



*Fostering communication, networking, professionalism
and advocacy in road safety*

2013 ACRS SUBMISSION TO FEDERAL PARLIAMENTARIANS

Road Trauma is arguably the highest ranking public health issue we face as a nation today. Federal government estimates put the annual cost of road trauma to our economy at \$27b. With 25 people dying and 600 being seriously injured each week in Australia, the ripple effect of each road trauma event to our families and communities is enormous.

The ability for Australia's peak policy makers to 'make a difference' both personally and professionally, that is felt by all Australians, is a real incentive to drive genuine change across the many federal systems and portfolios involved in road trauma - from research, technology, engineering, health and emergency services, to our youth, our senior citizens, disability and community services, and rural and regional communities, to name a few.

We look forward to continuing to work together to make significant reductions to the current level of road trauma. The wellbeing of our nation as a whole will benefit greatly as a result. In turn, all of you, as determined and committed leaders of our nation, will undoubtedly achieve a high level of personal and professional satisfaction.

The Australasian College of Road Safety membership consists of the following:

- All Australian and New Zealand road safety research agencies;
- Australian and New Zealand universities;
- Injury prevention, brain injury and neuroscience research organisations;
- Australasian surgeons' association;
- Australian federal government road safety & health promotion agencies;
- All State and Territory road safety agencies;
- Local government agencies;
- Policing agencies (both federal and state);
- Emergency services agencies;
- Road safety research funding organisations;
- Medical associations;
- Safety promotion and training agencies;
- Carer advocacy groups and associations;
- Independent road safety consultants;
- State vehicle and personal insurance agencies;
- Driving schools and instructor associations;
- Road safety advocacy groups, including motorcycles, children, youth, pedestrians, cyclists;
- Road industry groups, including vehicles, trucks, roads;
- International road safety consultants, agencies and advocacy groups;
- Fleet safety associations;
- Independent economist consultants and companies;
- Engineers & engineering associations;
- Legal firms;
- Trucking companies;
- Vehicle manufacturing companies;
- Vehicle safety advocacy and testing organisations;
- Other public or private companies interested in or working in the field of road safety;
- Secondary, tertiary and post-graduate students currently studying in the road trauma field;
- Interested members of the public.

“Imagine if improvements to combat road trauma were a top national public health priority - the effect on our nation’s health, economy and wellbeing would be a gold standard for the global community”

(Lauchlan McIntosh, ACRS Australasian President, 2013)

The Australasian College of Road Safety was established in 1988 and is the region’s peak membership association for road safety professionals and members of the public who are focused on saving lives and serious injuries on our roads.

The College Patron is Her Excellency Ms Quentin Bryce AC CVO, Governor-General of the Commonwealth of Australia.

The 2013 ACRS Submission to Federal Parliamentarians informs Australia’s peak policy makers of the opportunities that are available to address the serious issue of road deaths and injuries in Australia. The causes and consequences of road trauma impact many federal departments, and exist regardless of which party makes up the majority in Parliament.

“Political will is needed at the highest level of government to ensure appropriate road safety legislation and stringent enforcement of laws by which we all need to abide,” says World Health Organization Director-General Dr Margaret Chan. “If this cannot be ensured, families and communities will continue to grieve, and health systems will continue to bear the brunt of injury and disability due to road traffic crashes.”ⁱ

The College supports the recent appointment of an inaugural Federal Minister for Road Safety. This submission provides many recommendations for that new portfolio.

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Support for the ACRS 2013 Submission to Federal Parliamentarians

The Royal Australasian College of Surgeons President, Dr Michael Hollands, strongly supports a concerted effort towards reductions in road trauma:

“Each week there are 25 deaths and 600 serious injuries on our roads (that’s 1300 deaths and 32,500 serious injuries per year). Seen first-hand by our surgeons, this has an enormous impact on Australia’s health system as a whole. The College supports all evidence-based initiatives that assist in the prevention of road trauma and the reduction of the devastating effects of injury”.

