP up and running.

Road Protection Score

- Examination of inherent safety of road, not crash history
- Star rating based on features including:
 - Lane width
 - Sealed shoulders
 - Guard rails and barriers



The road protection score, which is the second protocol, is really trying to take the motorist's knowledge that step further and say what is it about some of those roads, perhaps the red and black coloured ones, that makes them unsafe? Is it because they do not have sealed shoulders or is it because they do not have lots of power poles beside the road? What are the factors that contribute to that?

With a lot of help from transport research we have developed a methodology for star rating the roads and giving us a language that we can communicate between governments and regular motorists on the road, so that we can communicate between all three as to what is a safe road and what is not a safe road. It is basically based on the concept that we know that, for instance, a dual carriageway road is safer or has a lower relative risk than a single carriageway road. We know that roads with no sealed shoulders are less safe than roads with sealed shoulders.

Using that information we have collated a star rating system. The way that we collect that information is with specially equipped vehicles which have video cameras mounted on the roof, pointing basically in every direction and these people travel around the road network and we are currently collecting data for the entire Auslink national network in every state. They take that video data back to the office, do a virtual drive through of the road, measure how wide the lanes are, measure how wide

the sealed shoulders are, how far away from the road trees are and a whole range of characteristics and give them a rating of, say, between one and four. A road with no sealed shoulders gets a rating of one for that component and a road with nice wide sealed shoulders gets a rating of four. We compile that together to give a star rating.







That will enable us to talk about a road like this in terms of a star rating, and while it is a long-term project, hopefully after a while people will come to understand that a one star road implies these sorts of characteristics. This sort of road with no sealed shoulder, with lots of trees beside the edge of the road we might call a one star road and that will help us convey to motorists and policy makers and governments what we might do to this road to lift it that marginal extra bit up to a two star road. That might mean putting some sealed shoulders along the length of it, putting some guard rails around some sections of trees where they are close to the road.

So it really gives us the language to talk to people about some of the really complex jargonistic road traffic language that we currently have. Here again, at the moment you might look at that road and intuitively a motorist might think that that is a fairly safe road, but by giving it a star rating based on our characteristics we might be able to challenge some of their assumptions and really help motorists to link road safety with some of the actual road safety features and infrastructure and then we will not call this a five-star road, but intuitively people might call that a five-star road, or we might be able to challenge some of the existing beliefs about what is a safe road and what is not a safe road. It might be that there are no guardrails on the inside lane there heading over to the overpass and they might be the things that tip this road from a five-star to a four-star road, so what we are effectively doing is I guess highlighting some of the simple measures that might be made to roads just to lift them that little bit extra perhaps from two-star to three-star or three-star to four-star, which will make a real road safety difference.

Road Protection Score

- **5-star road:**
 - Divided, straight, good linemarking, wide lanes, sealed shoulders, forgiving roadside, grade separated intersections
- **1-star road:**
 - Undivided, sharp bends, hills, narrow lanes, poor linemarking, severe roadside objects



That is basically the summary of what we are looking at. A five-star road will be a divided straight road with good line marking and wide lanes. I guess the philosophy behind this is that if you are a five-star driver, so someone obeying the law and not speeding, not driving drunk, you are in a five-star NCAP car, there should not be anything about a five-star road that in the event of a crash will mean that you will die. We have said that people will always be involved in crashes for any number of reasons because roads are a pretty complex system, but we want to try to raise the level of road infrastructure I guess, or at least the way of thinking about it such that when you do have a crash you do not need to die.

What next for AusRAP? We are going to continue producing these risk maps, which will become I guess for us a benchmark of how well we are performing. We hope to produce the road protection scores for the national network later this year. We will have the majority of the network done by around June and hopefully we will have it all completed by mid next year and then hopefully we will continue to update these scores in the future and really in the long-term try to develop the motoring community's understanding about the need for safe road infrastructure and road safety.

What next?

- Risk maps for AusLink National Network updated annually
- Road Protection Scores for National Network this year
- Progressive updates in later years



Collaborative approach

- Federal Minister for Roads, Jim Lloyd:
 - “By providing a safety rating, the risk of death and injury on our roads will be easier for road users to understand. Risk-aware road users will be able to adapt their driving to reduce the risk of a crash”
- Valuable State and Territory Government cooperation



A lot of what we have done here just would not be possible if the State and Federal Governments had not supported and cooperated with us. The State Governments have provided a lot of really good data to help us produce those risk maps, and that has been really helpful, and the Federal Minister for Roads and the Federal Government also provided very important financial assistance to AusRAP last year and really

helped us to bring forward this road protection score. Otherwise we just would not have got as much done as we have, so that has been very helpful.

Questions

Mr Ian Faulks (Committee Manager, STAYSAFE Committee, in the chair): There is time for some questions, if anyone has an issue that they would like to raise?

Mr Iain CAMERON (Office of Road Safety, Western Australia): It is probably a bit too early yet, but are there any discussions or can you comment on the potential for local government involvement in this process? I mean I know that State authorities are collaborating closely at a national level, obviously there are State roads under that, but then local governments - has the methodology got the potential to be applied there?

Mr SMITH: Absolutely. What we are doing is a really broad sort of approach and you will see we are focusing just on the national network, the national highways, at the moment, but I think particularly in Europe, when EuroRAP was rolling this out, ultimately a lot of the local governments were the people who the media went to and said, well, why are these roads not up to scratch, because those roads were the ones going through local government areas in many ways. I think the system works a bit differently here, but they were the ones responsible for upgrading the roads, so sure, I think all levels of government will be involved. I know that ARRB at the moment is working with the State Government in Queensland and local governments there. I have forgotten the name of the approach that they are using, but they are basically taking a similar approach in that they are using this road protection score methodology but scaling it down to more localised problems, which will enable local governments to, instead of waiting for crashes to occur to decide that a road is dangerous, go out and really measure which roads are high risk in terms of these road safety features and then start apportioning their road safety budgets to those sections of roads. I think what the State Government is trying to do there is ensure that all local governments are using a similar system and working together in a common way to try to solve these problems, so I guess AusRAP is a very high level tool and, in terms of its actual application or implementation of road works, very broad, but it certainly can be scaled down to this level.

Mr FAULKES: My understanding is that the original program evolved out of some concerns about the safety of road tunnels in Europe. We are a tunnelling city here in Sydney with a dozen or more road tunnels, some of which are classified in international terms as major, they go under Sydney Harbour and the Cooks River. Can AusRAP tell us anything about road tunnel safety issues?

Mr SMITH: As background, I think what happened in Europe was that there were a couple of major crashes in some of the very large tunnels that caused fires and there was a lot of concern in the community that, if that happens while I am driving through

there, there is a fair chance that I am not getting out alive, so people actually started avoiding tunnels and driving on alternate routes, and people were saying, well, these tunnels are actually quite safe roads. The alternate roads that you are taking are very risky. They wanted to demonstrate that. Insofar as the tunnels are designed in terms of the road infrastructure and the standards that are applied, AusRAP certainly can rate a road going through a tunnel in exactly the same way as it rates a road going anywhere else. In terms of those other issues relating to the special circumstances of a tunnel in terms of what happens if there is a fire in the tunnel, not so much.

Mr BRETT SHERRING: I take it that the maps you have are basically the main transport corridors and that they are the ones you would be looking at going to in terms of saying anything from one to two stars costs X dollars and there is a saving to justify doing that.

Mr SMITH: Yes, in principle that is what we want, we want five-star drivers in five-star cars on five-star roads. I guess sitting below this, and this is something that the road authorities ultimately need to decide, is this idea of fit-for-purpose designing of roads and I guess what we are about is saying that some of these roads are three-star and it would not take much to push them up to four-star, but that would come with significant benefits, so we are really trying to highlight what features on a road could be treated pretty simply and quickly to make a big difference.

Mr SHERRING: That is looking at a localised road safety auditing process.

Mr SMITH: Yes.

Mr SHERRING: That example you have, if there is a missing length of barrier on the approach to a bridge over a river or another road, you would say adding that one little bit will take it from four-star to five-star and you would say, well, you have a high volume of traffic going past and there is a reasonable probability that if somebody spears off there is a big consequence, what are you going to do? What I like about the maps is that you have the two levels of risk and if you can get the governments focusing on what we have to measure and go out and do some of these - I mean it is the same as the road safety audit process, but it is another way of looking at it. As for tunnels, I do not think we have five-star tunnels because there are no shoulders in them.

Mr Lauchlan McINTOSH (Australian Automobile Association): The German Motoring Club did do a massive audit of tunnels across Europe, so there is a process for tunnel auditing and there is a lot of data and a lot of information on that, so it is a matter of resourcing it, but we are capable of doing that sort of study.

Mr Michael GRIFFITHS (Road Safety Solutions): What is the relationship between the traditional black spot identification programs and AusRAP - relationship or overlap, if any?

Mr SMITH: They certainly are related, particularly the risk maps, I guess. I certainly think that the black spot program is valuable and should continue. At the core, AusRAP is trying to take a more proactive approach so, rather than waiting for crashes to occur and using that to define what a dangerous section of road is, why don't we get out on the roads and look at the spots and look at the features that we already know contribute to a lack of safety and try to fix those straight away? But as I understand it there is an almost endless list of what you could call black spots which obviously need to be fixed as well.

Associate Professor Raphael GRZEBIETA (Australasian College of Road Safety): I just wanted to respond to the comments in terms of star rating and trying to get to a five-star rating. Five-star rating does not necessarily mean that you have to have a divided highway with barriers, et cetera, you have to bring speed into it as well, the kinetic energy. When you combine the kinetic energy with the road environment, I mean you can be travelling on a suburban street at 60 kilometres per hour and survive a crash into a pole if you are in a five-star rated vehicle, for example, but if you do that on an 80 kilometre per hour road into a pole or a concrete pylon, well, your chances are 50-50 possibly depending on what car you are in. We saw that with Lady Diana, at 90 kilometres per hour, she was not wearing a seatbelt, but Rhys-Jones survived, so really I think you have to put it into perspective that what you class as a five-star road does not necessarily mean--

Mr SHERRING: Yes, that sort of thing, more detailed.

Associate Professor GRZEBIETA: Yes, it is really focused, it is the start, the baseline, and we go on from there.

Mr Brian WOOD (Motorcycle Council of New South Wales): Your theme is five-star drivers, five-star cars, five-star roads, it is run by car clubs, but what is being done to ensure that other road user groups, of which there are quite a number, are not being disadvantaged by making five-star roads for car drivers?

Mr SMITH: I assume you are talking about motorcyclists?

Mr WOOD: Well, they are not the only ones, there are pedestrians and pedal cyclists as well.

Mr SMITH: Yes, well, in terms of risk, it is every crash that occurs, not just car crashes, and motorcycle crashes would be included, pedestrian crashes would be included. The fact that we are looking at the national network of roads in rural areas at the moment means that the proportion of pedestrians and cyclists is not very large in those crashes, and as well motorcycles, and the same with the road protection score. We are focusing on the rural sections of road and I did not say it in the presentation but we are focusing on three specific types of crashes: Intersection

crashes, run-off-road crashes and head-on crashes. What makes a road safer for those three types of crashes pretty much applies across all types of vehicles that use it. A sealed shoulder is good for a car, it is good for a truck and it is good for a motorcycle. A divided road is good for all sorts of vehicles.

EuroRAP is leading the way in terms of thinking about these additional areas, that is how do we make roads safer for pedestrians and cyclists specifically in terms of the RAP process. They have also done a lot of work on motorcycles. They have identified on which roads out of their overall assessment motor cyclists show up as being a big proportion of the crashes. We take our cues from there. At the moment we are finding our feet on this sort of stuff and we are looking at the higher level approach.

Dr Sarah RENSHAW (Centre for Cultural Research, University of Western Sydney): I wanted to know how you are appealing to people, such as on television, how are you actually reaching people? Are you doing something in groups?

Mr SMITH: It is very difficult to communicate stuff and break into the media on this approach to road safety. I guess what you find is in the media the hot topics are young drivers or the big sensational crashes that occur. We have been reactive in the last couple of years in responding to those media stories with our story. I think that the road protection score things that we do with the star rating is going to be much more digestible for the community, so in that respect we are going to do a lot of work on trying to get that message out there through the media.

Mr FAULKES: Picking up on the theme of Sarah's question, it occurred to me that with the increased penetration of satellite navigation systems, talking to Sensis and some of the other companies supplying data into those navigation systems, this kind of approach could be well integrated into the trucking companies and those sorts of organisations that provide advice to their drivers. Hugh McMaster may talk about this a little later. There is enormous potential from the AusRAP process to really have some quite interesting interventions to assist drivers to understand and recognise the risks on the road.

Better roads

Mr John Brown
NRMA Motoring & Services

Mr Ian Faulks (Committee Manager, STAYSAFE Committee, in the chair): I would like to ask John Brown from NRMA Motoring Services, standing in for the indisposed Brett Gale, the manager of public policy in NRMA Motoring Services. John is familiar to all of you. He is a resident road safety guru with NRMA Road and the topic his talk is picking up and continuing with the theme of road infrastructure.

Apologies again for Brett, who woke up ill this morning and gave me a call to say that I will now become the guru of road infrastructure, not behavioural issues, so if you see a few holes in my logic please be patient with me. Road infrastructure is issue that NRMA Motoring & Services has been getting very involved in and following on from what Greg was saying, it is an issue that we believe needs to be elevated. Typically we have had the shared view of the road safety community that it is the behaviour of drivers that is the cause of crashes, so therefore we should put our energies there. Have we gone so far with our behavioural programs? Do we need to get a balance?

In the last few years you would have noticed a more aggressive NRMA Motoring & Services on road safety infrastructure and also vehicle safety. The figures we saw from the Federal Government's strategy 2010 of road safety surprised me when I saw the data that almost 50 percent of the lives they believe they can save are from road infrastructure and yet we still struggle to have this debate. Obviously there are lots of dollars involved but we are going to be pushing very hard on that issue.

Let us reflect on the next few weeks. We are going to have Sydneysiders leaving to go on their annual Easter holidays. Some will be going north on the Pacific Highway and others south on the Hume or the Princes Highways. I think that if we had a dollar for every time someone says "I wish they would fix this bloody road" gets muttered in the next couple of weeks we would be well off. Nobody likes to spend the Easter break stuck in bumper to bumper traffic, but this pales into insignificance when we consider the three under-performing, under-funded highways that have been just been mentioned, which have been responsible for over 14,000 deaths and injuries in the last 10 years.

As the nation's largest motoring club we are particularly concerned about that and we are marshalling our resources to be more effective in lobbying the Government. We have the voices of two million members behind us and we are trying to educate them about the debate. As we have mentioned before, some time local government or the average motorist can get hooked into the pot hole debate, and we are trying to move that forward into a much more significant debate, that is road safety, deaths on the

road, is a health issue and we need to address it and the people who need to address it are governments with the support of people like those in this room.

It wasn't too difficult to come up with a campaign to attract people's attention in about October of last year to force the government to pay attention. We came up with a campaign. It is on our web site and it depends on how well you say it or with what gusto you say it, but it is www.fixourbloodyroads.com. That caused a bit of interest inside the board of NRMA Motoring & Services, who wanted to know whether that was appropriate. When we surveyed it people basically said "that is the language we use", we have used it and we think it is having a direct impact. When people go on to the site they can find information about the Princes, Hume and the Pacific Highway and find out what the road toll is on certain sections of the road. They have to only type in their details and immediately from their e-mail it would go directly to the nearest Federal and State politician in their area so what we have had is certain Federal and State politicians being spammed, if you like, with road safety messages, well informed through our web site but basically we have made it so easy for them to express their anger. We are trying to keep them angry. Sometimes the community very easily moves on and you need a sensational event to make them angry. It is a struggle to keep them on those lines. It is too exhausting to always be opportunistic to find a new reason for the media to take up the story. We want the politicians to pay attention, so we have tried to empower our members and the broader community to do that.

Our job has been made easy in the last six months with the ill-fated Cross City Tunnel. Just when we thought things were quietening down and we could not get front page, we managed to get front page four times in a week over the Cross City Tunnel for a whole lot of reasons. Since the tunnel was opened in August last year it has unwittingly opened the debate about road safety and also roads and road funding and polling has shown it is becoming an election issue. The Governments have been quite smug at both federal and state levels, saying it is not going to rate as highly. It is starting to rise and if NRMA Motoring & Services and others in this room can keep fuelling it, then politicians will start to pay attention and start putting the pressure on transport ministers et cetera, particularly in close seats.

Dare I say that any government or opposition who can go into the next election, particularly in the State of New South Wales, who have resolved this issue to the satisfaction of the general community and motorists, will be in a better position to be elected.

We believe that the Cross City Tunnel was overpriced and unfair to motorists, particularly those people who did not have an E-tag, and because it closed roads off that were essentially owned by the community. A toll road should benefit those who pay but should not disadvantage those who elect to go the local route. That seems to be a real problem with the way the tunnel has been set up. We now have a new tunnel coming, the Lane Cove Tunnel and that will continue the debate about the

funding of road infrastructure. When a new tunnel comes more debate will be around tolls, road closures and the benefit of Public Private Partnerships (or PPPs).

NRMA Motoring & Services's position on road funding is that, where possible, roads should be funded from existing government revenues, that is taxes or, if not that, public sector debt. If there is no money in the budget then other avenues can be considered, such as the public sector tolls like the Harbour Bridge and/or shadow tolls. The Cross City Tunnel has taught us that Public Private Partnerships need to have strings attached to them. There needs to be adequate and effective consultation with the community over the design and the financing and any contractual details should be made public and far more transparent than what we have experienced.

We cannot have the road closures around the Lane Cove area as we have experienced with the Cross City Tunnel. Anybody in Sydney knows that William Street, Bourke Street, and Sir John Young Crescent have become a debacle. There should be no restrictions however on public transport provisions in those road toll corridors, nor any restrictions on the ability of government to upgrade other roads in the toll road corridor. There needs to be more openness. If a toll is to be imposed it should be set at an appropriate level, otherwise we will have more than one empty tunnel in the coming months.

What was encouraging was the different approach used on the M7, which was opened in December 2005, and we had a toll-free period of at least a month which allowed people to experience and see the benefits of the road. It was good to see that the Lane Cove Tunnel followed suit last weekend, and agreed to that procedure.

Finally, a free alternative route must be made available. This alternative route should be at least the same number of general traffic lanes as the existing route. Existing local roads should not be altered, closed or be subjected to capacity reductions except in cases where the existing road will directly feed into or out of the toll road or where it is justified on safety grounds. That is a mouthful for a person from my behavioural background. I hope you all understood that. I think I understood it.

When NRMA Motoring & Services was first established in 1920, and the National Roads and Motorists' Association, it was not for the purpose of roadside assistance that we have now come to enjoy—the flagship service. It was actually about lobbying government to spend more money on roads. 86 years later we believe we are now back in that game. The State and Federal Government budgets are fast approaching, and NRMA Motoring & Services has completed its budget submissions to both of those Governments. Through research conducted by NRMA Motoring & Services we are also working in local areas. Through our safer roads program, which is essentially a lobbying tool to get governments to pay attention, we have now set up ten Better Roads panels across New South Wales and the Australian Capital Territory and we have identified priority projects that we feel need urgent attention and they are right across the State, and we have worked with local governments, the tourism industry,

regional development, medical practitioners and, at a very grass roots level, we have developed complete and very thorough research on their behalf that has made it so easy for the Government. We literally prioritise in an area what roads could be improved and we have highlighted the cheap wins, the quick wins that they could enjoy. We are really trying to push the case. We have had a lot of rhetoric and we will continue to do it but we are wanting to move into implementation and some changes on those roads.

Getting Governments to take notice and to take action on these issues is one of the challenges that I think we face in the future, but I look forward to working with you in keeping the governments honest and improving our roads to improve road safety for the community of New South Wales and the broader community.

Questions

Mr FAULKES (Manager, STAYSAFE Committee, in the Chair): We will place John on a little bit of a spot but please recognise that he is delivering a speech on someone else's behalf. Are there any questions for John about NRMA Motoring & Services's approach?

Mr Evan GILES (Bamster Driving School): I do not want to put you too much on the spot but there does seem to be a conflict between the five star system we were just talking about before and a lot of emphasis on the Cross City Tunnel, for example, where it seems we created a five star situation out of a quite messy situation. Is there not a certain selling of one's soul if one uses that as one's way to publicise the infrastructure issues when really, from a safety point of view, the Cross City Tunnel must be an improvement?

Mr BROWN: I do not think so. We are not in the business of just road safety, we are in the business of looking after our motorists in the broader community and on that example we thought it was straight out wrong the way they hoodwinked New South Wales people, took roads from them that were not theirs, and separated them. Looking at the actual five star, hopefully we have not over-used that phrase, and I know it has been used four or five times already, five star roads, five star drivers, but we are wanting to make roads an issue and we do not apologise for the fact that infrastructure does highlight the fact that if all the people in these room cannot change the infrastructure, that it needs dollars from Government, we need to have the discussion about who funds it.

We have the example of the Pacific Highway, the road that gets a lot of attention. The Government says it is going to take five years, or it is going to take eight years, or it is going to take 20 years, and then the quick solution that the Government has is we could produce a toll road. I think that highlights this whole debate about funding of roads and how roads are an investment in the future in the community and actually

can reduce the road toll, reduce the ultimate dollars that the community spends repairing people in hospitals by saving them on the road.

So the idea of having a more forgiving road will hopefully, a lot of the time, prevent someone from having a very, very serious crash and actually keep them safe, so I take your point, but we do not apologise for the fact that we are lobbying the Government on the way that they approach that. As Ian said, Sydney is the toll capital of Australia and, dare I say, I think it is very much across the world. We are more tolled than most cities in the world and somehow in Sydney, when you are born and bred here and live here, you just accept that that is the way it is, but you only have to move to other cities and realise it is not the way a lot of their roads are funded.