(Dr Michael Hollands, President,
Royal Australasian College of Surgeons, 2013)

Carers Australia President, Mr Tim Moore, strongly supports all endeavours to reduce the level of deaths and serious injuries from road trauma in Australia through evidence-based strategies:

“Families experience firsthand the tragedy of these deaths and the impact of the serious injuries sustained in these accidents. Every day too many ordinary Australian families will become a caring family – this means that one or more family members will need to change their own way of life to provide support (including emotional, personal, clinical and financial) to the injured person. Australian and international research indicates that these carers are likely to have significantly lower health and wellbeing (including social and financial) than non carers and that this impact increases with the duration of their caring responsibility.

Carers Australia strongly supports The Australasian College of Road Safety in its aim to reduce the level of deaths and serious injuries from road accidents in Australia through evidence-based strategies.”

(Mr Tim Moore, President, Carers Australia, 2013)

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1. Key Points – The way forward to reduce road trauma

Recognising road safety should be a vital factor in the Australian productivity and national economic debate.

Road Trauma is arguably the highest ranking public health issue we face as a nation today. Federal government estimates put the annual cost of road trauma to our economy at \$27b. With 25 people dying and 600 being seriously injured each week in Australia, the ripple effect of each road trauma event to our families and communities is enormous.ⁱⁱ

It is essential to build a consensus across the whole community to recognise that there are many solutions, often at relatively low capital and social cost, which can reduce trauma without unnecessarily impacting on mobility.

International studies and well researched recommendations (such as the Wegman 2012 report) point to the value and critical importance of national political leadership in road safety public policy. The transport system is a public good, and on that basis alone it can be argued that governments, including the Federal Government, should make safety of our transport system a priority.

Much can be done, and not necessarily requiring a significant outlay from the government. The College strongly supports the activities detailed below.

Specifically national actions proposed by the College include:

1. **Endorse and promote national recognition of road trauma as an extensive public health issue.** This would include recognition across all levels of government, all stakeholder groups, and the Australian community.
 - a. This would include an emphasis on a national recognition of the road trauma ripple effect for each Australian.
2. **Commission a study by the Productivity Commission on the full impacts of road trauma** - on national productivity, the current size of annual expenditure by all government sectors including transport, legal, industry and health, as well as to assess the economic costs and benefits of State, Federal and Local Government -based road safety programs.
3. **Develop a nationally agreed ‘serious injury’ definition & data collection method in relation to road trauma.**
 - a. Serious injury definitions and data collection methods currently differ across jurisdictions, making recording and tracking of injuries very difficult, if not impossible. (D’Elia & Newstead, 2011). This is particularly relevant in terms of ensuring progress against serious injury reduction targets outlined in Australia’s National Road Safety Strategy 2011-2020.
 - b. This definition would be implemented across all jurisdictions, and would assist in the collection of reliable serious injury data to support government and stakeholder initiatives.
 - c. An agreed definition and data collection method would produce more reliable comparisons against road trauma reduction targets.

4. Obtain collective agreement for collection and reporting of road trauma data and costs from all sources, including transport authorities, police, all insurers, and hospitals to ensure that reduction targets can be measured and reported and published in the National Accounts.
5. Develop a widely agreed national management approach to road trauma, including a Road Trauma Reduction Action Plan and Investment Budget across all portfolios. This will focus attention and enhance resource coordination and would complement the national reduction target for deaths and serious injuries.
 - a. The national management approach to road trauma is vital in ensuring recognition of the importance of the road safety portfolio at the federal level, a newly created ministry under the Gillard government. This recognition should translate into a specific road safety budget and clear actions.
 - b. A Road Trauma Action Plan and Investment Budget would aim to ensure management at a federal level is more inclusive than existing arrangements.
6. Continue and potentially increase our level of commitment to the UN Decade of Action for Road Safety 2011-2020. “The benefits of linking Australian road safety projects, researchers and practitioners to international programs, as is well recognised in other areas, are valuable not only to low-and-middle-income countries but to assist in adding skills, experience and knowledge.” (McIntosh, 2013).
 - a. Australia should be determined to be even more effective in leading the drive to reduce road trauma. The current aim within the UN Decade of Action for Road Safety is to see a 50% reduction of death and serious injuries within the next decade. Australia should aim to meet or exceed this reduction, which is significantly greater than the 30% reduction target which is currently set in Australia’s National Road Safety Strategy 2011-2020.
7. Promote integration of road safety targets and aspirations into all current stakeholder programs including mobility planning - research, road, vehicle, communication, health, community, disability, regional, treasury, police and emergency services, and human services.
 - a. This integrated approach, led with a federal Minister, is vital in order to promote efficient cooperative Local, State and Federal Government road safety programs, together with business, professional and community groups.
 - b. This approach will also build national and international partnerships and reduce duplication. It is one which stakeholder leaders can join and promote. Collectively stakeholders could provide independent contributions through existing organisations (ARRB, Austroads) and road user groups (Australian Trucking Association, Australian Automobile Association, the Federal Chamber of Automotive Industries, Minerals Council of Australia, Pedestrian Council etc), supported professional bodies such as (ACRS), and perhaps new bodies modelled on the European Transport Council and/or the Insurance Institute for Highway Safety in the USA.

8. **Develop a national Road Safety Research Plan and Budget, as well as a Capacity and Skills base.** Development would involve government and industry, and would include a national data base of incidents with research that has a focus on timely and practical results. We need the best facts and evidence, not opinions, to make a difference. We need research to improve our ability and our capacity to get results. Collaboration with best practice international researchers should be included. Current professional bodies could be financially encouraged to undertake this work and bring commercial and research funding together to effectively manage a whole of community approach.

Research drove the initial successful road trauma reduction in Australia 40 years ago, and we need to re-build a modern, scaled and nationally coordinated and prioritised research program. Translating those results into action will need a dedicated training program for the many relevant professionals and practitioners.

- a. A good starting point would be the National Road Safety Research Framework which is currently being developed with all stakeholders, including the NHMRC and the College.
 - b. Building on existing training programs such as in management, road and vehicle engineering, behavioural science, policing and trauma care, will require a specific plan and budget.
9. **Develop a national Safety Technologies Action Plan and Budget** - to facilitate the introduction of safety technologies across vehicles and infrastructure.
 - a. Continued and enhanced government funding, together with consumer and commercial organisation funding for non-regulatory programs such as ANCAP are vital to encourage the early introduction into the Australian vehicle fleet of world best crash avoidance and crashworthiness in all new vehicles.
 10. **Develop a national Road Safety Communications and Marketing plan.** This would help to ensure that all stakeholders are promoting the same message, and reduce the possibility of duplication or misinformation. Current shared programs appear limited to government agencies. There is potential to harness other stakeholder programs to enhance messages.
 11. **Utilise and extend existing proven or promising non regulatory programs** such as AusRAP, ANCAP, KEYS2DRIVE, the Naturalistic Driving Study, TruckSafe, AutoCRC programs and P Drivers Project.
 12. **Assist and develop other community programs** led by service groups, local government, professional bodies as well as specific programs for vulnerable road users and indigenous groups. Build on the capacity of these programs to support them in reducing the road toll.
 13. **Encourage debate on the introduction of market-based vehicle insurance and personal insurance which reflects the introduction of new technology** - provide financial incentives for drivers and their insurers for safer road use. (Tooth, 2012)
 14. **Financially support existing proven stakeholder initiatives that are ensuring collaboration between governments, professions, practitioners, users and the private sector is achieved** to enhance the efficiency of all stakeholders to reduce the level of road trauma e.g. the ACRS, the Royal Australasian College of Surgeons, and various vehicle industry, alcohol and drug initiatives.

15. **Develop and implement new road trauma reduction funding opportunities** - from new sources and from current road, industry, transport, insurance and health-related areas. Such a national budget led by a National Minister should recognise the size of the problem (i.e. the annual cost to the community of at least \$27 billion+ (NRSS)) and the scale of the response needed to achieve effective results.
 - a. The funding is not simply expenditure - it will be investment with a real return.

Road trauma must be clearly articulated by our federal government as a vital factor in the Australian national economy, national budget, and public health system, recognising the true scale of the problem. This will in turn ensure that significant reductions to road trauma are made.

Potential national savings of at least \$10bn per year over 10 years requires priority in the form of a national COAG plan, and is achievable with a budget of at least \$500m pa.

The benefits will be lives saved and reduced trauma, savings to the health and legal systems, and vastly improved national productivity.

References include: (McIntosh, 2013), (Wegman, 2012)

2. Imagine the consequences....

Imagine if our nation was providing defence forces to combat war overseas, and that *25 soldiers were dying and 600 being seriously injured each week - week after week, year after year*. Imagine if there was no end in sight, and the wartime fatalities had increased in the last calendar year compared to the year before. The public and political pressure to end these mass casualties would be immense.