Mr Lauchlan McINTOSH (Australian Automobile Association): It is a good point and a good point of discussion. I think it was raised earlier this morning, the issue of the system that if you just build a five-star tunnel or if you just build a five-star road and you do not do the other things, it is no better than just fining everybody for speeding. We have to somehow integrate the whole game, and it is tough because most of us tend to only think of the thing that is in our mind at the moment and the other things just get put to the side, and I think when you look at the system that John is talking about, if the system is not working well and the drivers are doing things and putting themselves at risk because of the system, and you are right, there is a view which is you cannot be safer, but in the workplace we do not do that. In the workplace we don't let people do that, we make sure you cannot cut the corner and do something else, we put the whole thing together. I think somehow in the road safety debate there is an opportunity now to actually make the whole picture bigger and say, I think as David Ward was trying to show earlier in the world scene, it is not much good just building roads two miles from the settlement if you do not make it right for people and change other things at the same time, and we in Australia have different needs and you will always get someone with a focus on one thing at a particular time, be it older or young drivers or penalties or demerits or run off the road crashes or something, but somewhere we must make the picture bigger

Associate Professor Raphael GRZEBIETA (Australasian College of Road Safety): One thing that impressed me, I think when Klaus came over the last time, he said road safety is also part of the mobility gain and the economic gain, so when we build safer roads we get a more vibrant transport system that pays dividends back to its community and if we can also consider that in terms of the financial attributes that we can get by making a safer road system, I mean this is the problem and some of the politicians forget this, that if you have a very good safe freeway where there are no blockages from crashes, you are going to have a better functioning system, economically functioning system, so I think we should pull the whole picture together.

Mr FAULKS (in the Chair): I will make a comment: I am not so sure that the politicians are not cognisant of the point you just raised, but I think as road safety practitioners we tend to try to blinker ourselves from recognising what is the reality.

Certainly the Members of Parliament that I have worked with, those sorts of issues are foremost in their minds when they question me on the technical advice that I give them, and they sometimes think it is a little too safety-oriented and not enough reality-based in terms of the fact that roads are serving a variety of purposes in terms of mobility and access and commerce.

Chapter xx—

Road freight—An overlooked road use?

Mr Hugh McMaster
NSW Road Transport Association

I will try to give a road freight industry perspective to what we are talking about today. I would like to talk to you about the policy framework that the industry has to operate in, because it is a little different from that facing most road users or most vehicle owners; some of the important strategic objectives and how they have an impact on the road freight industry; some of the future challenges we will face, and they will certainly be looking 15 years ahead, not just the next five minutes, and also some perspective from the industry as to what the industry sees as being important.



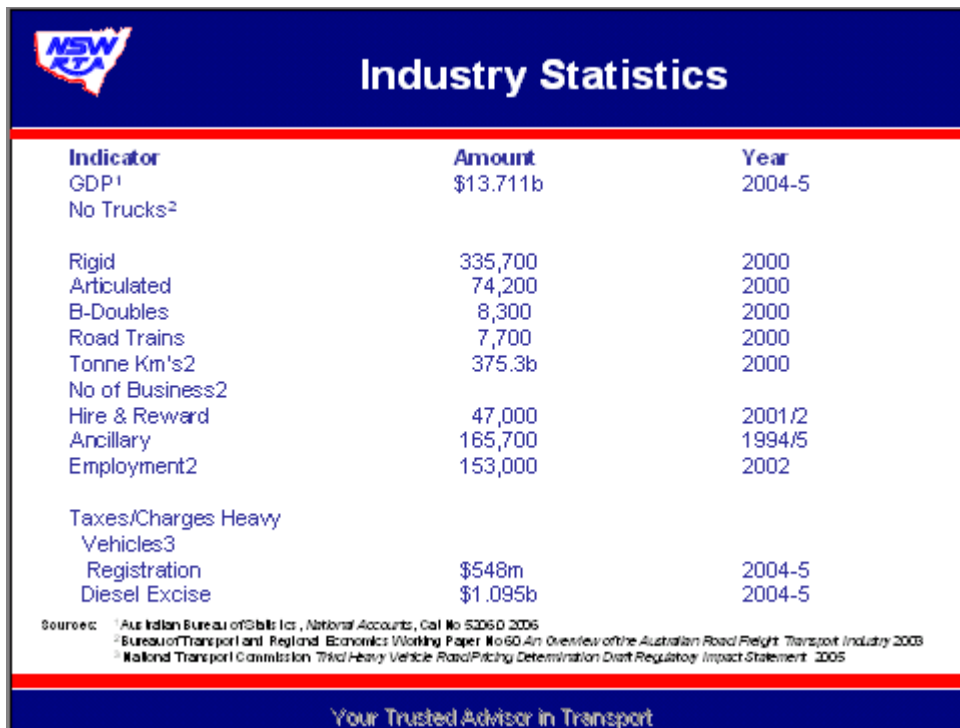
NSW Road Transport Association Inc

- Established 1890;
- Represents NSW based road transport operators;
- Founding member of the Australian Trucking Association;
- Registered industrial organisation of employers;
- Registered Training Organisation.

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Firstly, the New South Wales Road Transport Association is a rather old organisation, established in 1890. We represent road transport operators in New South Wales, that is everything from a bicycle courier right through to a road train, from a single truck owner right through to companies like Toll and Linfox. We are a key member of the Australian Trucking Association, the national peak body for road transport operators, the registered industrial organisation of employees, in other words we represent industry negotiations on wages and conditions for truck drivers and others in the

industry. We are also a registered training organisation and we are the largest supplier of training services in the transport sector in Australia.



The slide features the MSW KTA logo in the top left corner. The title 'Industry Statistics' is centered at the top in white text on a dark blue background. Below the title is a table with three columns: 'Indicator', 'Amount', and 'Year'. The table lists various industry metrics such as GDP, number of trucks, and employment. At the bottom of the slide, there are source references and the slogan 'Your Trusted Advisor in Transport'.


Indicator	Amount	Year
GDP ¹	\$13.711b	2004-5
No Trucks ²		
Rigid	335,700	2000
Articulated	74,200	2000
B-Doubles	8,300	2000
Road Trains	7,700	2000
Tonne Km's ²	375.3b	2000
No of Business ²		
Hire & Reward	47,000	2001/2
Ancillary	165,700	1994/5
Employment ²	153,000	2002
Taxes/Charges Heavy Vehicles ³		
Registration	\$548m	2004-5
Diesel Excise	\$1.095b	2004-5

Sources: ¹ Australian Bureau of Statistics, National Accounts, Cat No 52060 2006
² Bureau of Transport and Regional Economics Working Paper No 60 An Overview of the Australian Road Freight Transport Industry 2003
³ National Transport Commission Trial Heavy Vehicle Road Pricing Determination Draft Regulatory Impact Statement 2005

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Just a few basic statistics about the industry: You will see it is a rather large industry, GDP around \$13.7 billion - that is just the hire and reward sector of the industry as opposed to the ancillary sector. The hire and reward sector is that sector that specialises in defining our freight road service. You will see that there is something in the order of 430,000 trucks in the industry. Most of them are rigid trucks. There is a perception that a typical truck is a long distance semitrailer going from Sydney to Melbourne, Sydney to Brisbane, et cetera, but a lot of the freight is local, it is around Sydney, it is working in regional New South Wales. The tonne kilometres travelled, you will see there are rather large also. We employ 153,000 people and pay somewhere around \$1.6 billion per annum in taxes and charges to Australian Governments.

The way we see road safety is the interaction of three important variables, and these have been alluded to this morning, but I think it is always important to remind ourselves. They are, of course, the road and the environment related to the road, on the roadside, the vehicle and the driver and other road users, and we need to bear in mind that any progress that we are going to make in terms of road safety involves considering those three variables, although I would certainly agree with the motoring associations: We cannot spend enough money on improving the infrastructure.



Overview of the Road Freight Industry Policy/Regulatory Perspective – NSW

- Road safety issues are derived from the interaction of:
 - The road/road environment;
 - The vehicle;
 - The driver/other road user.

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The regulatory environment in which we operate:



Policy/Regulatory Framework – Road Freight - NSW

- State/Territory responsibilities - general:
 - Roads;
 - Road safety;
 - Vehicle standards;
 - Road/traffic law enforcement.
- Road freight specific responsibilities:
 - WorkCover Authority – OH&S;
 - Dept of Environment & Conservation – dangerous goods transport.
- MoU amongst NSW Government Agencies:
 - Primary responsibility for crash investigation – R&TA/NSW Police;
 - WorkCover/DEC called in if required.
 - Road Freight Advisory Council – policy/regulatory co-ordination (in limbo).

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As I said earlier, things are a little bit different. State and Territory Governments have responsibility for roads, road safety, vehicle standards and road and traffic law

enforcement by and large, but the road freight industry is also a part of this community and so there are certain obligations that we have that extend beyond those facing normal road users. The WorkCover Authority of New South Wales has responsibility for occupational health and safety issues because, after all, truck drivers when they are driving are at work, whether they are at the warehouse or on the road, so our members need to consider what occupational health and safety laws they need to abide by while those drivers are working. The Department of Environment and Conservation has control and responsibility for issues concerning dangerous goods perhaps for obvious reasons because of the environmental impact that they could cause if they spill. That has led to a memorandum of understanding in New South Wales amongst those two agencies, the Roads and Traffic Authority and police. In the event of a serious crash, it is recognised that primary responsibility for investigation rests with the Roads and Traffic Authority or the police, however, if there is considered an issue relating to fatigue or some other workplace related issue, WorkCover is invited to take part in the crash investigation, and the same in relation to the DEC should there be a spill involving dangerous goods which could have an environmental impact.

The other important policy and strategic advisory body that is in New South Wales is the Road Freight Advisory Council, which is supposed to meet quarterly. Its last meeting was December 2004. Since then we have had three changes of Minister for Roads, which is an issue in itself in New South Wales at the moment I should say. We do need some stability in the roads portfolio, we do need to resurrect the Road Freight Advisory Council so it can provide the advice that the industry believes that Government needs to improve the policy framework that the industry operates in.

NSW **Policy and Regulatory Framework – Road Freight - Australia**


- Australian Government has increasing role:
 - AusLink – infrastructure;
 - Austroads – vehicle standards;
 - National Transport Commission – policy/regulatory co-ordination:
 - Efficiency;
 - Environmental;
 - Safety.

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Of course, we also appreciate I think that the Australian Government's role appears to be increasing. Through AusLink more money seems to be flowing to roads, certainly in nominal terms. It is taking a more strategic approach, it is considering the merits of road infrastructure along with rail infrastructure, but AusLink also is to some degree considering the importance of freight flows and some of the priorities for its spending are having greater regard to freight flows both within major urban areas but also between major cities.

Austrroads is a well-established organisation that provides guidance in relation to vehicle standards. It is a very important role that Austrroads plays in ensuring that that there is continuous improvement in the standard of vehicles that we buy and drive.

The National Transport Commission was established in the early 1990s. It has an important policy and regulatory coordinating role for the road transport industry. The major areas of its involvement relate to vehicle efficiency, environmental issues and of course safety. As far as the road transport industry is concerned, it is important that we try and have a policy framework within which we can work which has a greater national focus, the reason being a lot of road transport activity crosses State borders, so we would like to think that the regulatory framework and the policy framework in New South Wales is the same in Queensland and Victoria, et cetera, but we are not there yet, we have a long way to go, but the Commission has done a great job in ensuring that issues such as increased commercial environment do drive more consistency in terms of the policy and regulatory frameworks in the various jurisdictions.

 The Road Safety Record – Road Freight Industry - NSW		
Indicator	Fatalities	Year
Articulated Trucks ¹	145	1981
	96	1986
	78	1991
	56	1996
	60	2001
Heavy Vehicles ^{1,2}	102	1991
	86	1996
	77	2001
	65	2005

¹ Australian Transport Safety Bureau Road Deaths Australia 2004 Statistical Summary 2005
² Roads and Traffic Authority Monthly Heavy Vehicle Crash Statistics (unpublished)

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Here are statistics on some trends in fatal crashes involving either articulated trucks or heavy vehicles over the last 20 or so years. You will see that there has been a downward trend, although I should say that even though some of those statistics show there is continuous improvement, really there has not been much improvement in the number of fatal crashes in the last five or 10 years. We have reached a bit of a plateau. Last year the number of fatalities fell again but it is too early to say whether that is a trend. We need to continue to improve our performance and that means better roads, better trucks, and better drivers.

I should say too that within that time the road freight task has probably doubled so those figures need to be considered in terms of the strong growth within the industry, which is growing at about 1.2 times faster than the economy as a whole.



The Future Freight Task

- To double 2000-2020;
- Road up; shipping down; rail unchanged;
- Rail's growth opportunities at the expense of road are:
 - East coast intercapital corridors;
 - Port to outer industrial areas.

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Looking ahead, the National Transport Commission has just released a report called Twice the Task, which is a very informative publication which gives some idea of the road and rail freight sectors, looking ahead to around 2020. In that time the freight task will roughly double, so the NTC says. We will continue our growth faster than the economy as a whole. Road freight will take a greater share of the surface freight transport task at the expense largely of the shipping industry. Rail's share of the freight task will remain unchanged. It will probably grow in areas such as east coast freight movements between Sydney, Melbourne and Brisbane and also from ports to outer industrial areas in, say, the western suburbs of Sydney and the western suburbs of Melbourne.



The Future Freight Task (cont)

- **Drivers of freight growth include:**
 - Increased demand for minerals;
 - Increased international trade;
 - Reduced inventory holdings; more air freight;
 - Smaller number of plants/warehouses;
 - Increasing diversity, specialisation and individuality.
- **Long distance – larger payloads;**
- **Short distance - smaller consignments;**
- **Fuel to increase 1000% to impact on distribution patterns.**

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We need to bear in mind what drives this freight growth and there are things such as increased demand for mineral commodities, the opening up of the international economy, reduced inventory holdings, more reliance on just-in-time, a small number of plants and warehouses, so instead of having a business with 20 plants scattered around the country, you may have three, which means that the road transport industry places a greater role in the production and the distribution process. There is also increasing specialisation and a wider variety of goods and services available, so all of those things again drive increased freight and more trucks on our roads.

I think, looking forward, we will see that over longer distance trips the average payload will probably be larger. Over shorter distance trips the average consignment will be smaller, so the NTC thinks that 15 or 20 years hence a quarter of all the vehicles on urban roads are going to be trucks, and invariably light trucks, so there will be a change in the pattern of traffic on our roads, especially in urban areas, and even if fuel increases by 1,000 percent, the NTC thinks that will make very little difference to the relative share that road has compared with rail and shipping, so there will be more trucks on our roads.

The Roads and Traffic Authority have underlined some strategic objectives in the area and they are to maximise road user knowledge and competence, to increase community awareness and positive attitudes to road safety, to minimise unsafe behaviours and unsafe vehicles through appropriate regulation enforcement, which is an important issue in the road transport industry, to increase market demand for safer vehicles and give greater priority to design, development of maintenance and infrastructure.



R&TA Underlying Strategic Objectives – Road Safety³

- R&TA's underlying strategic objectives are to:
 - Maximise road user knowledge/competence;
 - Increase community awareness and positive attitudes to road safety;
 - Minimise unsafe behaviours/vehicles through appropriate regulation/ enforcement;
 - Increase market demand for safer vehicles;
 - Give priority to safety in design, development and maintenance of infrastructure.

Roads and Traffic Authority 2005 Annual Report

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Future Challenges Relevant to Heavy Vehicle Driver Safety³

- Change mindset of people who use drugs;
- Implement chain of responsibility legislation;
- Use technology/intelligence to cost effectively target non-compliant vehicles/operators;
- Achieve a balance between:
 - road safety;
 - road network utilisation;
 - infrastructure protection; and
 - vehicle productivitythrough heavy vehicle access arrangements/ compliance strategies;
- Encourage accreditation and self-regulation.

Roads and Traffic Authority 2005 Annual Report

Your Trusted Advisor in Transport

Important priorities also include changing the mindset of people who use drugs. That is important in the road transport industry. The level of drug taking amongst truck drivers remains far too high. It is falling, but it needs to fall a lot further. Our association supports the idea of random drug testing at work sites. Provided that we

have a credible enforcement regime, we also support the idea of random roadside drug testing as well, and we are heartened by some of the progress in Victoria on that front.

We support greater use of technology, greater use of intelligent systems to drive smarter target enforcement and certainly the Roads and Traffic Authority is one of the leaders around Australia amongst the jurisdictions in trying to better analyse the reputation of particular trucking companies and their preparedness to comply with the law, but the last thing that our association wants is irresponsible behaviour by trucking companies and their drivers.

There is also a greater role for accreditation and self-regulation within the industry and certainly through programs like the Australian Trucking Association's Truck Safe program. We think that has a long way to go and we will continue to encourage our members to try to self-regulate and try to improve standards of industry performance that way.

NSW RTA

Future Challenges Relevant to Heavy Vehicle Driver Safety³

- Maintain decline in the road toll;
- Satisfy infrastructure demands in rapidly growing coastal areas;
- Subject to a successful trial, introduce point-point speed cameras for heavy vehicles.

Roads and Traffic Authority 2005 Annual Report

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Further challenges for the Roads and Traffic Authority sees are maintaining the decline of the road toll. As I said earlier on we seem to have plateaued out. We have to find new and innovative ways to keep the road toll down. They recognise and the NRMA spokesperson said previously, and we agree with them, we need to address infrastructure issues in the rapidly growing coastal areas but we need a lot more money on both the Pacific and Princes Highways in particular.

Regarding the introduction of point to point speed cameras, only yesterday afternoon we met with the new Minister for Roads for New South Wales and talked about that.

In principle we support this as a way of trying to encourage improved compliance with speed limits by truck drivers. There is no doubt that from our viewpoint speed is the number one concern that our association has as far as heavy vehicles are concerned in the road safety area.



The slide features a dark blue header with the NSW RTA logo on the left and the title 'NRTC Heavy Vehicle Safety Objectives⁴' in white. Below the header is a white area with a red border containing a bulleted list of objectives. At the bottom of the slide, there is a red horizontal line above a dark blue footer with the text 'Your Trusted Advisor in Transport'.

NSW RTA

NRTC Heavy Vehicle Safety Objectives⁴

- Heavy vehicle driver seat belt wearing rates to be increased to match those of car drivers;
- Responsibility for driver safety to be shared by all parties through a range of personal, commercial and government structures;
- Improved compliance with prescribed speed limits which should be reviewed and reduced where warranted;
- Selective infrastructure investment programs aimed at reducing crashes involving heavy vehicles should be put in place;

⁴ National Transport Commission Heavy Vehicle Safety Seminar 21-22 October 2002

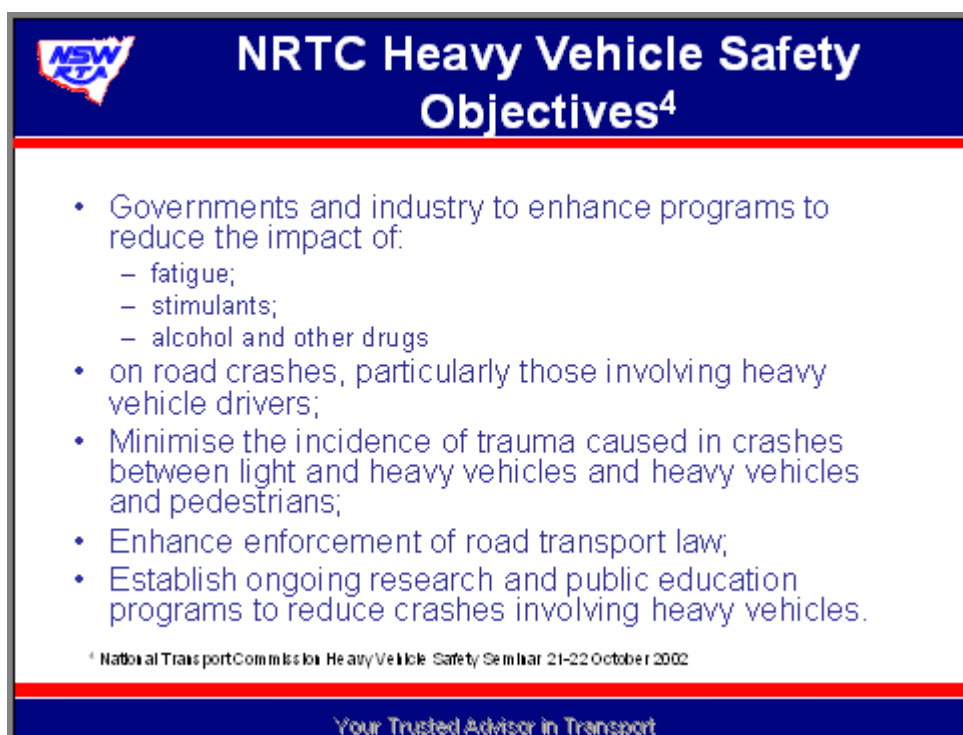
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The National Road Transport Commission as it then was back in 2002 or reached agreement on a series of priorities as far as safety is concerned. Seatbelt wearing is a very big problem in the trucking industry. Something like half of all heavy vehicle drivers killed on New South Wales were not wearing seatbelts, so we have a long way to go still to improve compliance by truck drivers in that area.

Responsibility for driver safety is to be shared by all parties. Last year New South Wales introduced chain of responsibility legislation in relation to road laws. Victoria did also. That legislation evolved from model laws developed by the National Transport Commission. Under this legislation it recognises that pressures can be put on both truck owners and drivers for those drivers to meet unreasonable demands in the delivery of freight. What it is trying to do is tackle the problem of the client who expects a truck driver to drive overnight, say Sydney-Adelaide. It is against the law. It is far too far for any person to drive. That driver will be fatigued. We have to find ways of spreading the responsibility further, so these laws are designed to save lives and costs. While they have not gone into the fatigue area yet, there is conceptual support now of the idea that the consignor, the consignee and other parties between the consignor and the consignee in the road transport chain have to bear some responsibility for the behaviour of truck drivers on the road.