Imagine if there were 5 Boeing 737 crashes every week in Australia, with *25 passengers dying and 600 being seriously injured each week*. The public outcry would be enormous, the effects on our nation soul destroying. Every effort would be made to stem this tide of death and injury.ⁱⁱⁱ

Imagine if there was an epidemic that consistently, year after year, was the leading cause of casualty in our population for 1-44 year olds. Imagine if it was the leading cause of death and injury in our young people between the ages of 15-24. The forces mobilised to counteract this epidemic would be enormous.

Imagine the effects on health systems if our hospitals were dealing with the injured from these plane crashes, war events or epidemics - *over 600 people each week - reaching the emergency doors with serious injuries, enduring lengthy hospital stays and for some a lifetime of disability*.

Imagine the strain on our disability services and community support structures if our communities were dealing with these injured people - *over 600 people per week - some requiring extensive and costly lifetime support*.

Imagine the consequences of these deaths and injuries on our communities - the 25 deaths each week resulting in outpourings of grief from our families and communities, and the 600 people each week who are released from hospital, some to be cared for by families and communities over the longer term.

Imagine if the annual cost to our economy of these plane crashes, wartime efforts or epidemics was estimated to be over \$27 billion.^{iv} This is more than Australia's current annual defence budget of \$26b (Financial Review, 2012). The political and social pressure to solve this problem would be enormous.

This is the road trauma reality - 25 people dead and 600 seriously injured every week in Australia. Week after week. Year after year.

The impact of road trauma is all-encompassing, impacting the full spectrum of the political agenda. A much stronger focus on saving lives and injuries on our roads, covering all age groups and user groups, all the factors in roads and vehicles, and including all facets of road crashes such as trauma services and post-crash care, would have a major impact on Australia's economic and social well-being. Many solutions are simple and cost-effective.

The College urges all federal politicians to raise the profile of road trauma across our nation and internationally, and provide strong leadership and support for a coordinated approach towards road trauma reductions.

3. The road trauma ripple effect – an Australian story....

The College urges all Australians, including politicians across all levels of government, to reflect on the impact of road trauma during the course of their life - the 'ripple effect of road trauma'. How has the ripple effect of road trauma impacted **you** on a personal level - through your family, your friends and your communities?

This is one account - a middle aged Australian who grew up in rural Australia, attended high school in a Capital city, attended university, is working in a Capital city, married with 3 children, and who is an average Australian, living an average life.

- Born 1967
- Ripple effect 1 - 1978: Family friend's young son killed when a brick from a passing truck went through the car window. **Fatality.**
- Ripple effect 2- 1983: Family friend's son killed in highway collision after other driver went through a red light. **Fatality.**
- Ripple effect 3 - 1984: Past fellow primary school student (now aged 17) killed in head on collision with a truck. **Fatality.**
- Ripple effect 4 - 1984: Fellow year 12 student left a permanent quadriplegic after a roll-over when travelling with 11 others in a 4 wheel drive after a party. **Lifelong injuries.**
- Ripple effect 5 - 1985: Fellow student's grandmother killed in collision at a highway intersection. **Fatality.**
- Ripple effect 6 - 1998: Friends son left quadriplegic and brain injured after being hit while crossing a street at a pedestrian crossing. **Lifelong injuries.**
- Ripple effect 7 - 2003: Family friend's son killed in highway collision. **Fatality.**
- Ripple effect 8 - 2005: Aunt and cousin seriously injured in a crash on a rural highway. **Lifelong injuries.**
- Ripple effect 9 - 2008: 2-car crash on local community roads seriously injured a primary school student at a local school. **Lifelong injuries.**
- Ripple effect 10 - 2009: 15-year old niece killed in collision at a poorly marked intersection, in a car being driven by a young driver. **Fatality.**
- Ripple effect 11 - 2010: Colleague's young friend left permanently paralysed after motorbike crash. **Lifelong injuries.**
- Ripple effect 12 - 2012: Colleague's friend killed in a fiery crash on a rural highway. **Fatality.**

This is how the ripple effect of road trauma has affected one average Australian, who has so far lived for half their life expectancy.

What impact has the road trauma ripple effect had on you?

We grow up in a nation where we experience this ripple effect from an early age, and we become conditioned to accept road trauma as an inevitable side-effect of road travel. We don't have this subconscious expectation when we board an aeroplane or a train.

We have successfully reduced road trauma rates dramatically in the last 40 years, despite past views that such reductions were not possible. Reduction rates have now plateaued, even though we have better knowledge and better technologies. We need to reignite that past determination to save lives and injuries.

The College urges all federal politicians to reflect on the personal impact of the road trauma ripple effect, and ask all Australians to do the same, and provide strong leadership and support for a coordinated approach towards road trauma reductions.

4. Leading causes of death, and costs (Australia)

1. Ischaemic heart disease (22, 523 deaths) – cost approximately \$5.9b in 2004-05 (Australian Institute of Health and Welfare)
2. Strokes (11,220 deaths) –cost burden estimated to be around \$2.14b per year (Stroke Foundation)
3. Alzheimer’s Disease and other dementias (8,277 deaths) – total direct health and aged care system expenditure on people with dementia (including Alzheimer’s Disease) was over \$4.9 billion in 2009-10. (Alzheimers Australia).
4. Trachea and lung cancer (7,786 deaths) - \$107m in direct health expenditure (Australian Institute of Health and Welfare).

Breast Cancer

- Breast cancer -2,864 deaths (2010, (Cancer Australia)) at a cost of \$331m in 2004-05 (xLife)

Road Trauma

- 1,400 deaths and 32,500 serious injuries every year at a cost of \$27b to our economy each year (NRSS baseline figures, Department of Transport and Infrastructure).
- Road Trauma is arguably the highest ranking public health issue - in terms of cost to our economy - that Australia faces as a nation, with an annual cost of \$27b. In addition, road trauma is a huge social cost to our families and communities.
- The number of road deaths during the 12 months to December 2012, compared with the 12 months to December 2011, increased by 1.8% (Table 1):

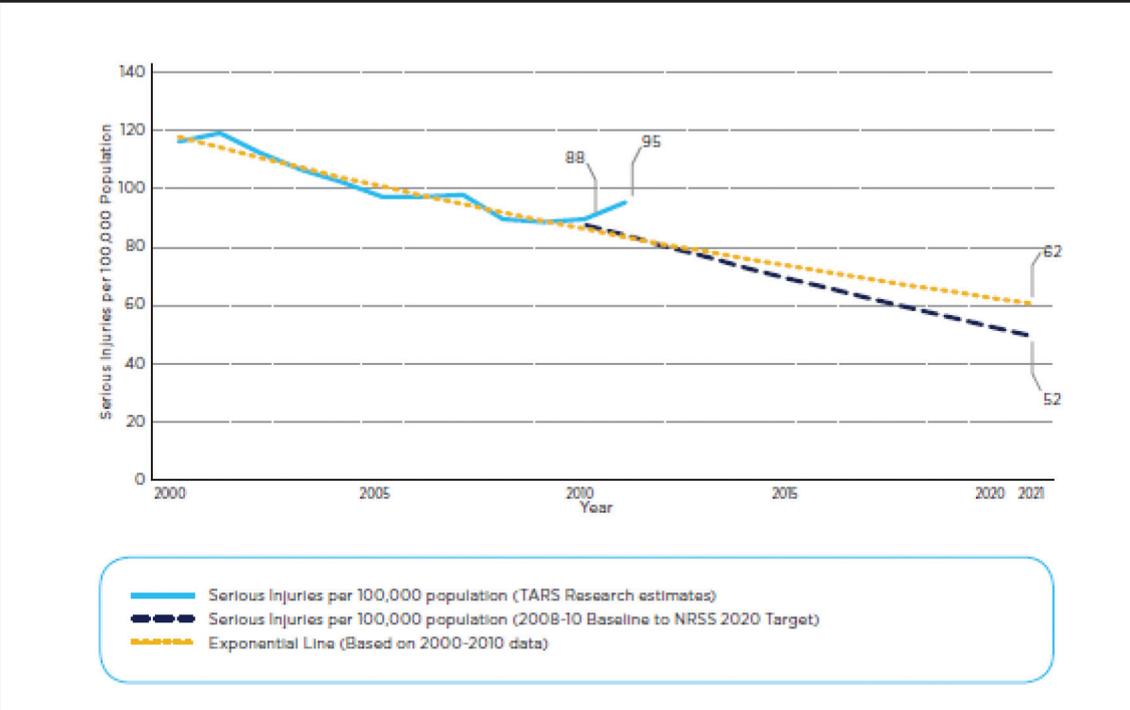
Table 1: Number of Deaths by Jurisdiction									
Source: Bureau of Infrastructure, Transport and Regional Economics, 2013									
Year to date	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
January 2011 - December 2011	364	287	269	103	180	24	44	6	1,277
January 2012 - December 2012	370	279	279	94	185	33	48	12	1,300
Per cent change	1.6	-2.8	3.7	-8.7	2.8	37.5	9.1	100	1.8