Only last month new laws came into force in New South Wales under occupational health and safety (OH&S) legislation, which extended the chain of responsibility to occupational health and safety areas. For large businesses with more than 200 employees they have responsibility for working with truck owners and truck drivers to ensure safe systems of work are in place, so that in areas like fatigue improved practices are in place. That has caused a huge reaction. We have spoken to something like 2,000 operators and their clients in the industry in the last few weeks, selling the message that these new laws are important to them and that responsibility for safety of the driver rests with the client base as well as the truck owner. We have some reservations about the specific provisions of this regulation but conceptually we support the direction that the Government has gone in.

Improved compliance with speed limits was also an important priority coming out of the National Road Transport Commission conference back in 2002 and point to point speed cameras and other measures will which improve enforcement and make it smarter and more targeted, we think, are very important. Selective investment infrastructure is also very important from a road safety perspective.



The image is a presentation slide titled "NRTC Heavy Vehicle Safety Objectives⁴". It features the NSW RTA logo in the top left corner. The slide lists six bullet points: 1. Governments and industry to enhance programs to reduce the impact of: - fatigue; - stimulants; - alcohol and other drugs. 2. on road crashes, particularly those involving heavy vehicle drivers; 3. Minimise the incidence of trauma caused in crashes between light and heavy vehicles and heavy vehicles and pedestrians; 4. Enhance enforcement of road transport law; 5. Establish ongoing research and public education programs to reduce crashes involving heavy vehicles. At the bottom, there is a small footnote: ⁴ National Transport Commission Heavy Vehicle Safety Seminar 21-22 October 2002. The slide is framed with a blue border and a red horizontal line at the bottom.

NSW RTA

NRTC Heavy Vehicle Safety Objectives⁴

- Governments and industry to enhance programs to reduce the impact of:
 - fatigue;
 - stimulants;
 - alcohol and other drugs
- on road crashes, particularly those involving heavy vehicle drivers;
- Minimise the incidence of trauma caused in crashes between light and heavy vehicles and heavy vehicles and pedestrians;
- Enhance enforcement of road transport law;
- Establish ongoing research and public education programs to reduce crashes involving heavy vehicles.

⁴ National Transport Commission Heavy Vehicle Safety Seminar 21-22 October 2002

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Governments and industry are working with each other to reduce the impact of fatigue stimulants, alcohol and other drugs; minimise the instances of trauma; enhance enforcement of road transport laws; conduct ongoing research and education. They are some of the priorities from the National Road Transport Commission summit back in 2002.



NTC Twice the Task Findings⁵

- **Identified 22 strategic priorities to 2020 across:**
 - Road and rail freight;
 - Efficiency, environmental and safety parameters.
- **Road safety priorities include:**
 - Actively progress implementation of Performance Based Standards;
 - Introduce time & location specific permits using intelligent access technologies;
 - Improve road design to better suit trucks/road capacity;
 - Introduce direct charging mechanisms by infrastructure provider;


⁵ 'Twice the Task' A Review of Australia's Transport Tasks SKM and Meyrick and Associates for the National Transport Commission, October 2005.

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I referred to earlier to the National Transport Commission's 'Twice the Task' report. For the next 15 years they have identified 22 strategic priorities, some relating to road safety and performance based standards. The idea of performance based standards is to encourage road transport operators to operate under a set of criteria that their outcome is focussed, rather than using the traditional prescriptive model that governs road law. Certainly we see great opportunity for truck operators to operate under a PBS regime whereby they agree to meet a certain set of safety, economic and environmental criteria, provided that drivers improve their overall performance.

Introduction of time and locations for specific permits using intelligent access: Once again intelligent access technology such as GPS, we see, has great potential to improve road safety by making the truck owner and truck driver more accountable for their behaviour on the road. Improved road design speaks for itself, but we want to ensure that the road design takes into greater consideration what sorts of vehicles are going to be using the road. Introduction of direct charging mechanisms as well, we see a direct link between the charge imposed on the vehicle and the safety with which that vehicle is used.

Some other priorities in relation to road safety: We are looking at congestion from the point of view of a truck driver and a truck owner. Each day they schedule transport tasks that have to be completed. Should problems arise due to congestion that has an adverse impact on the ability of the truck owner and the truck driver to complete those tasks. That adversely impacts on client service. It puts pressure on drivers unrealistically to complete certain tasks, so there is a need to ensure that there is a right balance between managing fatigue and planning a day's work.



NTC Twice the Task Findings (cont)⁵

- Road safety priorities include (cont):
 - Assess real contribution of freight to congestion;
 - Establish national transport planning body;
 - Preserve rights of way for transport corridors/terminals;
 - Identify road/rail links to comprise the essential freight network.

⁵ "Twice the Task" A Review of Australia's Transport Tasks SKM and Meyrick and Associates for the National Transport Commission, October 2005.

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If we can improve the average speed of trucks on the road within the legal speed limit, that means that more transport tasks can be completed per day and that improves vehicle productivity and better manages fatigue of the driver as well.

The establishment of a national transport planning body: What the National Transport Commission is saying is let's look at infrastructure planning from a national perspective to reduce the role of state and local governments. Preserve the rights of way for corridors and transport terminals: That is something that has been well-established in all jurisdictions, but the National Transport Commission sees important safety issues concerning that as well, and also improving the rail links. There is a greater role for rail to work with road in improving the overall transport task especially, as I said earlier, up and down the eastern seaboard and from port to the western areas of Sydney and Melbourne.


What do the National Transport Commission priorities recognise: The industry can do better in terms of its seatbelt wearing record. The pressures that are on truck owners and drivers and recognised responsibilities need to be shared across the transport chain. We need to improve our fatigue management. We need to more effectively tackle the problem of drug taking within the industry. We need smart and targeted compliance enforcement programs. We need to understand that the way the industry operates, the way truck drivers behave on the road and operate in the market environment. Market drivers will not go away. We have to take into account in developing a policy, the framework the industry operates under. We need to ensure close interaction between planning and engineering.



Significance of NTC's Objectives

- NTC's objectives recognise:
 - There are areas where industry can do better (eg seat belt wearing);
 - Pressures from the transport chain justify imposition of responsibilities beyond drivers and owners;
 - Fatigue/drug taking require particular attention;
 - Specific compliance/enforcement programs/strategies are needed;
 - Understanding the market is critical;
 - Planning, economics and engineering interact closely.

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NSWRTA's Road Safety Priorities

- Driver Issues:
 - Attracting young drivers; building career paths;
 - Introducing workplace drug and alcohol testing; roadside drug testing;
 - Demerit points regime reform.
- Infrastructure issues:
 - More spending on roads:
 - Pacific Highway;
 - Hume Highway;
 - Princes Highway;
 - F3/M2 link;
 - Port Botany/airport access.

Your Trusted Advisor in Transport

Some of our priorities as well are attracting young drivers. At the moment we have a graduated driver licence regime for truck drivers, not only here but in other States and Territories.

The originating apprenticeship system. It means while the person who fixes the truck may go through a vocational and training regime, the person who drives the truck does not. The shocking record of young male drivers in particular forces up insurance premiums and makes it unattractive for truck owners to hire them to drive trucks, so there is no proper career path in the industry. We need to somehow overcome those problems.

As I said earlier, we support the introduction of work place drug and alcohol testing. We want to be as sure as we can that drivers are fit for work when they arrive at work every day. We believe there is a need to reform demerit points regime as well, to take account particularly long distance drivers and the number of kilometres they do each year and the impact of the loss of licence on their livelihood.

Infrastructure issues, we share the concerns of NRMA Motoring & Services about many of the State's roads and some of our priorities there for infrastructure change.



The slide features a dark blue header with the NSWRTA logo on the left and the title 'NSWRTA's Road Safety Priorities (cont)' in white. The main content area is white with a red border. It lists two categories of priorities: 'Heavy vehicle rest areas, especially:' and 'Enforcement/administrative issues:'. The first category includes four bullet points: Pacific/Princes Highways; Port Botany precinct; Western Sydney; and With new intermodal developments. The second category includes three bullet points: Use technology; Improved co-ordination/co-operation – NSW Police, other jurisdictions; and Compulsory third party property insurance. A dark blue footer contains the text 'Your Trusted Advisor in Transport'.

Heavy vehicle rest areas, a very big problem in the industry, especially on the Pacific Highway. So often a truck driver wants to take a rest and the rest areas are full, so he ends up parking on the side of the road and really cannot get decent sleep. It simply is not good enough. A similar problem exists in western Sydney and the Port Botany area. There are simply not enough facilities for truck drivers to rest.

We think it is absolutely mandatory that with any new motor terminal that there are sufficient rest areas or rest facilities provided for truck drivers.

Enforcement and administrative issues, as I said earlier, let's rely on more technology such as GPS to improve the quality and effectiveness of the enforcement regime. We want to see improvement co-ordination between the RTA and the police, between the RTA and transport and road agencies and other jurisdictions. We want better intelligence gathering so the roads industry either can clean up their act or get out of the industry. It is absolutely vital in our view. We support compulsory third party property insurance as well.



The slide features the NSWRTA logo in the top left corner. The title is 'NSWRTA's Commitment to Continuous Improvement'. The main content is a bulleted list of five points. The bottom of the slide has a blue footer with the text 'Your Trusted Advisor in Transport'.

- **Ensure a safe workplace and a safe road environment for all road users;**
- **Regular consultation – Ministers and Shadow Ministers, advisors;**
- **Participation:**
 - Inquiries – Ministerial, parliamentary;
 - Regular dialogue – government departments/statutory bodies;
- **Information dissemination – circulars, briefings;**
- **Training and skills development – course development and delivery.**

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We will continue to advocate a safe work place and a safe road environment for all road users. We will continually to regularly consult with ministers to ensure we achieve this. We will continue to participate constructively in ministerial and Parliamentary inquiries, ensure regular dialogue with politicians and government bodies.

Once new laws come into place, we will continue to ensure our members are aware of their obligations through circulars, briefings, etcetera. We will continue to offer training and skills development as new policies and regulations come to force. Thank you very much.

Questions

Mr Ian FAULKES (Committee Manager, STAYSAFE Committee, in the chair): There is time for a couple of questions.

Dr Sarah RENSHAW (Centre for Cultural Research, University of Western Sydney): I just wanted to ask you if there has been much research on trucking culture for things like sources or reasons why seatbelts might be so bad. I have been told by a truck driver for example that he won't wear a seatbelt because he wants to be able to leap down onto the floor if his vehicle looks like crashing and they believe that this will save their lives.

Mr McMASTER: Maybe somebody from the National Transport Commission may know of any research. My understanding is some has been done. I think some of the issues that probably discourage the wearing of seatbelts are the issue that you referred to, plus the feeling that seatbelts in trucks are not comfortable, so the design of the seat, the design of the belt, it makes it uncomfortable, particularly for drivers who are driving long distances.

Mr FAULKS: Jeff Potter from the National Transport Commission may care to comment.

Dr POTTER (National Transport Commission): Firstly, thank you Hugh for the presentation and for the excellent promotion of the National Transport Commission policies including safety in the transport industry. On the issue of what is known about why truckies don't wear their seatbelts, we have recently put a report up on our website looking at some of the reasons reported by drivers for not using seatbelts, particularly relating to the question of comfort and the different set ups within the truck cab or whether the seatbelt is actually attached to the seat or attached to the side of the cab, with a free floating end suspension onto the seat, which means that every time you hit a bump the seatbelt tightens a little bit more and that has been identified as one of the reasons – I am not sure to what extent it is an excuse rather than a reason for not doing something they don't normally do in the first place. Addressing some of the myths about whether you would be safer flying loose around the cabin, even at floor level rather than being held in your seat, is certainly one of the challenges to get over in order to increase seatbelt wearing.

Mr Lauchlan McINTOSH (Australian Automobile Association): I think those reasons are really quite old reasons and if manufacturers are still making truck seats without the belts properly attached, the manufacturers should be castigated. Twenty years ago I ran a mine with 200 trucks and every driver wore a seatbelt. It is just an old argument.

Professor STEVENSON (George Institute for International Health): Hugh, I am just interested in the figure you had about the fuel costs increase is 1000% and there would not be much change. I guess in fact with the fuel costs in the 70's there was a big change in exposure and I am just wondering what was the basis for that.

Mr McMASTER: First of all, that is the International Transport Commission saying that, not us, but I think what they are saying is that factors such as a road's ability to

deliver a door to door service, the greater reliability of road as a freight mode compared to rail or shipping, the wider network, more flexibility that the road truck industry has, a more customer service oriented culture. They are all factors that mean that even a large increase in fuel prices will not lead to a huge change in modal share.

Mr Michael GRIFFITHS (Road Safety Solutions): Two points on truck seatbelts, one is that Australian Design Rule 4N is a specific design rule for truck seatbelts, which allows a desensitising of seatbelts so that idea of truck seatbelts locking up on the air suspension should not occur, and in fact if that rule is not working, obviously it should be updated.

In terms of enforcement, the Roads and Traffic Authority has got Safe-T-Cam. When I was in the Roads and Traffic Authority we re-aligned some of the cameras there for a while to start looking at the cabins and it is totally feasible to do a seatbelt wearing enforcement in trucks using that safety cam system. The tools are all there, they are just not being used.

Mr McMASTER: Let me make it quite clear, we do not support drivers who do not wear seatbelts. The seatbelt is there to protect them. We believe they should wear it but ultimately it is their responsibility because they are the ones who are driving and once you leave the loading dock or the transport yard, it is in your hands entirely.

Associate Professor Raphael GRZEBIETA (Australasian College of Road Safety): Thank you for that great presentation Hugh. A lot of good stuff was in there concerning truck safety. I just want to respond on the seatbelt issue, I think one of the issues is you have got mass behind you when you are in the truck when you are involved in a crash, momentum is on your side and so a lot of truck drivers survive crashes not wearing a seatbelt. That is one thing that is going together with that myth.

However, they also looked at that in Germany, I remember a couple of years ago I went to a truck crash worthiness conference. They have it every biannual year, which a chap by the name of Alexander Burg keeps inviting me to and what they did, they actually had to stage a crash, and they did a crash with a truck, they had a couple of dummies without seatbelts and then they did the second one with seatbelts. Then the media got involved and it went virtually nationwide throughout Germany.

I think there is an issue there that there is probably a myth that they won't get hurt if they hit something solid or get involved in a crash, but the other issue which concerns them, and I have noted this as well from some discussions and anecdotal evidence, is the truck cabin itself, it may not be strong enough, and what they to be is in a position that they can jump clear – they think they can jump clear. Whether they do or not is another question, but the truck cabin itself also needs to be looked at carefully from that perspective, because once again, you have got mass against you.

Mr FAULKES: One final comment Hugh?

Mr McMASTER: Certainly they are all factors. The Roads & Traffic Authority does have a video which shows the impact of a crash and how the driver moves around in the cab if they do or do not have a seatbelt on and certainly that has had wide publicity throughout the industry, although it does not seem to have made a great deal of difference as far as seatbelt wearing rates are concerned.

I suspect the main areas of resistance continue to be the driver thinks they will be safer without a seatbelt on, they can escape more easily, etcetera, etcetera, etcetera rather than stay in a rolling truck. I suspect also that the issue of driver comfort is important but we need to continue to ensure that there are good seatbelt design, adequate roll over protection and also continuing targeting and promotion of seatbelt wearing by truck owners.

I know one or two companies that actually install fluorescent material on the sash part of the seatbelt to try and ensure that that is easier for them to monitor what the driver is doing when they leave a transport yard and come back. That certainly caused a reaction, as I understand it, in the Transport Workers Union, who sees it as being an unnecessary imposition on the driver. We need to deal with those sorts of cultural issues and certainly from our Association's view point we will continue to do so, but ultimately, the driver, when he is out on the road on his own has to accept responsibility for himself.

Key performance indicators, benchmarking and fleet safety issues

Mr Anton Benc
Benchmarking Partnerships

Mr FAULKS Committee Manager, STAYSAFE Committee, in the chair): Good afternoon, can I indicate something which is not particularly apparent from the various displays that you have seen so far today, but this conference very much is dependent on sponsorship funding which is supplied by way of a grant from the Motor Accidents Authority of New South Wales and the New South Wales Chapter of the Australasian College of Road Safety. I would like to acknowledge that. You may have wondered why the Motor Accidents Authority (MAA) banner was displayed so prominently. I think we are one of the few jurisdictions across Australasia which has the benefit of such continued support in a meaningful way for ongoing road safety purposes, which is what this seminar is designed to be.

Before lunch Hugh McMaster was chatting to you about issues associated with heavy vehicles. I would like to continue that theme, if we could, by inviting Anton Benc from the firm Benchmarking Partnerships to talk about key performance indicators, benchmarking and fleet safety issues. Many of us, I think, do receive e-mail notifications from Benchmarking Partnerships about the very active role they play in coordinating seminars across the country and they look at a range of issues in a range of businesses, but particularly looking at benchmarking matters.

Anton is a co-managing partner with Bruce Searles, who may well be familiar to a number of people here; Anton is the Melbourne connection, Bruce is the Sydney connection. Bruce Searles was, I would argue, one of the architects of the original Road Safety 2000 strategy in New South Wales in his role as a senior executive within the then NRMA, now NRMA Motoring and Services.

I would like to ask Anton to continue the theme of the heavy vehicle and the fleet operations by talking about key performance indicators and benchmarking.

Benchmarking Partnerships	
	<h2 style="text-align: center;">Outline</h2> <ul style="list-style-type: none"> • About <i>Benchmarking Partnerships</i> • KPIs for Fleet Safety • How Fleet Safety best practices are found • Fleet Safety Benchmarking Process <ul style="list-style-type: none"> • Variety of <u>organisations</u> involved <ul style="list-style-type: none"> ▪ Topics covered • Key Best Practice Findings • Feedback and Questions

Good afternoon and thank you very much for the invitation. There will be some background material on benchmarking, and we will put that in context with our organisation and key performance indicators (KPIs) in fleet safety and how that is applied across a whole segment of industries in Australasia. We will be covering benchmarking as well as key performance indicators. We will be looking not only at the setting of key performance indicators, and the lead and lag indicators of good safety benchmarks, but applying it to benchmarking processes and how you can actually learn from other organisations in good fleet safety management and practices. We will look at best practices and how fleet safety practices are found across organisations—often it is hidden within corporate policy and sometimes it is an individual or silo managed function—and how the good practices upon behaviour and culture is embellished across the organisation to encourage good practices as well as the skills and competencies which go with it. How do you benchmark fleet safety and how can you learn from other industries outside your own industry? I know today there is a variety of industries represented here and I hope this will give you some incentive that there is good learning outside your own industry, to gather the very good practices that are happening around the workplace and in other industries. We will share the variety of organisations we have worked with in this area. We have been benchmarking fleet safety now for three or so years, and we will cover that partnership and discuss that in more detail. Last, but not least, I would like to spend some time towards the end looking at what are the best practice findings from the networks and workshops and study tours that we conduct in this area. There has been some excellent work done and I would like to share some of that with you.

Many organisations that sign up for our workshops and studies do so within a code of

conduct, a behavioural code, so the information is somewhat confidential but I am able to blind that information up so that it will have some meaning but will not identify those organisations. If we have a chance at the end there will be some feedback and questions.

Our organisation, Benchmarking Partnerships, has been going now for about seven years. We are recognised across Australia and through the Pacific rim. We are the licensed partners through the Asian Productivity Organisation, the Singapore Productivity Association, the New Zealand Business Excellence Foundation, for which we have just had a two day workshop two weeks ago, specifically on KPIs and strategy throughout organisations, and we run best practice study tours, and a few other things which I will touch on. Our mission and our purpose is to partner people in different organisations, the emphasis being different organisations because that is where the innovation often is inside our own industry, so through shared learning and collaboration we can all improve and you can improve your business. We do that through study tours, workshops and a range of other products. There are about 5,000 customers we have throughout South East Asia and Australia, also now linking across to America to the American Productivity and Quality Centre (APQC), which is a recognised licensed body of business excellence in the United States and we are running a number of projects through them.

We commenced Benchmarking Partnerships through the Australian Quality Council, and we have purchased the intellectual property of benchmarking in our organisation. Our organisation is fairly small. Bruce Searles and I are the partners, and we typically have about eight people working on various projects from data analysis through to project planning, project management, administration, etc.. We do benchmark analysis where we do a health analysis of good practices in organisations and how well they are performing and we provide customised reports to leverage strategic benefit on good practices that others are doing. Our facilitation of process innovation is a bit like business process reengineering. We work at the front end of the organisation. We come in and do a diagnosis of where they are at, where they want to be in line with their stakeholder needs and map a strategic plan or an action plan for business improvement. We do this through a range of workshops, one of which is fleet safety, but many other topics across management systems as well, such as senior executive, leadership, communication, customer service, innovation, marketing, public relations, ... the whole range of project management.

The next slide shows what not to do with good fleet safety management. You may have seen this around the traps. I hope not. We want to discourage this sort of behaviour. Many organisations have got great plans and great processes for fleet safety but I wonder how many individuals actually in their heart walk the talk, or they actually behave in the way that the organisation would like them to and be a conscious role model in the organisation for good practice fleet safety.



Unfortunately, one of my good friends died from a heart attack last week and he had the mindset of knowing he was not feeling well and he pulled over. He could have had a disastrous effect on other people going across the bridge he was travelling on, but he had a conscious mind even in those dire circumstances not to endanger the public.