- Despite the absence of a nationally consistent definition of ‘serious injuries’, the rate of serious injuries from road trauma (NRSS states 32,500 people annually are seriously injured as a result of road trauma) is currently considered to be rising and is anticipated to continue rising into the future (Figure 1):

Figure 1: Estimated serious injuries per 100,000 population target

Source: NSW Road Safety Strategy 2012-2021, 2013

Note: Serious Injury is defined as injury resulting in hospitalisation (but not in-hospital death) due to land transport accidents (AIHW, 2012).



5. Federal and State/Territory Government decline in road safety spending

Annual Reports from the Department of Infrastructure and Transport from the years 2009/10, 2010/11 and 2011/12 show the following reduction in spending for:

“Outcome 2: An efficient, sustainable, competitive, safe and secure transport system for all transport users through regulation, financial assistance and safety investigations.”

Table 2: Department of Transport and Infrastructure expenditure on Road Safety, 2009/10-2011/12
Source: Department of Infrastructure and Transport Annual Reports.

Program 2.3: Road Safety

	Budget \$'000	Expenses Actual \$'000
2009/10	30,931	25,396
2010/11	33,469	24,856
2011/12	25,527	20,081

Table 2 shows a reduction of over 20% (not including inflation) for federal government spending (actual expenses) on road safety management between 2010 and 2012 (Department of Transport and Infrastructure Annual Reports, 2009/10, 2010/11, 2011/12).

This downward trend in road safety management spending is also reflected across State and Territory governments, a situation highlighted in recent media articles:

- New South Wales - NSW defends road safety job cuts (ABC News, 2012).
- Victoria - Road repairs and safety under threat: budget cut hits VicRoads (The Age, 2012).
- Queensland - Job cuts in Qld budget - 1450 jobs redundant in Qld Transport and Main Roads (Times, 2012).
- Tasmania - Budget cuts prompt road safety concerns (ABC News, 2013).
- Western Australia - Concerns raised over frontline policing as budget cuts considered (PerthNow, 2012).

Whilst the reduction in road safety management spending probably partly reflects the global financial situation over the last few years, it is critical that it be reviewed to ensure that this critical public health issue is not underfunded relative to others.

The College strongly supports a review of road safety management spending across federal and State/Territory governments. Particular consideration should be given to how this reduction in spending is affecting our collective ability to reduce Australia's road trauma rate.

The College urges all politicians to consider how external agencies can assist in collaborative efforts to reduce the road toll. The recent collaboration between the National Health and Medical Research Council, the College and all road safety stakeholders is a prime example of the ability of external agencies to encourage significant reductions to the road toll.

6. Federal Government portfolios impacted by the causes and consequences of road trauma:

A. Endorsement and implementation of a ‘whole of Government’ approach to reduce road trauma – Prime Minister & Cabinet Portfolio

“The Department of the Prime Minister and Cabinet has unique responsibilities and a privileged role. The principal function is to provide high quality policy advice to the Prime Minister and the Cabinet on matters that are at the forefront of public and government administration, including domestic and international affairs and, in particular, the implications of proposals for Commonwealth-State relations. By looking over the horizon to the challenges and opportunities of the coming years, our high level strategic advice further supports the government in taking all relevant factors into account to make the best possible decisions.

“The Department briefs the Prime Minister, the Cabinet Secretary, the Parliamentary Secretary to the Prime Minister and the Minister for Social Inclusion, and consults extensively across the Australian Public Service (APS) to ensure that the advice provided draws on the most appropriate sources.