Benchmarking Partnerships





KPIs for Fleet Safety

- Lag – LTIFR, LTISR
- Lead – investigations completed, improvement actions closed
- Qualitative through Benchmarking – Where am I at? What are the best practices out there?
- In ours and in different industries
- Why measure KPIs? – to track and improve performance – learn & apply best practices through benchmarking

Let's look at key performance indicators now. There are two groups of key performance indicators: lag indicators and lead indicators. Do we all know the difference between a lag and a lead indicator? A lag indicator is something that has already happened. For instance, if we are looking at some measures there of lost time injury frequency rate or lost time injury severity rate, these are data or measures that have been already collected by the organisation. We have a feel for the accident profile of the organisation and the injury rate and the severity rate. These measures are often collected by many organisations and can be benchmarked across a whole range of industries. They do not tell you how to improve, they just tell you the current state of safety.

Lead indicators are those things that you can proactively set in place, put some measures in place to impact the effect on the lag indicators in the future. For instance, you might study a lost time injury frequency rate and severity rate accidents occurred. To have some investigations of fleet safety committee, you might have a specific team that represents all divisions or all business units of the organisations. So you cover all the key stakeholders of those that use fleet safety. Improvement actions are actually engaged in better practices. The root cause is determined, there is some study on the different trends of the causes and improvement goes through to change practices and change behaviour. They are some lead indicators.



They are the numerical things of benchmarking, the lag and lead indicators. There is also the qualitative, as well the numerical or quantitative. The qualitative aspect is really important because that gives context to organisations wanting to learn from each other that are outside your own industry, things that are not 'apples with apples

'on the first instance, might in fact have some real wisdom on good practice and we want to learn about those. It is about 'Where am I in the maturity of our fleet safety, how well is it performing and how do I know'? Learning from not only our industry but other different industries and then the basis of all of these different measures, why do we have these measures? We might have too many or not enough for fleet safety.

I guess if I could provide some insight here: what gets measured, gets done. If you don't have the measures, then the behaviour is uncontrolled and the espoused talk by a senior executive will be different to the actual behaviours because we are not being monitored in the way the measures are being set. Conversely, you may have the wrong measures, wrong measures accept the wrong behaviour. So having a balance of both quantitative and qualitative measures, a balance between the lag – the things that have happened, and good practice – lead indicators, so you can cut off any trends that are going to escalate into a crisis with your fleet safety, are probably good things to apply in your benchmarking.

Other key performance indicators that perhaps you may be aware of, include:

- VKT or vehicle kilometres travelled. This is about the number of deaths or crashes or injury per 100 million kilometres travelled by vehicles. This is a common fleet safety measure, particularly with road transport organisations.
- Severity rates per crash and analysing the data, getting down to the root causes of various incidents, because an incident in fact could be a fatality.
- By chance, people may have got away with a less severe case, so it should be treated quite seriously, collecting the data on incidents and looking at those risk factors. Things like looking at the demerit points per driver and type, speed fatigue, failures, using mobile phones for instance while driving, percent night driving, the age, whether they are provisional, the conditions of the road are wet, returning from functions, different road types, different surfaces, fuel consumption, a driver observation check list, and so on.

Benchmarking Partnerships	
	<h2>Other <i>KPIs</i></h2> <ul style="list-style-type: none"> • Crash rates per VKT, per vehicle • Severity rates eg injuries (hospital & other) per crash, per VKT • Risk factors per driver / per VKT eg demerit points by type eg speed, fatigue, phone use; night driving %, age, provisional, wet, returning from function, fuel consumption, driver observation check list • – these can be organisation specific and need to be checked as such

Xxxx

For those that had collected a hand out, there is a hand out that I had on an observation check list at the very front. I am sure Ian will be able to make a copy available to the rest of the delegates, but if you have got it there I would just like to bring your attention to this, because this is a good practice example that has come up very recently in one of our networks, of a large energy provider in New South Wales and they have this as a self assessment. It is not yet enforced for everyone that drives fleet vehicles. They are going very slowly and gently and they are getting a great buy in.

What it is, is an observation sheet which the driver would fill in their behaviour according to how they believe they went in a recent experience. There would be someone who is perhaps with the driver that would actually sponsor them or nominate that they are there to support what the driver has put down.

The first page, observation check drive form, looks at five key result areas or five keys and there are those five areas which are detailed on the second tabled page. You won't see that from up here but hopefully you have got your own copy. That looks at various measures, measures such as has the equipment been reviewed prior to going out before you go out on a drive? Does the vehicle have a first aid kit? Simple things. Is there a torch with batteries? Condition of tyres, tyre gauge pressure, etcetera. Aiming high in steering is looking at those things ahead when you're driving. Looking at traffic congestion. Does the driver anticipate the action of other drivers in their

driving behaviour? Getting the big picture. This is about what happens during the drive. Is the driver applying the brakes early and smoothly, turning safe, alert to pedestrians, etcetera.

Then seeing yourself as an out. This is where you are seeing yourself in the space of others:

- Drives within speed limits.
- Centres well in the proper lane.
- Observes the second rule.
- Allows extra space when boxed in.

There are plenty of other measures, I am not going to go through them all, but there are five key result areas and what happens is the driver would nominate an (a), (b) or a (c) rating to each of those measures. (a) being very good and (b) being fair, (c) being needs improvement and (d) being not observed.

With the maturity of this organisation and the driver's wishing to do this self assessment, they can actually see their own behaviour being reflected by others. They just a number of things but it is actually by an observer who actually corrects it and then a supervisor supports it.

This is really a good practice because often we get complacent with our own driving behaviours. We get boxed into our own habits often, just in life generally, particularly driving, we think about other things as we go down the road to a function and we are not consciously aware of our environment and what is going on.

Sometimes we have to withdraw ourselves and take ourselves back from an unconscious mind set, which is driving a vehicle, often because we are thinking all these other things, to a conscious mind set and this assessment provides an opportunity. That is just one example of something that is working well with other KPIs and measures in organisations.

How are the best practices in fleet safety found? Through benchmarking the process is around identifying the really good practices, the outstanding practices to achieve superior performance. The bottom section there is looking at the why. Why do we need to benchmark fleet safety? There needs to be a position of admission of fleet safety in the organisation.

The measurement of what, what sort of measures do we have in place and thirdly and lastly is the how. This is where we learn about the good practices because every organisation is different but if we can apply the learning about specific measures that we can apply, we can learn from good things.

Benchmarking partnerships have a relationship with ARRB and Fleet Safety Solutions and have been running workshops now for over three years. This is our model of benchmarking. First of all there is a scope that is known. At the end of every

workshop we actually scope out a new workshop with a new purpose, new measures, new learnings that are required.

We market this to our customer base and through industry partners. Partners confirm that they would like to participate. We have some comparisons during our workshop, often they are qualitative. Sometimes we have numerical comparisons as well and we share and learn at the workshop the really good practices. We invite external leaders and guest speakers. There may be three or four guest speakers from various industries that come and share what they do well within the scope of the particular workshop and so there is great learning that goes on.

The centrepiece is a code of conduct, a behavioural code that really provides the rules of behaviour for all participants working and sharing in the workshop. So we can all be open about what we are doing well without the competitive environment giving access to the knowledge.

Various benefits of our workshops, obviously the learning, networking with guest speakers, ideas that come up that are beyond the scope. It is very much facilitative, we discuss the strengths. We have an action plan in focus in the afternoon orientated to the individual objectives by each organisation. There is a workshop manual that is issued for all delegates. At the end of workshops we have notetaking like we have got down here on my right hand side where they provide an extra resource of knowledge that may or may not have been captured by yourselves during the workshops.

Lessons are learned and all within this benchmarking code of conduct these are some testimonials, and I will not go through them, but there is a lot of wonderful feedback. A program, as I mentioned, typically has three or four best practice case study presentations. It starts off with the code of conduct so everyone knows the role of the day. We invite people to identify what keeps them awake at night, the key things that organisations want to learn. We capture the dynamic up on the board so that we can capture and sense the mood of the day and make sure speakers orientate themselves to it and the action planning in the afternoon closes off on those issues well. There is sharing and networking between different organisations and I will give you an idea of the sorts of organisations in a moment.

This is a history of some of the workshops we have conducted through this three-way partnership. We started off in March 2004 general sharing of ideas and solutions. Then the group wanted to know about root causes and the benchmarking process. The group then wanted to know about how to measure fleet safety performance. Interventions for driver safety was conducted towards the end of last year. It focussed on how we get the organisation to realise the value and the ownership for this being on ourselves as drivers, and the next one that is coming up in June will be duty of care and chain of responsibility and also towards the end of the year we will have one on driver fatigue. This will be hosted over in Perth.

On this slide we have some of the organisations we do benchmarking with on fleet safety. There are some names there and it crosses over a range of industries, as you can see.

I will now turn to some more samples of best practices. Identifying root causes is something we do. We make decisions sometimes without looking at all the data. Asking the five whys is a good place to start and you can often get to the root cause by the fourth or fifth why of an incident. We undertake specialised, not general, training to suit the root cause. It is customised to suit stakeholders in different parts of the organisation. We have a no blame culture where the organisation needs to be mature enough to look at the process and not at the individuals. More often than not we all come to work with a desire to have a good day's work and often we are limited by our processing system within our organisation. It could be that the leadership is not as inviting to encourage innovation and forward thinking. There could be a big stick approach, for instance.

The next point is market road safety internally. This is really a powerful way of story telling. This is about someone, an individual, who has been through an incident that people can have a connection with in an organisation. They know these people and through a video clip or some role play there is a sense of hey, it could have been me, instead of the outside world through television advertising trying to get the education up. This can really engage the mind for better practice.

A lot of this isn't rocket science. Heavy vehicle selection of maintenance standards is pretty obvious, I think. Integrating driver safety through the OH&S framework; there is a lot of commonality between OH&S and the workplace and having some alignment or cascading of KPIs, so there is relevance of measurement. Collecting good data about incidents and crashes and the predictive or lead data, such as traffic offences et cetera where there has not been an incident, but obviously the behaviour has been picked up by the law. Recognition and reward for good practice and driving, this is encouraging good behaviour. It is very easy to focus on the negative but some organisations doing this well encourage good behaviour by rewarding, such as giving chocolate bars out and other gifts, where good behaviour is observed and that is reinforcing the culture that we want to be conscious about our good driving habits. We want to get back to the planning and policies, having strong policies regarding mobile phones et cetera.

This is the code of conduct I alluded to before, the behaviour code which says we are willing to be open and sharing with each other but we should not give the intellectual property or the farm away, so if you are looking at getting a group of partners together even within your organisation, make sure that you protect the information, if there is any confidentiality or it is legalistic. Use your information internally. Be prepared. Be honest. Follow through with commitments, understand expectations, et cetera. That code of conduct is used in all of our benchmarking activities.

In closing, what we are doing now is on-line benchmarks for business improvement. It goes across all areas of organisational performance. We are using webinar conferences on line, particularly where there are regional areas for participation and often in Perth. Many customers cannot travel over because of the cost and the time involved in doing so, and in regional centres throughout New South Wales, Victoria and Queensland that is also quite valuable.

We have international projects on contact centres or telephone call centres. As I said before, we are just back from New Zealand on workshops there. We have a USA best practice workshop on knowledge management coming up next month that we are over in the United States for. KPI benchmarking data: We do that analysis through our platform. International study tours: One is coming up in October in Melbourne this year and New Zealand will be in November, and through those peak bodies, so there is a lot of things that we are towing in the industry. I would like to thank you for your attention and I am happy to take questions.

Questions

Mr FAULKES (Committee Manager, STAYSAFE Committee, in the chair): It is rather interesting because at the meeting of the committees yesterday there was a lot of emphasis placed on improving our capacity to have good data. The definition of good data seems to rest on getting some qualitative and quantitative measures, but the good part of it seemed to have these overtones of being meaningful, that it was something that was actually going to assist the strategic processes that parliamentary committees were contemplating and the status of where the strategic plans are currently. How much of a buy-in are you getting from the road safety agencies across the state and territories? Are they interested in what you are talking about at the moment?

Mr BENC: They are. It is a matter of getting the ear to a number of these bodies. We do some paid advertising as well and that gets attention and often we have new players at our workshops. Many of our customers are repeat customers who can see the value and keep coming back with a learning and action orientated focus. They are bringing in their other cousins and suppliers and partners in industry, but we do need to do more work in the industry peak body alliance areas. There are a lot of players out there and I do not think some of the players have been and experienced the value in some of these things that we do to realise that we can deliver on value to their members and to others, so we are all ears and we are wanting to improve all the time as well but I concur, I think having the right data is really important. We have too much data sometimes in our organisations and not the right sort of data, and we tend to massage the data we have, without looking for the right data, and often that is only part of the picture.

Associate Professor Raphael GRZEBIETA (Australasian College of Road Safety): I do not know whether it is relevant to what you have just presented to us, but one of the things I see that is missing in this is self-assessment of crashworthiness of vehicles

and fleet vehicles and whether the choices are made, one of the things we seem to have a problem with Government fleet vehicles is getting the appropriate safety systems into those vehicles, like electronic stability control. We tried up in Brisbane to convince the powers that be there to get the ESC systems in there. The trouble is you probably have to buy a top of the range vehicle. Have you assessed any of the drivers as to what sort of priority they place, themselves, on the safety systems that are within their vehicles and whether they themselves would have any influence over this and one way or another the people are using the systems

Mr BANC: Within the vehicle and the safe-worthiness, there is a lot of data out there about the crashworthiness of vehicles externally that we can draw on, but we have not had a specific focus or discussion around that, including the selection of vehicles and the different uses and different environments that are good for them. That could be an area of focus. Our workshop group have not highlighted that to be a specific discussion point to date.

Mr FAULKES: Thank you very much, Anton, for taking the time and trouble to come up from Melbourne.

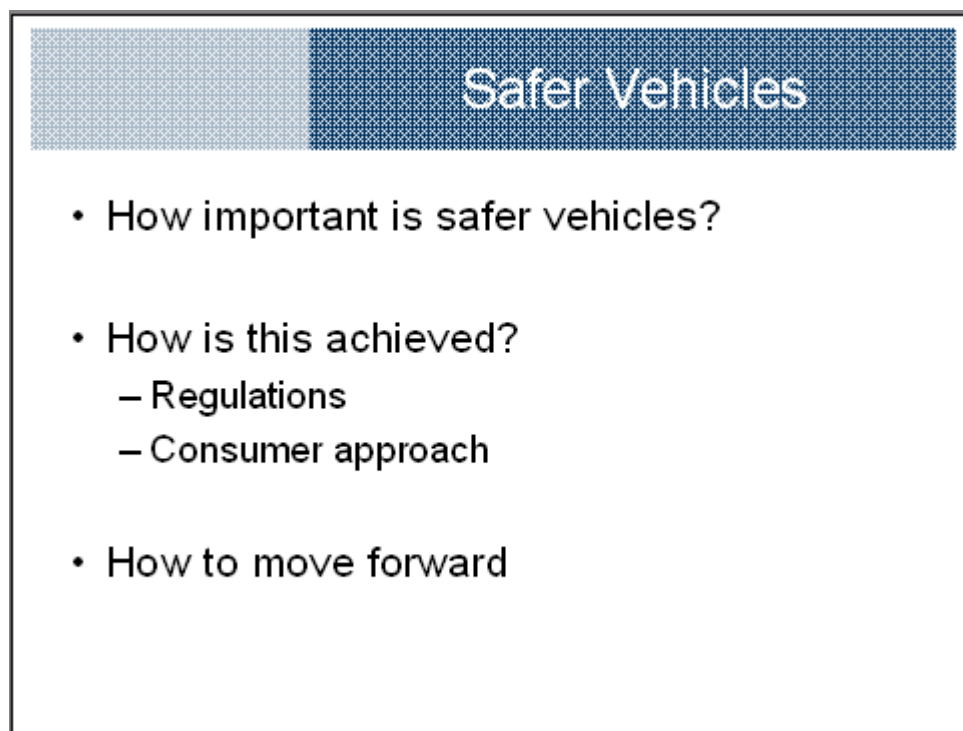
Chapter xx—

Safer vehicles

Mr Lauchlan McIntosh
Australian Automobile Association

Thank you, Ian, and to your Chairman, Paul Gibson MP, for the opportunity. I think it is important and it is very encouraging that the parliamentary road safety committees have had this two day event and I know they get different briefs in different states for different purposes, but one would hope there would be a summary from this meeting and that will be passed on to them and that should add value, I hope, to their important work.

The issue that I have been asked to speak on this afternoon is safer vehicles and I do so in my role at the AAA. We are members of the Australian New Car Assessment Program and I have been the chairman for many years. It is pleasing to see Michael Griffith in the audience. He is one of the major instigators of the program.



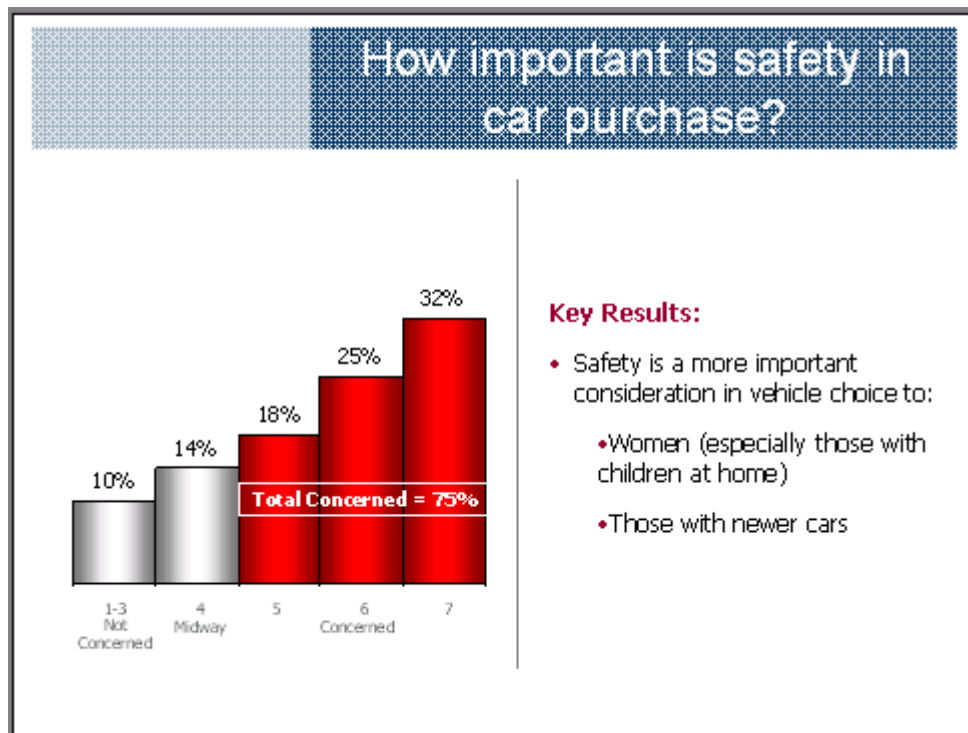
Safer Vehicles

- How important is safer vehicles?
- How is this achieved?
 - Regulations
 - Consumer approach
- How to move forward

The issue is, and we have touched on it in that last question, how important are safer vehicles? I want to have a look at that and talk about how we can achieve that by

regulations or by consumer involvement and how we might move forward.

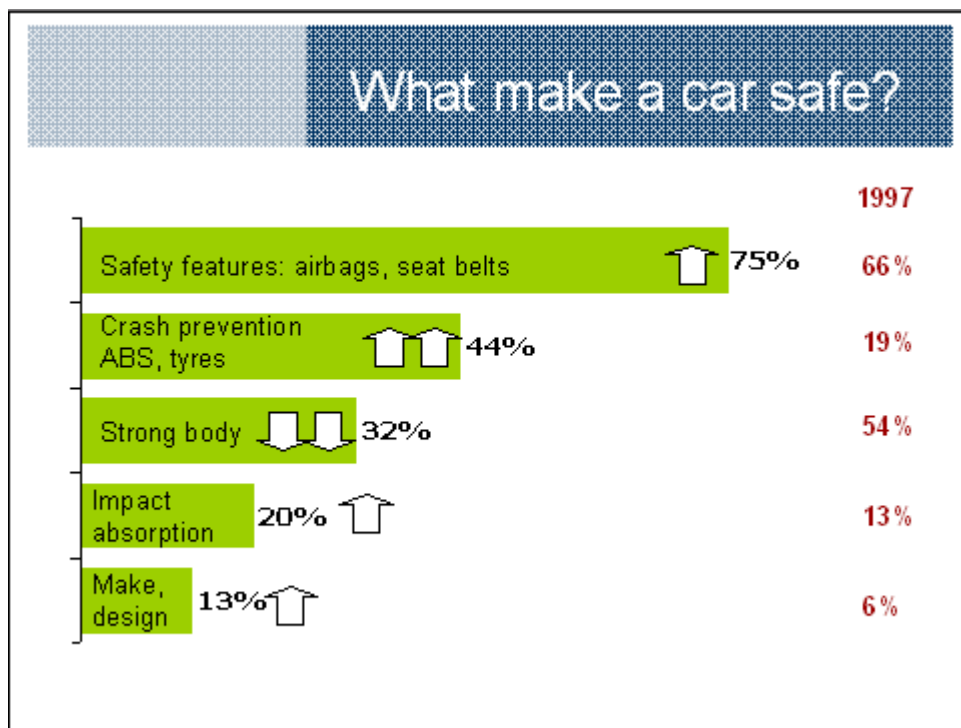
Greg Smith this morning talked about surveys that the AAA do. We do poll fairly regularly and we try to get a handle on what people are thinking in motoring issues and the issue of safety is actually starting to creep up in people's minds. I think probably it is fair to say some time ago, 10 years ago, people did not think too much about it and when we asked the question people thought it was far better to have a Valiant that was big and strong and the fact you went out through the windscreen did not seem to matter too much but at least the car did not look too bad after an accident.



That attitude is changing and more and more the question is asked how safe is the car you have purchased. A lot of people, particularly women, are concerned about this but it does not mean they necessarily do anything about it. The reality is that not a lot of people buy new cars. While we might sell one million cars in Australia there are far more used cars sold and far more people make a decision on colour and a lot of other things.