“In addition to its work in policy advice, innovation, coordination and implementation, it is the role of the Department:

to ensure that policy proposals put to the Prime Minister, other ministers in the portfolio, and to Cabinet are developed in a coherent, informed and coordinated fashion.

where appropriate, to coordinate and monitor implementation and delivery of Government decisions, policies and priorities, recognising that ministers are responsible individually for the administration of their departments and collectively for matters decided by Cabinet.

...

to coordinate and facilitate government administration, intergovernmental relations and communications with State and Territory Governments.”
(Department of Prime Minister and Cabinet, 2012).”

As detailed within this submission, the causes and consequences of road trauma affect many federal government portfolios. Recognition of the continuing severity of road trauma in Australia by the highest level of government, and a commitment to encourage a more coordinated approach to implement solutions, has the potential to create an environment where we can collectively reduce the road toll beyond our expectations.

The flow on effect to the Australian community as a whole would be enormous, and would include positive benefits for many government portfolios, from our national budget to our emergency services, health and community support systems, our youth and the rapidly growing ageing sectors, and many others.

A realisation that road trauma is the most significant public health issue facing this country, and providing whole-of-government support for improvements through a coordinated national approach, would lead to significantly increased positive outcomes for Australia's collective well-being.

Imagine the possibilities if the highest levels of Australian government provided coordinated support to reduce the road toll. The positive outcomes for our nation would be immense, and would ensure Australia is recognised as a leader in road trauma reductions world-wide.

B. National budget – Treasury portfolio

“The Treasury Department aims to improve the wellbeing of the Australian people, by providing sound and timely advice to the Government based on thorough analysis of options, and by assisting the Treasury Ministers in the administration of their responsibilities and the implementation of Government decisions.” (Treasury Dept)

With an estimated annual cost to the economy of \$27b, the cost of road trauma to the Australian community exceeds Australia's current national Defence budget. The National Road Safety Strategy sets out a process to reduce road trauma by 30% in a decade, at least \$9bn pa in today's dollars in a decade. This should be a noticeable impact on the national accounts, but we have no national investment budget proposed/approved by Treasury to help ensure that the savings are achieved.

A realisation that road trauma is the most significant public health issue facing this country, and providing whole-of-government support for improvements through a coordinated national approach, would lead to major positive effects on Australia's national economy.

Imagine the possibilities if the Australian economy was able to significantly reduce the annual \$27b cost of road trauma – greater than Australia's national defence budget.

C. National Public Health – Health and Ageing portfolio

“The Department of Health and Ageing seeks to provide better health and healthier ageing for all Australians through a world-class health system.” (Health and Ageing)

“..... road crashes still cause some 1,400 deaths and 32,500 serious injuries each year. The social impacts are devastating and the annual cost to the Australian economy is estimated to be \$27b.” (Department of Infrastructure and Transport, 2011).

With 25 people killed and 600 people seriously injured and entering our health system every week, week after week, year after year, the implications for our health system are enormous. The potential benefits to our health system for reductions in these levels are also enormous.

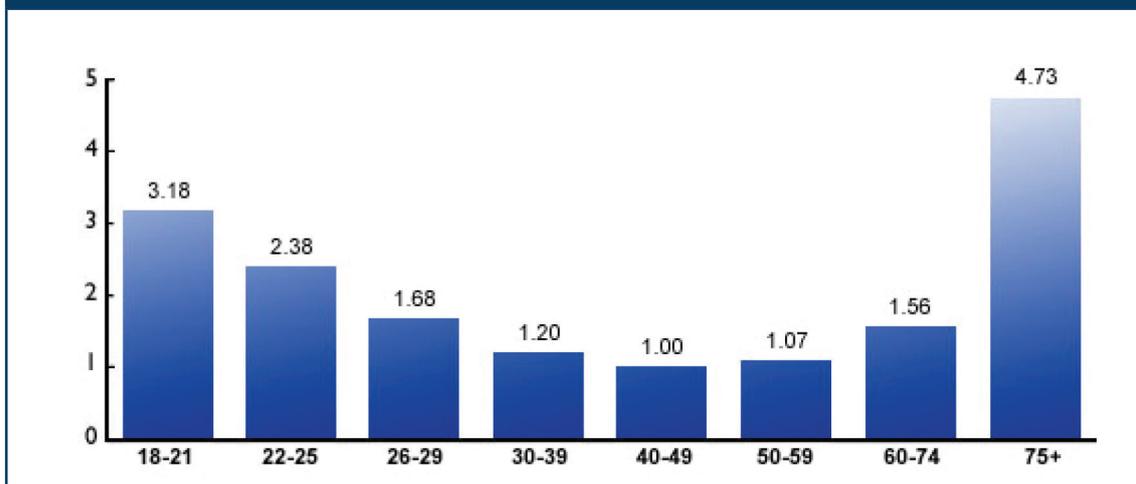
Evidence shows that as the population ages, older drivers are more likely to be involved in collisions and are also more susceptible to injury than the average citizen. So, even with a reduction in collisions, there will be an increased number of deaths and injuries to this increasing proportion of the elder cohort of the Australian community.