We asked what makes a car safe in a crash and back in 1997 only 66 percent said safety features such as airbags and seatbelts. This figure the year before last was 75 percent. It is interesting that crash prevention activities went up from 19 percent to 44 percent. Strong body, the good old Valiant argument, dropped from 54 to 32. Impact absorption started to get a bit of traction and make and design, which is the probably the most important issue in the marketplace for the manufacturers themselves, was on the increase but, again, 13 percent is a pretty ordinary figure. If

you were trying to use a good benchmarking figure you would have to say that is fairly low. At least we are making some progress.



Regulations

- Set minimum benchmark
- ADRs – based on overseas standards
 - Originally US
 - Moving to European/ECE
- Important part but with limitations;
 - Slow to move
 - Not able to keep pace with technology

The regulations, of course, the ADRs do set some standards and we have in Australia a set of design rules for vehicles. It is very difficult I think once you have a regulation

that requires all the States to sign off and be involved in, to change them. It is very difficult to move and very difficult to be ahead of the game. So the ADRs have become less important in determining newer safety features but important in maintaining a base level under which people cannot slide.

Regulations are difficult, it seems to me. They are important but we need to think how we can build another mechanism to encourage people to do better than the standard. It is again like the benchmarking exercise before, it is all very well to say this is all the minimum you need to do, the question is what can you actually do better and how do we encourage people to do better, and the safer car technology, the crash worthiness, it is really important that we have as many people in the safest cars as possible.

Consumer Information

- **National Programs**
 - ANCAP
 - Used Car Safety Rating
- **State Programs**
 - TAC website "How safe is your car"
 - WA "Promoting Safer Vehicles"
 - RACQ "Buying a Safe Car"
 - TAC, RACV, Vicroads promoting ESC



howsafeisyourcar.com.au + TAC

We have in Australia the Australasian New Car Assessment Program. We do have partners with the Land Transport Authority in New Zealand and the New Zealand Automobile Association. Every State government in Australia is a member of the Australia new car assessment program. All the State car clubs—NRMA Motoring & Services, the RACV and the RACQ and RAA and RACWA and RACT are members and as I say, the New Zealand Automobile Association. We also have a grant, as you would have heard this morning, from the FIA Foundation for the Automobile and Society. It is a very important program, where we test new cars under some fairly standard conditions to assess their crash worthiness on a relative basis. We publish those results and let people know.

I think those of us that are in the business are often somewhat concerned that more people don't know about ANCAP. You can find out about the ANCAP results on the TAC website in Victoria, it is quite a busy site with that, Western Australia has actually gone out of their way to expand and are going to do some more work there. RACQ and the other departments have quite strong programs and the TAC and Vic Roads also have an education program.

More importantly though is the fact that there is competition between the manufacturers which gets best results, because in the end that is where the investment is made and that is where the decision will be made. It would be great if everybody walked into the new car show room and said I'll only buy a four or five star car. It is going to take sometime to do that but certainly the manufacturers – and I will come to that in a moment – are making a lot of effort. Some manufacturers in particular to build four and five star cars and that is really important.

There is a used car safety rating in Australia, which is done on real world results from an aggregation of real world data and that also ranks cars and I think it is really information that people take that information on board when they go to buy a second hand car.



The NCAP program exists across the world. The US I think had the first one, the National Highway Transport & Safety Administration Program, the Insurance Institute for Highway Safety has a slightly different program. There is nothing like the same people having slightly different programs and everybody can justify why it is

important, but I don't think it matters all that much. In the end they publish the results and they have made a lot of progress there.

The European NCAP program started after ours and I think a lot of people in Australia in NCAP spent sometime encouraging that program. It is heavily funded by the European Commission and the FIA, some of the major motoring clubs and some other organisations as well. It is a far bigger program than ours but as a lot of our cars are sourced from Europe, we are able to use the EuroNCAP results in comparative testing.

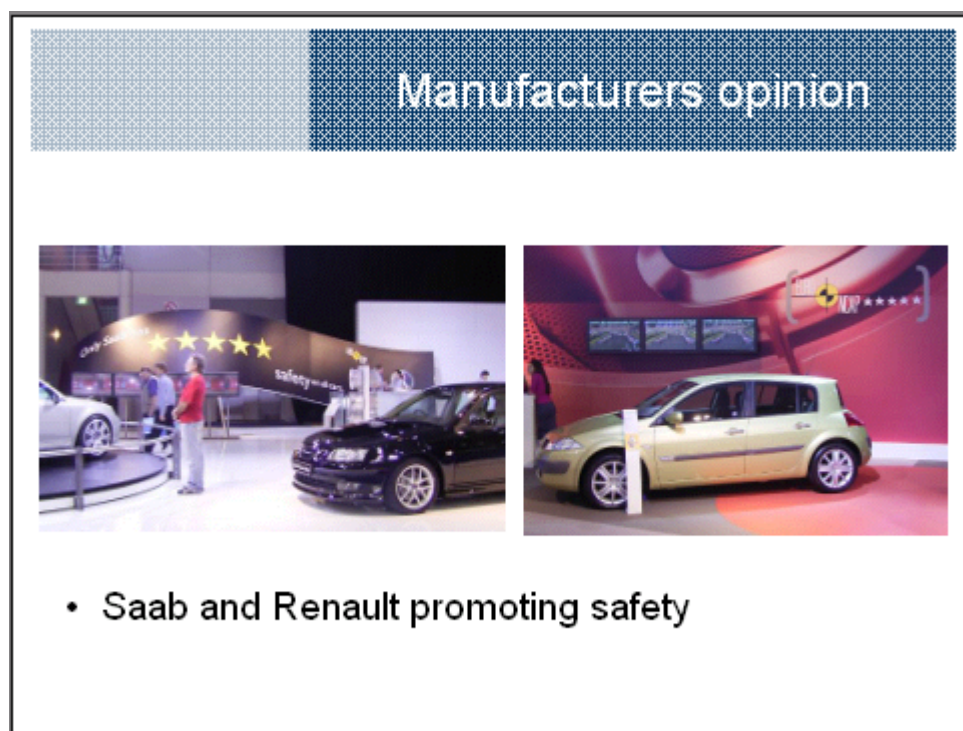
In Japan there is a new car assessment program there. It also has its own peculiarities, if you like, but it shows the comparison results and it also includes a braking test and shows the relevant differences in braking results. Just a month or so ago a new car assessment program was started in China and that is now running and again has the support from the Australian NCAP and from EuroNCAP and I think from NTSA as well. There is a mechanism around the world for the consumer testing of new cars in terms of crash worthiness and it is a very solid program.

Relevance of NCAP

- US study “driver is 74% less likely to die”
- Sweden – “cars with 3 or 4 stars are 30% safer than 2 star cars”
- MUARC
 - ANCAP good indicator of occupant protection
 - Cars that perform well in NCAP tests... also perform well in real life crashes

Just some anecdotal figures – there is of course a lot more detailed information – the US studies show a driver in a car today is 74% less likely to die. I think that is probably within the last ten years. In Sweden, cars with three or four stars are 30 to 40% safer, so again a different term but I would say it is a generic term and two star cars, the Monash University Accident Research Centre has shown that NCAP is a good indicator of occupant protection. Cars that perform well at NCAP tests also perform well in real life crashes.

Manufacturers of course in the first instance were totally opposed – how could someone else test the cars they make, it would be outrageous. If you actually look back in history you will see back in 1925 the motoring clubs being severely criticised for trying to assess performance of cars, how can you possibly measure 0 to 50 mph, we, the manufacturers know how to do that, you wouldn't have any idea, and of course today everybody tests 0 to 50 and 0 to 100 and 0 to 200 and whatever but when we started introducing tests for safety, you know, what would you know.



But we have moved on, we really have moved on. Those of us who have been in the industry for a long time are perhaps a bit shell-shocked with it but there are major manufacturers actively promoting the NCAP results today. Saab and Renault here for example, I think recently Peugeot have been promoting it. I think Renault had an ad the other day saying we have more five star cars than Mercedes and Volvo put together.

That sort of comparison is really important and it makes a huge difference. People are starting to look for that and the fact that competition exists is really important.

We are starting to see motoring writers now accept the NCAP results as a standard test. This is probably a little bit difficult to read but these are from newspapers, the Sydney Morning Herald and The Australian, the new car assessment program numbers are shown in the test results.

same manufacturer makes four star cars. I think it is interesting that too often we focus on the negative. The reality is Ford make the Falcon ute, which is a four star ute and that is a great result.

Safety Features

- **Lower specification vehicle sold in Aust.**
- **US models – curtain airbags available;**
 - Ford Escape
 - Toyota Camry
 - Honda CR-V
- **Safety pack options in Aust**
 - Rav 4 – safety package on high end only
 - Mazda – safety package across range
- **Proven safety technology available on all spec levels - at least as an option**



We have some problems still with lower specification vehicles being sold in Australia. I think that is what probably prompted – I shouldn't speak for Michael – Michael Griffiths initially to realise that some of the cars made and sold in Australia had the lower specifications than those in the US. We still have that situation today. It is interesting in the US curtain airbags are available on the Ford Escape, the Toyota Camry and the Honda CRV but not here. We have cars such as the Toyota Rav 4 with a safety package only on the high end model but not on the low end models, and Mazda puts its safety package across the range. We should see that improvement safety technology on all specifications of cars, at least as an option.

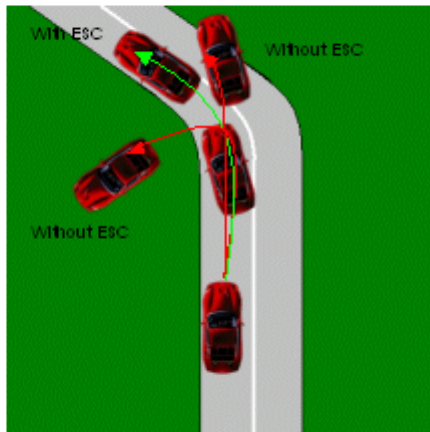
There has been some discussion about electronic stability control, should it be included. Basically the electronic stability control just ensures that as you drive around a corner and if the car diverts from the line that you are steering, the electronics in the car will recognise that while you are pointing one way the car is not going in that direction and will brake the wheels individually to ensure that you recover and drive straight forward.

You can see a car without ESC on an oversteer would go up, across the road or spin out and come on the inside whereas with ESC you continue to turn around. I have to say, if you are actually in a situation where you experience it, it makes it very difficult – for all these years you have learnt about trying to remember which way you are

supposed to steer when you are trying to recover from, particularly an event which occurs that you are not expecting and it is interesting, the motoring writers and the motoring drivers for sometime used to say a good specialised driver knows how to handle a situation. Someone well trained is able to recover but of course it is that event that occurs when you are momentarily distracted, when it happens in a situation that you weren't really prepared for, and the car can actually brake those four wheels individually. There is no way you can brake with one foot four wheels to do that situation.

Electronic Stability Control

- VW/Audi research
 - Prevent 80% of skidding
 - Prevent 35% of fatalities
- US and Japan research - similar results
- Potential to save up to 500 lives annually
- US – ESC standard on SUVs
 - Ford, GM, Toyota and Honda
- Challenge for Australian industry



I have been in with some racing drivers who have actually said there are only a few people left in the world who can actually out-brake a car with electronic stability control. I think that is the message that we can learn. The potential to save lives is enormous because so many vehicles are these single vehicle accidents where vehicles lose control, but with have a huge investment in the current fleet. We have in Australia 10 million cars out there but very few have electronic stability control. It will take us a long time to get them into the fleet.

If you look at this little table to see just exactly whether or not these pieces are available in Australia, it is an interesting table. The left hand line of Australia with the Prado with optional and the Cruiser is optional, the Nissan Patrol no, the Pajero standard, the Lexus 330 is standard, the Rav 4 optional, Nissan X-trail no, the CRV no, the Forester no, the Ford Escape no and the Tribute no.

ESC Comparison				
	Aust	US	UK/Euro	Japan
Toyota Prado	Opt	No		Opt
Toyota Landcruiser	Opt	Std	Std	Opt
Nissan Patrol	No		No	
Mitsubishi Pajero	Std			No
Lexus 330	Std	Std	Std	
Toyota Ray 4	Opt	Std	Opt	Opt
Nissan X-trail	No		Opt	Opt
Honda CR-V	No	Std	Opt	Opt
Subaru Forester	No	No	No	Opt
Ford Escape	No	No		
Mazda Tribute	No			No

It is interesting when you look across in those other countries and see it is variable as well there, but why would you sell the features as standard in one country and not another – because really, the people are not asking for it. We, the customers, are not demanding it. We, the fleet buyers, are not insisting that that should be available and I think that is the message. It is not so much the manufacturer who is at fault here as the consumer who is not saying – be it the fleet consumer or the ordinary consumer – why shouldn't we have this? I think in that situation we will see a much increased take up. I think I read recently where Toyota for instance in their latest Yaras model have expected that 50% of buyers would pick up the safety pack on the car, something less than 20% are doing so. The question is, how do we work with Toyota to make sure that more than 50% pick up that package.

There are passive safety features coming next, improving with the safety pack options. We need to encourage the availability across the range. We need to have new technologies built into the car. There is electronic stability control, there is distance following, there are radar, adaptive cruise controls, there is a raft of technologies out there and we need to encourage them rather than hinder the market nationally.

We are developing a joint Australian NCAP and a DOTARS program to demonstrate the benefits of ESC. There are other programs going on and RAFF I know has one going as well, to look at how we might do that, Insurance Industry Highway Safety are doing them, everybody is having a go. What we have got to try and do is simplify the process so that we can get a simple message out to consumers, and we need to bring the manufacturers into the programs. We need to work with them more than we currently are.

What next?

- **Passive safety features**
 - Improving with safety pack options
 - Encourage availability across range
- **New technology safety features**
 - ESC, distance following, adaptive cruise control
 - Encourage on a national basis
- **Joint ANCAP / DOTARS program to “demonstrate benefits” of ESC**
- **Bring manufacturers into programs**

Car safety is important to motorists. That is what I like to conclude on.

Conclusion

- **Car safety is important to motorists**
- **Motorists are better informed & knowledgeable**
- **Regulations are important as “minimum”**
- **Consumer programs have proven record**
- **More to do - new technology such as ESC**

Motorists are better informed and are more knowledgeable about the safety features. The regulations are important but they are a minimum. The consumer programs

encouraging safety have a proven record but there is a lot more to do. We need to stop the down-specing and we need to encourage the new technology such as ESC.



This is an example of some progress in the NCAP program, the Minister, Jim Lloyd, the Federal Minister for Roads, launched this. These results are of a particular program that DOTAR sponsored through NCAP of looking at side impact and the impact of curtain airbags. The five star car on the left, the Subaru and the Pajero with a very good result from a curtain airbag in the side impact collision.

It is important that a national response can be done and I think we are making some progress, so let's hope we can show as much progress in the next 10 years as we have made in the last 10 years.

Questions

Dr SARAH REDSHAW: How much emphasis is there on design of vehicles in terms of their impact upon pedestrians outside the vehicle?

Mr McINTOSH: ANCAP does a pedestrian test on all the cars. We do a pedestrian test and rate them and I think EuroNCAP have turned up with one four star car in Europe. There are certainly none here yet and the manufacturers are taking notice and we are making some progress. Once upon a time when we first started they did not get on the rating. Quite a few of the cars are two and three star rating.

Dr REDSHAW: Is there much interest in that aspect?

Mr McINTOSH: Yes there is. We publish those results and there has been a considerable improvement.

Mr MICHAEL GRIFFITHS: I think it is the Honda Civic which has a good pedestrian rating.

Mr McINTOSH: There is another car in Europe which was actually better.

Mr FAULKS: The Staysafe Committee has an inquiry that is looking at vehicle repairs and the smash repair industry and there has been some concern expressed about the crashworthiness of vehicles after they have undergone a significant structural repairs. There was a recent crash test done at the Autolib Laboratory in Melbourne that mimicked the ANCAP test on a Ford Fairmont, I think it was, where that vehicle performed rather poorly post a repair process. Can you comment at all from the Australian Automobile Association point of view about that issue, that vehicles, when they are sold, are crashworthy but later during their working life that crashworthiness may be reduced or may even be significantly diminished?

Mr McINTOSH: Sure. I know that there have been some cars which have been tested which, after some years of operation, turned up with a similar result so that there so there has not been a lot done with this. One of the difficulties is the random selection. When we select a new car for the new car assessment program, we make sure that it is randomly selected and that it is new. If you take a car which is 10 or 20 or five years old it may well have had a range of different experiences. It may have been partially panel beaten, it may well be a different weight, it may well have been on different types of roads and had different stresses. It is very difficult to make those kinds of comparisons unless you do a huge number of tests.

As I understand it, the tests that you spoke about did show a fairly poor result for the repaired car, but I think you would need to do a series of tests on repaired cars before you jumped to a conclusion. The risk would be, I am sure, that you could badly repair a car and get a bad result. I do not know that we have ever done the work to say what happens if you do a good repair on the car can you get a good result. It requires a lot of work and a lot of funds. As I understand it that work has not been done. Someone else might know. Michael may know whether that has actually been done.

If you are going to be statistically robust and be accurate in what you say, you have to make sure you do the hard work. I think we have talked before about getting the data right. The last thing we want to do is take a one-off result and generalise that to the whole population.

Mr FAULKS: Unfortunately I think that was the conclusion of the Committee as well.

Chapter xx—

The DROP research program: Dynamic Roll Over Protection

Associate Professor Raphael Grzebieta
Australasian College of Road Safety



I am here as the President of the Australasian College of Road Safety. But I am also working with DVExperts International, and in the Department of Civil Engineering at Monash University. Half a dozen of us managed to secure an Australian Research Council grant—that is myself, applying from Monash University, Andrew McIntosh together with Shane Richardson, from the University of New South Wales, George Rechnitzer, who is a partner investigator from DVExperts, Mike Bambach, of course, from the Department of Civil Engineering, and Robert Judd from Autoliv. We managed to get \$410,000 from the Australian Research Council and we wanted to get into a fairly ambitious project concerning vehicle roll over prevention and occupant protection and try to solve this problem. \$410,000 really does not take you anywhere near far enough. It is a complicated problem which has been on the books now for about 20-odd years. What we are trying to do is put together a trust and I will get on to that shortly.


The Rollover Problem

Annually in Australia

- > 300 deaths
- 6000 injuries.
- \$3.6 billion
- 20% fatalities involve rollover (1 in every 5 fatalities)

Internationally

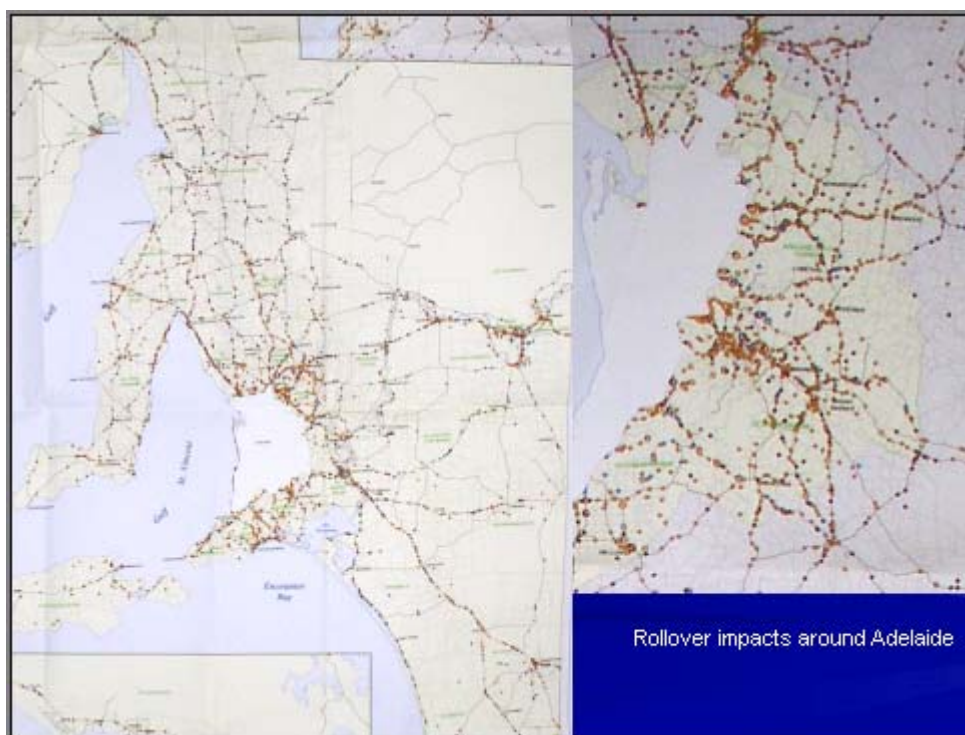
- 10-30% fatalities from rollover
- 10,000 fatalities p.a. in USA (1 in every 3 fatalities)



Let's look at roll over. Roll over is a particularly significant issue on Australian roads where vehicles actually do come into strife when, for example, someone falls asleep at the wheel and they suddenly realise they have drifted off the road, they jerk the wheel and they then find themselves in an unstable situation. We actually looked at this first from an occupational health and safety perspective with the Australian Army and the Perente vehicle and it is proneness to rolling over. The Perente vehicle in the slide actually has our safety cage in there, so in a roll over those drivers walk away. In fact one of them shook my hand and said: My family thanks you, after we designed one of those roll over cages with another chap, pre Shane Richardson, many years ago and had it installed.

Roll over annually in Australia is somewhere in the order of, we estimate, about 300-odd deaths, 6,000 injuries \$3.6 billion, one in every five fatalities. In Europe it is about 10 percent. In the United States of America much larger, about 30 percent, so one in three or one in four fatalities, because of their sport utility vehicle (SUV) fleet, of course.

When a roll over does occur you can either get ejection or you can get roof crush, depending on whether the occupants are seat belted or not and, by the way, you do get ejections if you are seat belted. It can happen, depending on how you are set up. Wearing a seatbelt certainly reduces by some 80 or 90 percent the probability of ejection, but it does not ensure it 100 percent. That is why we are considering other measures. Air curtains certainly do assist and, likewise, you have to have a strong roof structure.

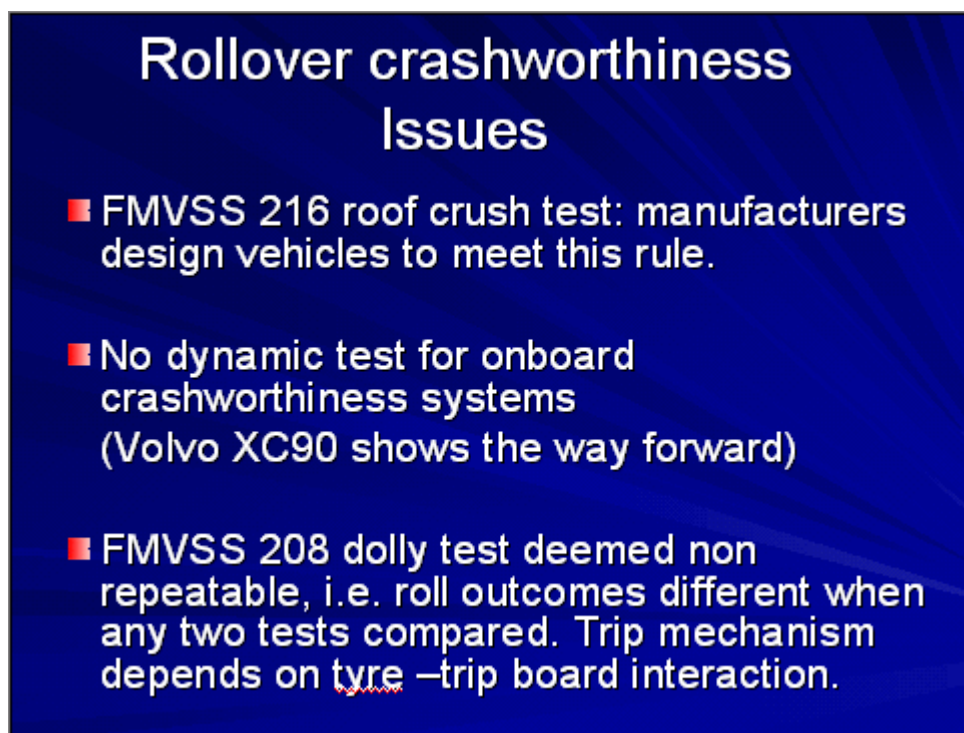


This map was given to me by Chris Cox from the Australasian New Car Assessment Program (ANCAP) committee, showing around Adelaide the rollover crashes that occur and you can see they are dotted everywhere. It is a common enough occurrence.

Background

- No handling or stability assessment for prevention
- No occupant protection standards for crashes
- No Australian Standards or Tests

One of the problems is that we currently do not have handling or stability assessment for prevention, nor do we have any Australian Standards or tests for occupant protection for crashes. The issues which we see, which are current at the moment in terms of roll over crashworthiness and prevention, the crashworthiness issue is the FMVSS 216 roof crush test. Manufacturers try to meet this rule.



**Rollover crashworthiness
Issues**




- **FMVSS 216 roof crush test: manufacturers design vehicles to meet this rule.**
- **No dynamic test for onboard crashworthiness systems (Volvo XC90 shows the way forward)**
- **FMVSS 208 dolly test deemed non repeatable, i.e. roll outcomes different when any two tests compared. Trip mechanism depends on tyre –trip board interaction.**

I remember quite distinctly, and this is going back about 15 or 16 years, when I was talking with Ford at some stage and we did some roof crush tests (and we were working with VicRoads on this and Ray Scott was involved). We did some roof crush tests and the Ford vehicle did not satisfy it. Ford were taken aback at this and wondered what had happened and what we discovered was the bonding kit they used for fixing the windscreen into the vehicle was a bonding kit that we had purchased externally, rather than buying the vehicle body with the windscreen installed from Ford we had purchased that separately and got Windscreens O'Brien to install the windscreen and we discovered that the bonding kit was not the same bonding kit. The issue that evolved from that was we saw advertisements later on from Ford showing someone who had survived a roll over crush and they said that their vehicle had satisfied the appropriate crash worthiness results, and this person gets out of the vehicle saying thank goodness it's a strong roof, the problem was the driver's pillar was quite intact but the passenger's pillar was completely depressed. The manufacturers were actually designing to that particular rule and this has continued on for many years. It is not very satisfactory.

There are no dynamic tests for onboard crashworthiness systems and Volvo has certainly shown the way with their XC90, but for firing air curtains, for firing seatbelts,

we do not have any system that will assist us with that at the moment, particularly with the roof crush.

They attempted to do this with FMVSS 208 with the dolly test, but they came up with this issue that it is a non-repeatable test. If you tested two of the same vehicles you would get two totally different results. The problem is that if we are to introduce some sort of a test then we need to ensure that we effectively get the same result but what concerns me is when you do have a roll over—and you will see here the roof actually completely collapses and the windscreen comes out—the issue is that the roof is totally inadequate, so no matter whether you have seatbelts, air curtains, or whatever you have on board, they become irrelevant in the roof does not withstand the appropriate force.

Current Standards				
	Frontal	Side	Pedestrian	Rollover
Consumer	 <p>For each body region the worst of the driver and passenger areas for that body region is used for the test.</p> <p>For each leg the worst of right & left legs is used.</p> <p>Hybrid III</p>	 <p>Driver Only</p> <p>Max 18 for Side Impact Test</p> <p>optional</p> <p>Max 2 for Pole Impact Test</p> <p>Pole Impact Test is optional. Only performed if side airbags provide good protection for the head in the side impact test.</p> <p>SID2S, EuroSID</p>	 <p>Headform, Legform</p>	?
ADR	ADR 69 ADR 73	ADR 72	?	?

Of course with our current standards we are covering frontal, side, pedestrian, but roll over is just an issue that is completely out on its own. There is nothing there that really is assisting drivers and passengers in vehicles that are involved in roll over crashes.

How does a roll over crash occur? It can be up or down a sloped embankment. It can be an out of control vehicle yawing sideways from bitumen onto dirt. I showed you that example before, cornering at excessive speed struck by another vehicle. It can also happen when you hit a barrier. I show these video clips with a little bit of hesitation because it is not what actually happens out there on a regular basis, but it does happen, and when it happens people get a little bit alarmed, but we see roll-overs when vehicles hit these sorts of barriers.

How do rollover crashes occur?

- Down or up a sloped embankment with no barrier installed
- When vehicle is out of control, yawing sideways
- When cornering at excessive speed
- When struck by another vehicle
- When hitting a road side barrier

■ Barrier stiffness & profile causing rollover (no rollover protection)



Just because you have a barrier and you hit it at a particular angle and speed where it is supposed to work according to the United States and Australian standards does not mean that it will not ensure that the vehicle will not roll over. We did a series of tests in Australia. A lot of you have seen footage of a pretty nasty sort of crash test at 80 km/h into a New Jersey barrier. We found that the occupants inside possibly would

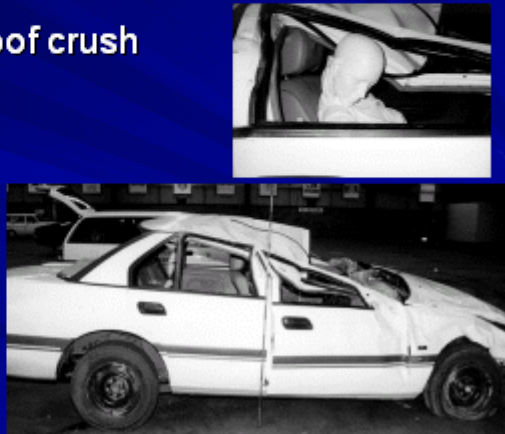
not have survived this crash, for a number of reasons, and the first is possibly the impact of the vehicle into the barrier. The head injury criteria was something like 1700 and for the driver a broken clavicle, but also from the roll over, and this was the second most crashworthy vehicle.

Another crash test we did with Claes Tinvall when he was with the Monash University Accident Research Centre. The roll over will get you in the end because the roof is just not strong enough. This was a badly installed wire rope barrier. It was too short and too tight, so be very wary wire rope barriers are very safe installations and I am the first to support the installation of wire rope barriers on our road system, but I show this one because it captured a moment in the actual roll over event. You can see the vehicle spinning there and it captured this event where the head of the dummy was crushed as a result of this A pillar being crushed down, and you will notice the neck going into an S. I have spoken to Andrew McIntosh about this and that is possibly not the way that an event occurs, but there is enough force to bend the hybrid 3 neck. Any of you who know anything about hybrid dummies, hybrid 3 necks are notoriously stiff.

Injury mechanisms

- Full or partial ejection (current seatbelts ineffective)
- Spinal injury due to roof crush

11% spinal injuries/yr
directly related to
rollover crashes



This is how Jack Hamilton, the Australian Football League president, died in his roll-over crash when he hit one of those tram barriers and rolled onto the roof and broke his neck. He was sitting there in the car with the roof on the top of his head, that is how they found him.

We get roughly about 11% of spinal injuries also are directly related to roll over crashes, so really it is an area that we need to do something about.

In fact, vehicle fleets have done something about it, the Australian Army has gone and developed their own roll over protective system where these blue polystyrene type boxes there are just simply volumes to ensure that anything that strikes this roll over protective system does not encroach into this area.

Protective systems already in vehicle fleets (OH&S)

- Australian Army
- Victoria Police
- Mining companies

A photograph of a military vehicle, possibly a Land Rover, equipped with a roll-over protective system (ROPS). The ROPS is constructed from blue polystyrene boxes, which are designed to absorb impact and prevent the vehicle's occupants from being crushed in the event of a rollover. The vehicle is parked on a dirt surface, and the background shows some trees and a clear sky.

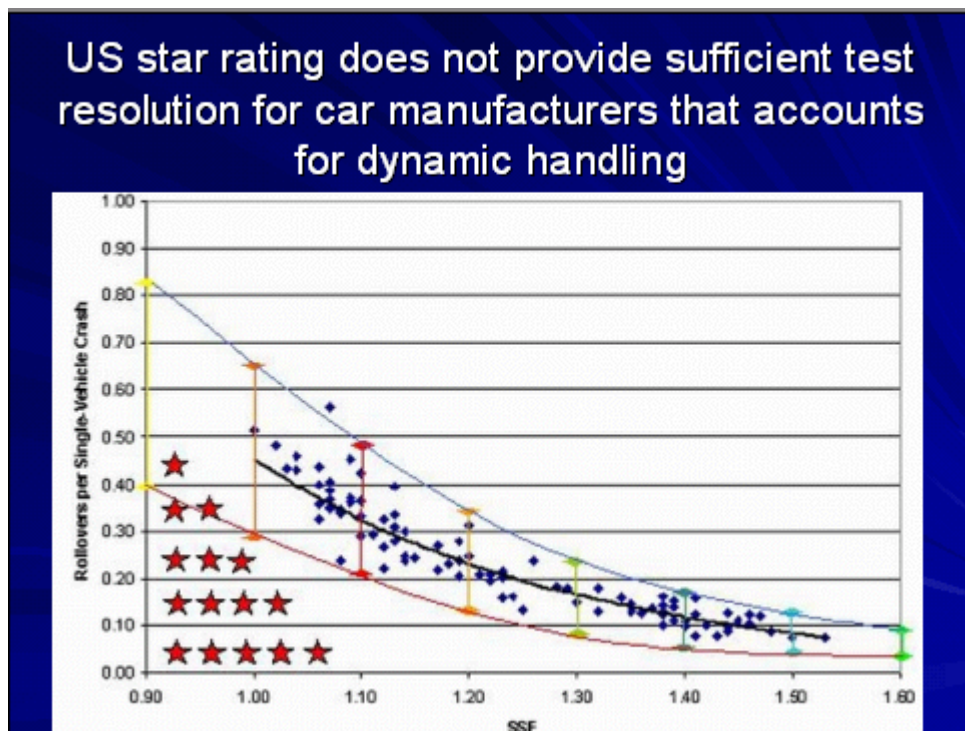
Handling & Stability

A photograph of a test track used for vehicle handling and stability testing. The track is a wide, flat, paved area with several orange traffic cones placed in a line across the width of the road. The background shows a clear sky and some distant hills or trees.

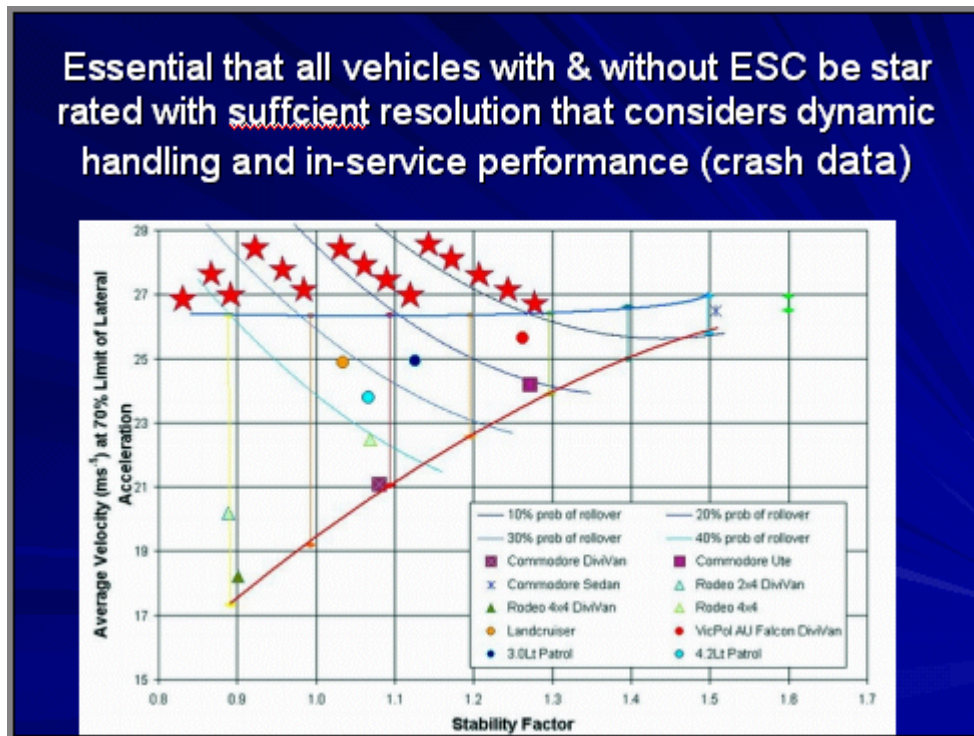
ISO 3888-1 "Test Track for a Severe Lane-change Manoeuvre"

We know this already from the motor racing industry. If you go and have a look at any of the Super 8 vehicles or Formula 1 vehicles, or whatever—any vehicle that has been designed for survivability in terms of racing—there will be this survival space that is maintained. It will have the appropriate protection, either a roll bar or in the Formula 1s they have got the headset at the back. There is that environment which nothing really should encroach and they are held in tightly. There is a curtain in some of the rally Super 8 cars I have seen. They use different methodologies to ensure that survival space is there.

We have also looked at handling and stability and we have rated about 14 or 15 vehicles now to date. The Victoria Police were particularly concerned about their divisional van—where they modified a Holden Commodore to have a prisoner cabin on the back—and we put that through its paces in terms of an ISO 3888 test. What we did is we rated the vehicles for their handling ability. We ran the vehicles up to about 70% of their lateral acceleration and then noted at what speed that occurred and also noted their stability factor, which is based on the geometry of the vehicle.



The problem with the US star rating is it does not provide sufficient resolution. What you need really is a test that does provide you with sufficient resolution. If you have a stability factor of 1.10, you could be one star rated (in this case that was Commodore divisional van), whereas the 3-litre Nissan Patrol is three star rated rather than one star rated. In the US system it all gets lumped into one.



I think you need to provide that opportunity to be able to rank these vehicles according to how they handle and we need to do it for both vehicles that have electronic stability control and do not have electronic stability control because obviously we have an old fleet. We need to be able to inform our consumers what sort of vehicles handle well and what don't. Victoria Police have since got rid of the Commodore, and likewise the Rodeo 2 x 4 divisional van which was also used for the police, and purchased other vehicles which are a lot safer.

This brings me to electronic stability control. If we worked in this area and we looked at electronic stability control for roll over, it also has the side benefits of single vehicle crashes and likewise yawing of vehicles during inappropriate manoeuvre or in wet conditions. It certainly seems to be delivering a lot overseas, whether it will deliver a lot in Australia, we will see, but we certainly need systems where we can assess them because in certain vehicles the stability control kicks in earlier than in other types of vehicles. So we do need to rank them even though they have got the electronic stability control in there.

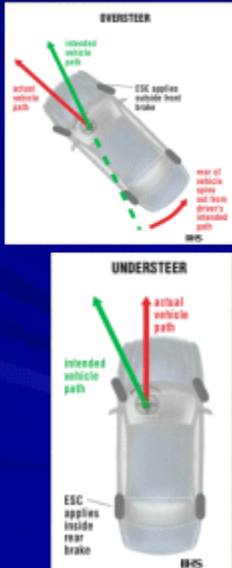
Other benefits of handling tests

Electronic Stability Control

USA
34% reduction in crashes
56% reduction in fatal crashes

Europe
■ Sweden
20-30% reduction in crashes
■ Germany
Equivalent to introduction of seat belt

Japan
32 – 53 % reduction in crashes




The diagrams illustrate vehicle handling tests. The top diagram, labeled 'OVERSTEER', shows a car's intended path (green dashed line) and actual path (red solid line) curving to the right. A note indicates 'ESC applies outside wheel brake'. The bottom diagram, labeled 'UNDERSTEER', shows a car's intended path (green dashed line) and actual path (red solid line) curving to the left. A note indicates 'ESC applies inside rear brake'.

No ATD designed for rollover exists

Challenges include:

- head & neck behaviour
- biofidelity for such loading
- axial rotation of neck inadequate in ATDs
- torso loading the neck
- understanding loads & injury criteria, Injury Assessment Reference Values (IARVs)



The photograph shows a crash test dummy (ATD) seated in a vehicle seat. The dummy is wearing a yellow shirt and shorts. The image illustrates the challenges of designing ATDs for rollover tests, specifically focusing on head and neck behavior and axial rotation of the neck.

The other challenge is that there is no anthropomorphic test dummy for a roll over crash test. This is where Andrew McIntosh comes in with all his work. In particular, for head and neck behaviour and axial rotation of the neck is inadequate in

anthropomorphic test dummies, and torso loading of the neck and understanding the loads and the injury criteria. What do we set as an injury criteria for a roll over crash?

We have set up a program with a number of objectives in order to try and deliver this roll over crash worthiness and roll over prevention safety.

Program Objectives

General

- Establish a standardised assessment program for vehicle handling & stability and apply this to a range of vehicles
- Develop a rollover crashworthiness assessment program based around the design & construction of the most advanced rollover test system
- Assess a number of vehicles to identify optimal rollover crashworthiness design.
- Develop an occupant injury assessment method for rollovers.

Three Projects

Project 1: Vehicle handling & stability evaluation & rating.

Project 2: Rollover Occupant Protection Analysis, Vehicle Design & Dynamic Rollover Testing.

Project 3: Development of Occupant Protection Assessment Protocol. Rollover Injury Criteria and Crash Test Dummy.

What we have done is that we have set up three projects.

One is dealing with vehicle handling and stability, evaluating the rating. The second one is roll over occupant protection analysis, the third one is the development of an occupant protection assessment protocol. We are looking at roll over injury to crash test dummies.

Project one, we are looking at vehicle handling and stability. We will evaluate and star rate vehicle handling on vehicles with and without electronic stability control and likewise we rate how the electronic stability control system works in different vehicles as well.

What we wanted to do was conduct a series of tests on small, medium and large cars, 4WD range, with and without electronic stability control, and the tests would be conducted at Moneggetta Proving Ground over a two year period and we would rank the various handling performances of vehicles, with and without electronic stability control. As you can see, that is the costs there. The outcomes of course would be a rated vehicle in handling stability for consumers.

Project two is looking at occupant protection analysis and vehicle design, dynamic roll over testing. What we have to do is identify what is required in the vehicle design to prevent serious injuries in roll-overs. We want to develop and construct a dynamic roll over test rig, firstly in methodology and then the test rig, and also use the outcomes of Andrew McIntosh's work in terms of injury assessment.

What sort of systems would we need in there? Obviously we need a stronger roof. What is happening with the air curtain? Do we need the seatbelts, for example, what is it, a three point, will that work sufficiently with some seatbelt pre-tensioners? Maybe we need to come up with a different system. Autoliv already have—they showed at the last Experimental Safety of Vehicles meeting at Washington where they had this cross over lap belt. We need to look at those very carefully, and so what we will do is assess a number of those different types of systems. Laminated glazing is another area.

Stage one will identify the injury mechanisms, the vehicle design causal factors in rollover. In stage two we will be looking at the computer modelling of the roll over crashes, the injuries and restraint systems. We will also model a dynamic test rig. So we will get a prototype up and going in the computer to assess that, so that we can design it and ensure that its design works.

We are not starting from scratch of course with the rig, there already is a system out there called the Jordan roll over rig roll over system, which we do have access to through the United States of America. This is a particular system, as I said, developed by Jordan, but also used by Don Freedman and Karl Nash over in the United States, where they have looked at how to test on board systems as well as roof

crush. The thing is, what we would change here is to set the vehicle up in such a way that a fly wheel would then mobilise the vehicle as it rolls over. There is a floor system in here which models the roadway as it comes in, so as the vehicle tips over the roll over protective system then fires, as it comes in, it tests then the roof strength and we will get the measurements from the dummy and assess the injury criteria. It would be constructed either in Melbourne or Sydney or wherever, we haven't really set that down yet on how we proceed over the next year or two.

Then we want to do the test rig validation. We will have some control vehicles that we will use to see how the system works, particularly in terms of its repeatability, can we get the same test results for two similar vehicles.

Then we are going to test a number of production vehicles and we will see how we go with ranking those common production vehicles and whether we can star rate them. Effectively 12 tests would be carried out, 6 production and 6 modified with the on board protection systems in them.

Hopefully, we would have computer modelling and simulation to identify the changes in the vehicle design on injuries. We would provide a test methodology for evaluating the roof to grant impact and sensor triggering and occupant protection. We are going to design and build this test rig that will do that that fits into a laboratory in a closed environment, so we don't have to have some big track where we have to go and run some vehicle a couple of hundred metres before it will do a roll over in a sort of more or less uncontrolled manner. As I said, carry out some tests and rank them and provide them for fleet purposes and for consumer access.

Project three will be developing the occupant protection assessment protocols. We have to look at the practical occupant assessment protocols for roll over crashes and establish reliability and validity of the occupant protection protocol.

We will be looking at biofidelity assessments, looking at biomechanical data, looking at vehicle crashes and looking at tolerance values for relevant modes of head and neck loading. We see the neck as the critical component in this. Obviously there are head and neck injuries but the neck axial loading seems to be the issue that we may be focussing on and likewise the rotation of the head during the axial loading.

We will assess the biofidelity, current physical and numerical models and see if we can, in fact, get away with a hybrid III with a different neck. Is it possible to do that? Can we not go through the process of what they did with the side impact, where we have got umpteen different side impact dummies. Can we get away with a hybrid III that has the appropriate head change, neck change, possibly tuned head and neck for a roll over impact? Maybe the articulation of the hips will be an issue as well, we don't know. So we need to consider those issues.

We may have to wind up looking at a biofidelic neck, we will think about that as well, and stage two we are looking at the injury mechanism study and identifying the types of injuries and injury mechanisms in the roll over, trying to refine our understanding of those mechanisms and looking at tolerance thresholds. There were actually tests which Don Freedman carried out where he put himself upside down in a vehicle and then just dropped himself by releasing the seatbelts and where he dropped a certain distance, hitting his head onto the roof that was lying on the grounds, no problems. The whole issue, is it diving or is it roof crush – what are we talking about here?

We have currently got a doctoral student working on this right now and hopefully he is going to answer that question emphatically so that we draw the line here and we actually can eliminate this whole issue, or this smoke screen. I believe it is a smoke screen that this is a diving or a roof crush. We will be implementing the physical and numerical models and testing them.

Hopefully, we will establish an injury mechanism for roll over, develop injury criteria and tolerance values and establish a head neck biofidelity model for a roll over injury assessment and implement a physical model. That is the drawing where we need to iterate around so we have all this information and we need to iterate around it until eventually we can find a protocol to implement.



What are the benefits to road safety? Improved vehicle safety for roll over, and that is the bottom line; reduce the fatalities and injuries in roll over; hopefully an Australian regulation for better structural integrity in roll over; improved occupant protection in roll over; and safer vehicle fleets and enhanced consumer information ratings. Maybe

the Australasian New Car Assessment Program (ANCAP) will adopt it. We are not sure, it is up to the Australasian New Car Assessment Program. The overall costs, that is the costs of the program, a total of about \$2.2 million and we are looking for, effectively, sponsors at \$30,000 a year over three years. To quite a number of organisations to some extent that is small change in comparison to the problem we are trying to solve and the moneys that they handle and we can certainly solve this problem. It is here. It is now. We can address this problem. We can take the lead in this area, if we want, in Australia for the world and help the world get rid this problem.

Chapter xx—

Unexploited injury and crash reduction opportunities

Mr Michael Griffiths
Road Safety Solutions

I want to talk today about some of the silver bullets that I think are there and readily available and some of them have been there for quite some time, and I also want to talk about how you go about implementation. I sometimes feel as though the current people involved with road safety accountability, bureaucrats, administrators, or people who have the ability to make change, think there must have been a golden era when it was easy to make change.

I was not involved in getting mandatory seatbelts in Australia but I doubt that it was a very easy message to get across. Perhaps Michael Henderson can tell us more about that. I note, for instance, with random breath testing there were challenges in the passage of getting that through. The Hon. Peter Cox MP was Minister for Transport at the time. Peter Cox was pretty sure that he and all of his mates could drive home safely with a few on board, so I do not think that it was an easy task for the bureaucrats and the administrators to sell the idea of random breath testing to Peter Cox. Eventually he came on board, but I do not think it was an easy task.

To bring about change you have to get into the uncomfortable zone. It is easy to go for the feel good stuff, the stuff that people go along with, the stuff that do not make you uncomfortable, the stuff that people think is okay. Take 40 km/h around schools—the Hon. Carl Scully MP thought was a good idea, but the crash research does not really support that that is the best place to have a 40 km/h speed zone. Research statistics tell us that kids get bowled over a lot closer to home, rather than around the perimeter of the school.

To bring about change you have to get into the uncomfortable zone and there has been a couple of references today to my role in new car assessment in Australia and I can tell you the level of uncomfortable zone involved in bringing the New Car Assessment Program into Australia. Initially New South Wales was so disappointed with how things were going federally that New South Wales was prepared to fund that program on its own. The chief executive officer of the Roads and Traffic Authority at the time gave me the money to build a crash test facility and to run that program as a New South Wales-only program, and it was only after that happened that the other states came on board. People were targeted personally. When the vehicle industry do not want something to happen they do not hit an organisation, they target the

individuals, so there were people involved who had to take out defamation action against the vehicle industry in order to survive. If anyone thinks that there was a golden period they are wrong. There was no golden period. It is hard. You have to be uncomfortable. You have to be unpopular. That has been my experience anyway. I do not know whether it is a good thing or bad thing, but when I left the Roads and Traffic Authority no-one in the vehicle industry came up and offered me a job. Maybe that is a good thing.

In terms of action you can take towards safer vehicles, we will look at this list.

- Action towards safer vehicles**

 - **Safe workplace - influence fleet buyers
(about half of new vehicle purchases)**
 - **Daytime running lights**
 - **Rollover prevention**
 - **Speed limiting**
 - **Intelligent braking system**
 - **Airbags**
 - **Improved protection in side impacts**
 - **Improved pedestrian protection**

You can create the safe workplace, get the idea that the vehicle is a workplace. Nearly half the vehicles sold in Australia are going into fleets, so that is where you can affect a lot of vehicles sold. Day time running lights, roll over prevention, speed limiting, intelligent braking systems, air bags, improved protection in side impacts, improved pedestrian protection.

In terms of getting those things into place, in terms of strategies for implementation, you can look at maintaining high profile credible consumer information, which eventually became the Australian New Car Assessment Program (ANCAP).

Strategies for implementation

- Maintain high-profile, credible consumer information
- Focus some resources on "implementation"
- Better monitoring and data collection and analysis
- Overcoming hurdles such as industry resistance

You can focus some resources on implementation. In other words, there need to be resources in organisations, not just doing research but looking at how you are going to implement it in whatever environment exists at the time. You need good or better monitoring and data collection analysis and you need to overcome hurdles such as industry resistance.

12 Year Progress Report

- The previous two slides are from the 1994 RTA Road Safety 2000 Review
- Still much to be done after 12 years
- Evidence of a good start
 - 1992 ANCAP crash test results
 - 1993 RTA Safe Vehicle Policy
 - 1994 RTA Safe Vehicle Selection Workshop for fleet managers
 - 1996 Staysafe "Vehicles as workplaces"
 - 1997 NSW Govt Fleet Safe Vehicle Selection Policy prepared

Those items all come from the 1994 Roads and Traffic Authority Road Safety Strategy, from their review in 1994, and there is still much to be done after 12 years. In 1994 we knew what to do. It just has not all been done. There is evidence of a good start.

In 1992 the Australian New Car Assessment Program was up and running and the results were available to the public. In 1993 the New South Wales Roads and Traffic Authority introduced a safe vehicle policy which has since been abandoned. In 1994 the Roads and Traffic Authority ran its first safe vehicle selection workshop for fleet managers and they grew and were joined by the NRMA and RACV and similar organisations.

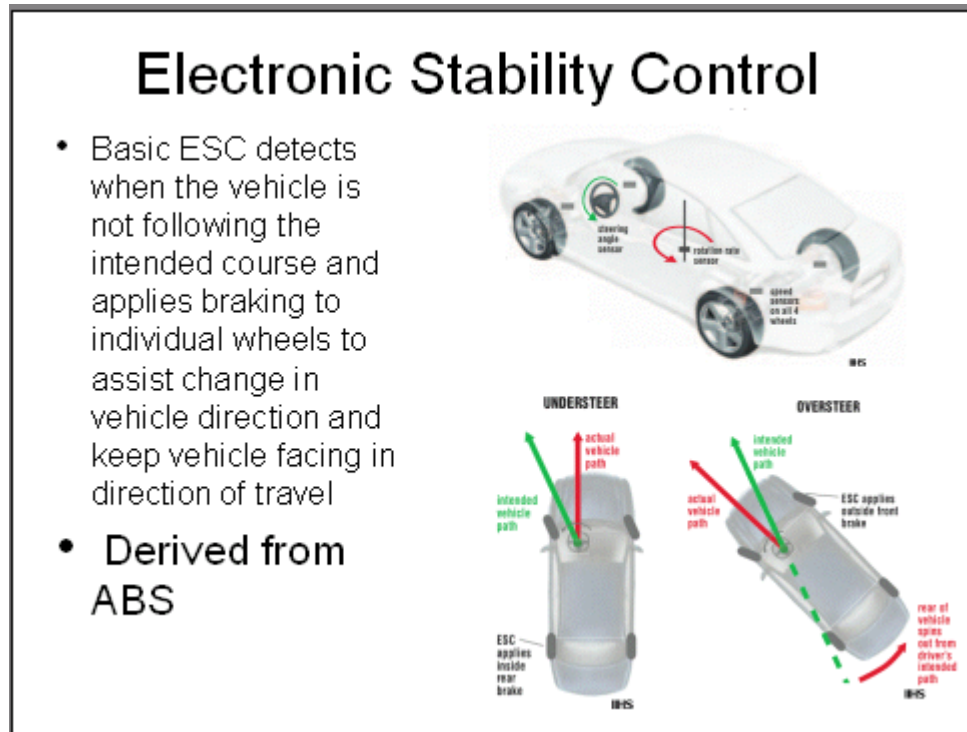
In 1996 the STAYSAFE Committee here ran a seminar in this Theatre, looking at vehicles as workplaces and in 1997—and I have the documents here with me—we were ready to sign off on a New South Wales State Government safe vehicle buying policy, and that died. It did not go anywhere, but the work had been done and was ready to be signed off.

Silver Bullets (aka Big Fixes)

- **Some 2006 Silver Bullets**
 - **Electronic Stability Control**
 - **Safe Vehicle Selection**
 - **Head Protection in Side Impacts**
 - **Daytime Running Lights**
 - **Intelligent Speed Adaptation (ISA)**

In 2006 what do I think are some of the silver bullets? Electronic stability control: You have heard a bit about it and we will talk a bit more about that; straight safe vehicle selection policy; better head protection in side impacts and roll-overs; day time running lights and intelligent speed adaptation.

Electronic stability control - you will have seen this diagram as it was taken from the Insurance Institute for Highway Safety site.



What is electronic stability control? It is basically braking on each individual wheel of the vehicle. It came from anti-lock braking systems (ABS). To have an anti-lock braking system you had to be able to brake each individual wheel on the vehicle. When anti-lock braking systems came out we had the motoring journalists telling us they would rather have ABS than airbags because they would rather avoid a crash in the first place. What research has shown is that airbags have saved a lot of injury.

Anti-lock braking systems have changed the nature of crashes but all the evaluations of anti-lock braking systems have not come up with a net benefit from it. Nevertheless it means that most vehicles sold have those systems on them for individual braking of the wheels, so if you then add a sensor, which senses which direction is this vehicle going in and which direction does the driver think he would like it to be going in, and you compare those two inputs you can use individual braking on each wheel to straighten the vehicle up. It is a system derived from anti-lock braking systems. It is not that expensive in one sense to introduce, because a lot of the hardware is already on the vehicle if the vehicle has an anti-lock braking system and on most vehicles that stuff is fairly standard.

What are the fatality savings that people think you can get from it? The best paper I saw on this was at the Enhanced Safety Vehicles conference last year in Washington and it was presented by the Swedes. They reviewed all of the different evaluations of electronic stability control. I think it is interesting to note that when electronic

stability control was first talked about people were pretty cynical—they had seen anti-lock braking systems so where is electronic stability control going to get us?

ESC Fatality Savings

- Insurance Institute for Highway Safety (IIHS) analysed *single vehicle crashes* of passenger vehicles with and without ESC.
- 56% reduction in single vehicle fatalities (17% of all fatalities)
- 17% reduction in multi-vehicle fatalities (12% of all fatalities)
- Total saving 29% (17% +12%) of all light vehicle occupant fatalities
- Sweden similar reductions
- Similar worldwide experience of effectiveness

It is an area where the research has shown it is incredibly effective. The Insurance Institute of Highway Safety has found a 56 percent reduction in single vehicle crashes and 17 percent of all fatalities, a 17 percent reduction in multi-vehicle fatalities, which is 12 percent of all fatalities, so you get a total saving of 29 percent of all light vehicle occupant fatalities with electronic stability control.

In Sweden they have found similar reductions and there has been similar world-wide experience of the effectiveness of electronic stability control already. Given access to electronic stability control in Australia you wonder how they have the ability to make these evaluations. If electronic stability control is so rare how can you do these kinds of evaluations? It is a bit like airbags—15 years ago in Australia they were pretty rare but they were common overseas.

In Sweden the fitment rate in December 2004 of electronic stability control as standard was 70 percent of all new cars. I do not know what it is now, but I am sure it is way above 70 percent. In the United States of America, in February 2006, electronic stability control was 50 percent standard in new cars and of 66 percent of sports utility vehicles (SUVs, or what we call four wheel drives, 4WDs). In Australia, as best we can tell, electronic stability control is standard on less than 5 percent of all new cars. Yes, there is safety technology out there, yes all of the manufacturers have it, but is it available to us, not really.

ESC Fitment Rates

- Sweden - in Dec 2004 70% of new cars
- USA - Feb 2006 50% of new cars, 66% of SUVs
- Australia 2006 - Less than 5% of new cars

Safe Vehicle Selection

- Used Car Safety Ratings show that least safe vehicles have twice the serious injury rate of better vehicles in the same class.
- There is proven correlation between NCAP and real world crashes
- So NCAP ratings are the best guide to prospective vehicle safety
- Need for ANCAP results on windscreen sticker and better internet access

There are now systems in Australia where you can actually make a choice in terms of new vehicles as to whether you are buying a vehicle which appears to have good safety features or not. There is the New Car Assessment Program in Australia which is like a

prospective test where you test a new car, but we also have used car safety ratings which evaluate the actual performance of vehicles in real crashes on real roads and there is a correlation between the New Car Assessment Program rating and the used car rating, so you know that the best available system to tell you respectively about the relative safety of a vehicle is the new car assessment program.

The next step has to be getting those New Car Assessment Program test results as a mandatory thing on the windscreen of new vehicles. If it is mandatory when I go to the shops to buy a new refrigerator or microwave, where there is an energy rating sticker on the front of that microwave, why is it not mandatory for there to be a sticker on the front window screen of a new car which tells me its passenger protection rating, its aggressivity rating compared with other vehicles and maybe its fuel consumption. I think that is the next challenge for the new car assessment program, to put the windscreen stickers in place.

Savings from Safe Vehicle Selection

- **Choosing a vehicle from the safest group in the class will half the risk of serious injury to driver**
- **Conservative estimate is a 15% saving in all serious injuries**

In terms of what can you achieve by choosing a safer vehicle in the first place, choosing a vehicle from the safest group in a class, do you want to buy a vehicle in the first place? In other words, you don't have to go and buy a luxury car, just to choose one of the safer vehicles in the class of vehicle that you actually plan to buy and you can afford to buy. If you choose in the safer part you will halve the risk of serious injury to the driver. In terms of savings over all crashes, it is a conservative estimate, a 15% saving in all serious injuries.

Improvements in neck protection and side impact can come about through basically tubular structures or side airbag or curtains which drop down.

Head Protection in Side Impacts



Inflatable Tubular Structure



Head/thorax side airbag



Side Curtain

Real World Crashes Side Impacts



- Insurance Institute for Highway Safety (IIHS) analysed side impact crashes of vehicles with and without head-protecting side airbags.
- 45% fatality reduction in side impact crashes

Effectively what these air curtains are doing is almost by substituting for a helmet on a car occupant. They are providing individual head protection. We still have the same situation in Australia where air curtains are offered as standard in models of vehicles sold overseas but the variant that comes to Australia doesn't necessarily have that

attribute, although programs like the Australasian New Car Assessment Program will drive that kind of thing.

In terms of what is happening in side impacts, Insurance Institute of Highway Safety has been evaluating or analysing the effect of vehicles with and without those head protecting side airbags or curtains and they have found a 45% fatality reduction in side impact crashes.

Curtain Fatality Savings

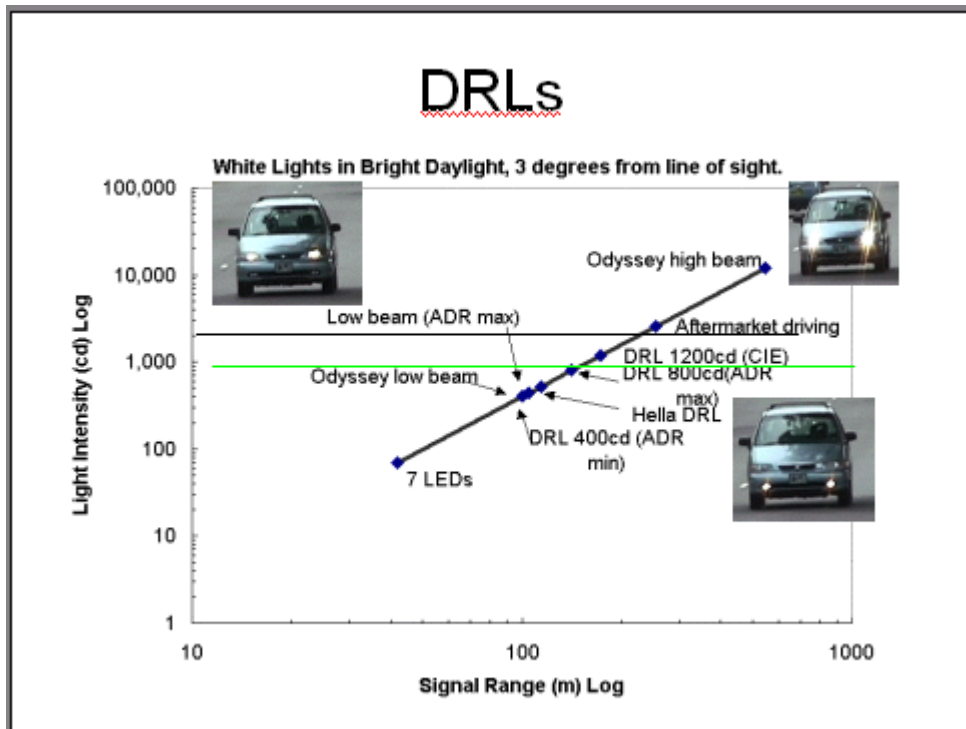
- **45% of side impact fatalities
(9% of all fatalities)**
- **Potential 60% of rollover fatalities
(13% of all fatalities)**
- **Total savings 22% of all fatal passenger
car occupants fatalities**

In terms of roll-overs, they see a potential for 60% reduction in fatalities in roll over crashes. Overall a total savings of 22% reduction in fatalities of all car occupants brought about by the introduction of those curtains fitted in all vehicles.

Daytime running lights, initially I guess were thought about as maybe low beam headlights on in the daytime and certainly when we first started applying it in New South Wales that is how we saw it. Overseas it has been trialled also as dimmed high beam headlights. They have also tried replacing the turn signals with much brighter turn signals, they also operate daytime running lights and then there are straight dedicated daytime running lights. The US accident data shows that the last two are three times as effective. A lot of the theories showing the effectiveness of daytime running lights relates to a lot of the real world studies and theory from actual traffic light design and motorists' abilities to see and respond to traffic lights.

Daytime Running Lights

- Various technologies:
 - Low beam headlight
 - Dimmed high beam
 - Bright turn signals
 - Dedicated lights
- US accident data shows last two are 3 times as effective - agrees with photometric theory from traffic light design



The effectiveness varies from whether you are looking at something with low beam headlights or high beam headlights or with something like a dedicated running light. LED technology is starting to make the prospect of daytime running lights even cheaper, because a lot of the evaluations in the past have said there are actually significant additional costs because of the lights being on all the time, bulb

replacements and whatever. LED technology is going to change that and make that much more cost beneficial.

DDRL Savings

- **European data: 25% of fatal multi-vehicle daytime crashes (10% of all light vehicle occupant fatalities)**

- **US data: 28% of fatal daytime pedestrian accidents (10-15% of all pedestrian fatalities)**

The European data finds 25% reduction in fatal multi vehicle day time crashes and that is 10% of all light vehicle occupant fatalities. In the US data it was found a 28% reduction in fatal daytime pedestrian accidents, which is overall 10 or 15% more pedestrian fatalities.

Another area is in intelligent speed adaptation. This is going beyond some of the areas where the research has shown the benefits. Certainly we know that GPS technology is available these days to tell you are where you are in the car and you can get devices which basically tell you how to drive around your town or a town you are not used to.

In other words, the systems can tell you where you are and those same systems can be programmed to tell you what the speed limit is. They will communicate to your car the applicable speed limit for the road system you are on.

Once that information is communicated, the options range from they can just tell you what it is, they can give you a warning if you are not complying or there is no reason why that same system just simply stops the vehicles from exceeding whatever the posted speed limit is. It seems to me there is a difficulty with the idea that if you really have got a mandatory speed limit, why are you giving people the option of going faster? It is sort of like, it is only going to be bad if you get caught and that should not be the message.

Intelligent Speed Adaptation

- GPS (or other) technology communicates local speed limit to the vehicle
- Options range from:
 - Mild alert and voluntary compliance
 - Vehicle won't allow speeding
- Potential for setting limits by driver, time and location (eg P-plates at night)

With the same sorts of systems there is the potential for setting limits on what the vehicle can do, depending upon the time of day and the location on the roadway, and the driver of the vehicle. If you get into a vehicle and you are a P plate driver and you are not allowed to do more than a certain speed, you are not allowed to travel in certain areas – we were in a country where they had introduced curfews – that card could go into the vehicle and the vehicle could override and let you do only what you are allowed to do.

The same thing for older drivers. There are a lot of older drivers out there who have licence restrictions in terms of when they can drive the cars, where they can drive the cars. This sort of system could take over the enforcement problem. I mean, what is the point of having rules if they are not enforced?

What are the options for implementation? Sometime ago the group I am involved in looked at the prospect of breath alcohol interlocks on cars and what we found from that is there was actually an on board diagnostics connector on most passenger vehicles made since 1993. It actually comes out of an environmental initiative in California but once vehicle manufacturers had to put that on board diagnostics plug on to suit the Californian requirements, they put it on most vehicles in the world.

The other thing we found is that since the year 2000, that most vehicles have got a socket for interface available which actually allows you to use the on board diagnostics plug to get into the vehicle's computer with the possibility of reprogramming. So in other words, this kind of system could possibly be retrofitted to vehicles made since the year 2000, you have a little box, you plug it into the on board diagnostics plug

and you have got the potential of reaching most vehicles made since the year 2000. You don't even have to wait for a whole new generation of vehicles.

Implementation

- On-board diagnostics connector on most passenger vehicles since 1993 (Californian environmental initiative).
- From 2000 software interface available on many new vehicles
- This has potential for retrofit of ISA and other IT technologies

ISA Savings

- 40% of all fatal crashes are speed-related
- Full compliance with speed limits would save 80% of speed-related crashes
- Approximate 30% saving in all fatal crashes

In terms of its ability to limit speed, 40% of all fatal crashes are coded as speed related. Full compliance with speed limits would save approximately 80% of speed

related crashes, our research finds, and that would lead to an approximate 30% saving or reduction in all fatal crashes with the coding spread in the first place.

Silver Bullets

- Electronic Stability Control - 29%
 - Safe Vehicle Selection - 15%+
 - Head Protection in Side Impacts - 22%
 - Daytime Running Lights - 10%
 - Intelligent Speed Adaptation (ISA) - 32%
- (not cumulative)

Summarising in terms of may be some silver bullets are still left in the gun, electronic stability control, possible 29% reduction, safe vehicle selection 15% plus reduction, better head protection in side impacts through curtains 22% reduction, daytime running lights 10% reduction and that is conservative. Intelligent speed adaptation probably nearly 32% indicated by current research.

That brings us to possible strategy for implementation. The truth is that the political will to do things just does not seem to be there at the moment. What do you do in that kind of environment? What do you do in the environment where bringing things in through regulation seems to be gone as a tool?

It seems to me that the most powerful thing available to us is a government fleet safe vehicle purchasing policy. You buy a lot of vehicles through the New South Wales government or the Victorian government, all you simply say is, we are not going to buy a vehicle unless it has got electronic stability control, unless it has got a five star rating in terms of crash tests, in terms of its aggressiveness, you want a certain performance. In terms of its pedestrian friendliness, you could demand a certain performance. You could have special requirements for dedicated daytime running lights. All of these things you can put in as a government specification for the kinds of vehicles you want, and there really is not much stock in that happening. You need some political will, but not quite as much political will to make it happen.

Strategy for Implementation

1. Government fleet Safe Vehicle Purchasing Policy
2. All fleet vehicles adopt same requirements through Safe Workplace Policy
3. Secures a supply of safer second-hand vehicles for private buyers

When they had the vehicle as a work place safety seminar in this same Theatre over ten years ago, the challenge was issued to the STAYSAFE Committee to take the lead on bringing in safe vehicle purchasing policies in New South Wales and now I think some twelve years later we still don't have that.

Once you have it in the government fleet it would not be that hard to spread it to make it a requirement for all fleet vehicles through safe work place policy. The big benefit of that is that vehicles in fleets, whether it is government fleets or private fleets, don't stay in there forever. They typically stay in a two to five year range, so then they are sold on. Then you have secured a supply of safer second hand reasonably priced vehicles for private buyers.

That is a possible strategy to bring in those kinds of changes and that is the end of my presentation. Thank you.

Questions

Mr HAROLD SCRUBY (Pedestrian Council of Australia): I agree with you about your silver bullets. I didn't see – I might have missed it – on black boxes, in America I think and Canada some big companies with fleets are putting in black boxes and two things I have noticed, one, they have had their first prosecution for driving manslaughter because the black box was able to show what this guy was doing in a certain speed zone, he killed somebody. Secondly I read a statistic, around 30 to 40% reduction in crashes for these people that have the black boxes installed

because they know they are under some sort of constant surveillance. What do you think of the idea of black boxes and their use in terms of reducing the road toll?

Mr GRIFFITHS: I haven't read the research on the effectiveness of using black boxes or otherwise, so I don't know just how effective they are. I can understand why you might say if people know they are being monitored they might be more careful, it may be a useful tool. But the silver bullets I have been talking about here today are the ones that are already here, that are available on vehicles, just somewhere else in the world and all you are trying to do is take action to bring them onto vehicles in Australia.

Mr SCRUBY: The black box is already here, it might not be in Australia but I saw them demonstrated in Dubai.

Mr GRIFFITHS: Sorry, what I am saying is if you buy a vehicle in Europe or buy a vehicle in North America, that technology is relatively standard on most new vehicles. What you are talking about is something that is only applying to a very small sector of the market. I am really talking about readily available, not difficult to get technology.

Mr FAULKS (in the Chair): If I just might comment, I understand that there is a research proposal floating around at the moment for the installation of something which is a little bit of a variant on what you are discussing, which is a black box or computer recording system within the vehicle, and that is the Drivecam device. There has been some publicity about it recently. There is a research proposal being developed at the moment that the STAYSAFE Committee is aware of, for looking at installing about 100 of those devices into the vehicles of young drivers to actually monitor driving performance in the P1 phase of the New South Wales licensing system. A lot of this is to do with essentially how you sell the idea. The black box recorders that I am aware of that are being used in Australia are being used in fleets. They are comparatively cheap and they come with a whole lot of software support and so on to enable the fleet operators to actually record a whole lot of details about the performance of their vehicles. I agree with you, they are there. For Drivecam, the marketing exercise is to target the parents of young drivers and say, do you want to know what your kids are doing when they take your car out, and if you do, you can buy this device for \$700 or \$2,000, whatever the price is.

Mr GRIFFITHS: I think there is a cheaper way with intelligent speed adaptation. You can do down to Paddy Pallin and buy a good GPS system for well under \$300 these days and they all have a tracking function and all have memory. Basically you are the parent and your child goes out in your car and there is nothing to stop you using that GPS system to print out a record of where the child went and how fast they drove for the whole journey, so that technology will come with an intelligent speed adapter.

Mr FAULKS: I think Michael Paine, of Vehicle Design & Research, demonstrated that a little while ago with the device he used for bushwalking.

Mr HAROLD SCRUBY: Michael, I think you misunderstood my question. If you went to the NRMA and said what about the making sure all your company vehicles have a black box like they have in America and measure the differences between the crashes pre and the crashes post, it is not a matter of having a parent controlling a child, it is a matter of an overall system governing these people so they know if they have a crash in a 60 zone and they are doing 80 we are in big trouble. That could be one of the biggest silver bullets.

Mr GRIFFITHS: We do not need that black box if you go to intelligent speed adaptation because you already have it in the car.

Mr FAULKS: Thank you very much, Michael. I would like on behalf of the STAYSAFE Committee, all of the members of whom are either in the Legislative Assembly or Legislative Council at the moment, on their behalf to thank you all very much for your attendance today and, for some of us, the attendance at the private meeting yesterday of the road safety committees. It has been an exceptionally useful exercise. I thank very much the Motor Accidents Authority for providing some sponsorship monies, together with the FIA Foundation for the Automobile and Society. I am very appreciative of the strong support of the Australian Motor Association and the NRMA Motoring Services and our national motoring services and the George Institute for International Health, who were also a partner for the process.

We will speak to our long suffering Hansard staff but I think we are expecting to get a copy of the transcript within a week from now, hopefully next Monday or Tuesday. For those who have spoken we will send the transcript out with a request that you have a look at it, check it for any inaccuracies and so on, and then the intention is to compile the whole of the proceedings of both yesterday and today and release it as a report of the Committee, to get this information out in a hard copy, and then in an electronic form. It will be up on our web site so that the work we have undertaken both in terms of the presentations we have heard and the questions that have been asked during these seminars can be out there for everybody to read and consider. Can I also thank my staff, in particular Annette Phelps and Bjarne Nordin who have been quietly and silently working very hard behind the scenes for the last couple of days. My personal thanks to you. I now declare the seminar closed.

Appendix A—

Organisation For Economic Co-Operation And Development — Working Group On Achieving Ambitious Road Safety Targets — Country Reports On Road Safety Performance — Australia

In July 2006, the Working Group On Achieving Ambitious Road Safety Targets, under the auspices of the Organisation For Economic Co-Operation And Development, released its report on Australia's road safety performance (see: <http://www.cemt.org/JTRC/WorkingGroups/RoadSafety/Performance/TS3-australia.pdf>). This report is reproduced, in full, in this appendix.

Appendix B—

Extracts from the minutes of the STAYSAFE Committee regarding the 4th meeting of Australasian Parliamentary road safety committees and supplementary papers, Monday 3 April 2006 and Tuesday 4 April 2006, Parliament House, Sydney.

This appendix contains relevant extracts from the minutes of STAYSAFE Committee meetings of:

- xxxxxx

regarding the 4th meeting of Australasian Parliamentary road safety committees and supplementary papers, Monday 3 April 2006 and Tuesday 4 April 2006, Parliament House, Sydney.

No. 53/53

STAYSAFE

PROCEEDINGS OF THE JOINT STANDING COMMITTEE ON ROAD SAFETY

11:30 A.M., FRIDAY 15 DECEMBER 2006
AT PARLIAMENT HOUSE, SYDNEY

MEMBERS PRESENT

Legislative Council

Mr West
Mr Colless

Legislative Assembly

Mr Gibson
Mr Maguire
Mr Barr

Also in attendance: Mr Faulks, Manager of the Committee, Ms Jay, Senior Committee Officer, and Ms Yeoh, Assistant Committee Officer

The Chairman presiding.

1. Apologies

Apologies were received from Mr Souris, Mr Bartlett, Mr Hunter, Ms Hay and Mr Brown.

2. Previous minutes

On the motion of Mr Colless, seconded Mr Barr, the minutes of Meeting No. 52 held on Monday 13 November 2006 was accepted as a true and accurate record.

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4. Consideration of Chairman's draft report: 'Road safety: From local to global perspectives. Proceedings of the 4th meeting of Australasian Parliamentary road safety committees, together with supplementary papers, Monday 3 April 2006 and Tuesday 4 April 2006, Parliament House, Sydney'

The Chairman presented the draft report: 'Road safety: From local to global perspectives. Proceedings of the 4th meeting of Australasian Parliamentary road safety committees, together with supplementary papers, Monday 3 April 2006 and Tuesday 4 April 2006, Parliament House, Sydney'.

The draft report was accepted as being read.

The Committee proceeded to deliberate on the draft report:

Recommendation 1: read and agreed to
Recommendation 2: read and agreed to
Recommendation 3: read and agreed to
Recommendation 4: read and agreed to

Chapter 1
Paras. 1.1 – 1.27: read and agreed to

Chapters containing speaker's papers: read and agreed to

Appendix 1-3: read and agreed to

The following motions are required:

On the motion of Mr Colless, seconded Mr Barr:
That the draft report: 'Road safety: From local to global perspectives. Proceedings of the 4th meeting of Australasian Parliamentary road safety committees, together with supplementary papers, Monday 3 April 2006 and Tuesday 4 April 2006, Parliament House, Sydney' be read and agreed to.

Passed unanimously.

On the motion of Mr Colless, seconded Mr Barr:

That the draft report: 'Road safety: From local to global perspectives. Proceedings of the 4th meeting of Australasian Parliamentary road safety committees, together with supplementary papers, Monday 3 April 2006 and Tuesday 4 April 2006, Parliament House, Sydney' be accepted as a

report of the STAYSAFE Committee, and that it be signed by the Chairman and presented to the House.

Passed unanimously.

On the motion of Mr Colless, seconded Mr Barr:

That the Chairman and Committee Manager be permitted to correct any stylistic, typographical and grammatical errors in the report.

Passed unanimously.

....

17. General business

.....

There being no further business, the Committee adjourned at 12:30 p.m..

Chairman

Committee Manager

Appendix C—

Reports of the STAYSAFE Committee 1982-2006

STAYSAFE 1 (1982)	Alcohol, drugs and road safety.
STAYSAFE 2 (1984)	Car driver licensing and road safety.
STAYSAFE 3 (1984)	Motorcycling safety.
STAYSAFE 4 (1985)	Is there a police quota system?
STAYSAFE 5 (1985)	Traffic law enforcement.
STAYSAFE 6 (1985)	The administration of random breath testing.
STAYSAFE 7 (1986)	Police hot pursuits.
STAYSAFE 8 (1986)	Speed control.
STAYSAFE 9 (1986)	Safe speed and overtaking on 100 km/h roads.
STAYSAFE 10 (1986)	Radar detectors and jammers.
STAYSAFE 11 (1987)	Safety of 2-lane country roads.
STAYSAFE 12 (1988)	Bicycle safety.
STAYSAFE 13 (1989)	Immediate and certain loss of licence for extreme drink-driving.
STAYSAFE 14 (1989)	Malpractice in driver licence testing.
STAYSAFE 15 (1989)	Alert drivers, and safe speeds for heavy vehicles.
STAYSAFE 16 (1990)	B-Doubles.
STAYSAFE 17 (1990)	Novice drivers: the student's view.
STAYSAFE 18 (1990)	Steering novice drivers towards safety.
STAYSAFE 19 (1992)	Alcohol and other drugs on New South Wales roads. I. The problem and countermeasures.
STAYSAFE 20 (1993)	Alcohol and other drugs on New South Wales roads. II. Offences, penalties, and the management of convicted drivers.
STAYSAFE 21 (1992)	Culpable driving.
STAYSAFE 22 (1992)	Towing caravans and trailers safely.
STAYSAFE 23 (1992)	A decade of the STAYSAFE Committee 1982-1992.
STAYSAFE 24 (1992)	Livestock warning signs: Road safety implications of the draft Rural Lands Protection (Amendment) Bill 1992.
STAYSAFE 25 (1994)	Death and serious injury on New South Wales roads: An examination of the provisions of the Crimes Act 1900 (NSW) regarding dangerous driving.
STAYSAFE 26 (1994)	Pedestrian safety. I. School children around buses.
STAYSAFE 27 (1994)	Traffic stops, police chases and police pursuits of motor vehicles.
STAYSAFE 28 (1995)	Sleep disorders, driver fatigue and safe driving.
STAYSAFE 29 (1995)	Pedestrian safety. II. Cleaning windscreens and other itinerant commercial activities on or alongside the roadway.
STAYSAFE 30 (1996)	Pedestrian safety. III. Bicycle courier activities in the Sydney central business district.
STAYSAFE 31 (1996)	Review of the road safety situation in New South Wales in 1994.
STAYSAFE 32 (1996)	Aspects of road safety administration in New South Wales.

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- STAYSAFE 33 (1996) Responses to recommendations in STAYSAFE reports of the 50th Parliament.
- STAYSAFE 34 (1996) A 50 km/h general urban speed limit for New South Wales.
- STAYSAFE 35 (1997) The Traffic Amendment (Street and Illegal Drag Racing) Act 1996 - A report into the sunset provision.
- STAYSAFE 36 (1997) Drivers as workers, vehicles as workplaces: Issues in fleet management.
- STAYSAFE 37 (1997) Driver licensing in New South Wales: First entry into the driver licensing system.
- STAYSAFE 38 (1997) Report of the 2nd meeting of Australasian Parliamentary road safety committees and Ministerial nominees, Parliament House, Sydney, Wednesday 2 April 1997 and Thursday 3 April 1997.
- STAYSAFE 39 (1997) Young drivers - Proceedings of a seminar at Parliament House, Sydney, 30 April 1997.
- STAYSAFE 40 (1997) A 50 km/h general urban speed limit for New South Wales: Progress report and edited minutes of evidence.
- STAYSAFE 41 (1998) Review of the road safety situation in New South Wales in 1995.
- STAYSAFE 42 (1998) Review of the road safety situation in New South Wales in 1996.
- STAYSAFE 43 (1998) Electronic drivers licences.
- STAYSAFE 44 (1998) Developing safer motor vehicles for Australia.
- STAYSAFE 45 (1998) Injury prevention and infection control in the taking of blood samples from drivers suspected of alcohol or other drug impairment.
- STAYSAFE 46 (1998) Falling asleep at the wheel C Legal and licensing implications of driver fatigue.
- STAYSAFE 47 (1998) Review of the road safety situation in New South Wales in 1997.
- STAYSAFE 48 (1998). Pedestrian safety. IV. Child pedestrian safety in New South Wales.
- STAYSAFE 49 (1998). Comments concerning the development of uniform traffic law in Australia—the Australian Road Rules.
- STAYSAFE 50 (2000). Speech by Grant McBride MP, STAYSAFE Chairman, in opening the 4th Local Government Road Safety Conference, Millennium Hotel, Kings Cross, 11-13 August 1999.
- STAYSAFE 51 (2000) Review of the road safety situation in New South Wales in 1998.
- STAYSAFE 52 (2001) Responses of Government agencies to recommendations in STAYSAFE reports of the 51st Parliament.
- STAYSAFE 53 (2001) Traffic control and safety around schools - Part 1 - Major recommendations and summary.
- STAYSAFE 53 (2002) Traffic control and safety around schools - Part 2 -Responses of government agencies to the major recommendations and summary.
- STAYSAFE 53 (2002) Traffic control and safety around schools - Part 3 -The evidence.
VOLUME 1 – The testimony of school communities in 2000.
VOLUME 2 – The testimony of school communities in 2001.
VOLUME 3 – The testimony of representatives of government agencies.
VOLUME 4 – The testimony of representatives of local councils.
VOLUME 5 – The testimony of bus and taxi operators, representatives of non-government organisations, private citizens and Members of Parliament.
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- STAYSAFE 53 (2002) Traffic control and safety around schools - Part 4 - Summaries of submissions received from government agencies, non-government organisations, and the community.
- STAYSAFE 54 (2002) Road safety and street design in town centres: Towards best practice in traffic control and safety for main streets in New South Wales: Proceedings of a conference held at Parliament House, Sydney, 31 July - 1 August 2000.
- STAYSAFE 55 (2002) Review of the road safety situation in New South Wales in 1999.
- STAYSAFE 56 (2004) Railway level crossings: Improving safety where railways and roads intersect at the same level.
- STAYSAFE 57 (2002) Work-related road safety. Proceedings of a seminar held at Sydney, Thursday 8 February 2002.
- STAYSAFE 58 (2002) Bullying, abuse, intimidation and assault on the road – selected Australasian research on ‘road rage’ and aggressive driving.
- STAYSAFE 59 (2002) On strategic planning for road safety in New South Wales.
- STAYSAFE 60 (2002) A decade of the STAYSAFE Committee, 1992-2002.
- STAYSAFE 61 (2004) Car surfing and the carriage of unrestrained and unprotected passengers on motor vehicles.
- STAYSAFE 62 (2004) “Road safety is no accident”: Proceedings of a seminar for World Health Day, 7 April 2004.
- STAYSAFE 63 (2004) Road crash statistics in 2002
- STAYSAFE 64 (2004) Road crash statistics in 2003
- STAYSAFE 65 (2005) Aspects of motorcycle safety in New South Wales—Proceedings of seminars on issues in motorcycle safety held at Sydney, Friday 3 December 2004 and Tuesday 4 May 2005, and other selected papers.
- STAYSAFE66 (2005) Repairing to a price, not a standard: Motor vehicle smash repairs under the Insurance Australia Group (NRMA Insurance) Preferred Repairer Scheme and its implications for roadworthiness, crashworthiness, and road safety.
- STAYSAFE 67 (2006) Driver distraction: Proceedings of an international conference on distracted driving, Sydney, Australia, 2-3 June 2005
- STAYSAFE 68 (2006) Improving the health of the motor vehicle insurance and smash repair industries: Shifting the focus to public safety—Report of a review of progress in implementing the findings and recommendations of an inquiry into motor vehicle smash repairs under the Insurance Australia Group (NRMA Insurance) Preferred Repairer Scheme
- STAYSAFE 69 (2006) Brief comments on organ and tissue donation
- STAYSAFE 70 (2006) Road safety: From local to global perspectives. Proceedings of the 4th meeting of Australasian Parliamentary road safety committees, together with supplementary papers, Monday 3 April 2006 and Tuesday 4 April 2006, Parliament House, Sydney.