“Older pedestrians, older drivers and passengers are over represented in fatal crashes. This is due to frailty and a reduced tolerance from the force of a crash, rather than risk taking.” (NSW Road Safety Strategy 2012-2021, 2013)

“Drivers aged 75 years or over have a higher risk (per distance travelled) of being killed in a crash than any other age group.” (Transport Accident Commission - Victoria) (Figure 2)

Figure 2: Driver age risk relative to lowest group

Source: Transport Accident Commission Victoria



The Royal Australasian College Surgeons President, Dr Michael Hollands, strongly supports a concerted effort towards reductions in road trauma:

“Each week there are 25 deaths and 600 serious injuries on our roads (that’s 1300 deaths and 32,500 serious injuries per year). Seen first-hand by our surgeons, this has an enormous impact on Australia’s health system as a whole. The College supports all evidence-based initiatives that assist in the prevention of road trauma and the reduction of the devastating effects of injury”.

(Hollands, M; Royal Australasian College of Surgeons President, 2013)

Imagine the considerable strain that would be alleviated on our national public health system with concerted national efforts to reduce our road trauma levels.

D. Vehicle safety, road safety, infrastructure and transport – *Infrastructure and Transport and Road Safety portfolios*

“The Department of Infrastructure and Transport is responsible for infrastructure planning and coordination; transport safety, including investigations; land transport; civil aviation and airports; transport security; maritime transport including shipping; and major projects facilitation.”

(Department of Infrastructure and Transport)

“The NRSS (National Road Safety Strategy 2011-2020) presents a list of ‘first steps’ actions to be undertaken within three years, as well as a range of possible ‘future steps’ initiatives that will be examined as the strategy proceeds. A review of the NRSS in 2014 will include an assessment of progress in implementing each of the ‘first steps’ actions, and further consideration of other proposed initiatives.”

Implementation responsibilities and coordination arrangements^v

Given Australia’s federal system of government, responsibilities for implementing the NRSS are distributed across nine jurisdictions in keeping with the established roles of each area of government:

- The Australian Government has responsibilities for allocating agreed infrastructure resources to the national highway and local road networks, and for regulating safety standards for new vehicles.
- State and Territory governments have primary responsibilities for funding, planning, designing and operating the road network, managing vehicle registration and driver licensing systems, and enforcing road user behaviour.

(The Australian Government has in the past set certain roads safety conditions [e.g. a blood alcohol level] as a precursor to releasing State road funds.)

National coordination arrangements for the NRSS are largely managed through two cross-jurisdictional committees:

- The National Road Safety Executive Group (NRSEG) comprises senior road safety officials from Australian Government, state, territory and New Zealand transport agencies, and police representation from ANZPAA.
(ACRS Note: This should include the health, community, disability, regional, treasury, police and emergency services, human services, etc. officials across the same jurisdictions – a necessity given the serious public health issue that is road trauma)
- The Strategic Vehicle Safety and Environment Group (SVSEG) comprises of representatives from Australian Government, state, territory and New Zealand transport agencies, and from automotive industry and road user bodies.

(Department of Infrastructure and Transport, 2012)

Imagine if public health implications were emphasised at a national level, and this emphasis was passed on to our jurisdictions, including local government. An inclusion of health authorities, insurance agencies and other stakeholders as ‘owners’ of the road trauma occurring in Australia would increase the focus on this issue, and have positive impacts on the level of road trauma experienced by our population.

E. Youth – Education, Employment and Workplace Relations portfolio

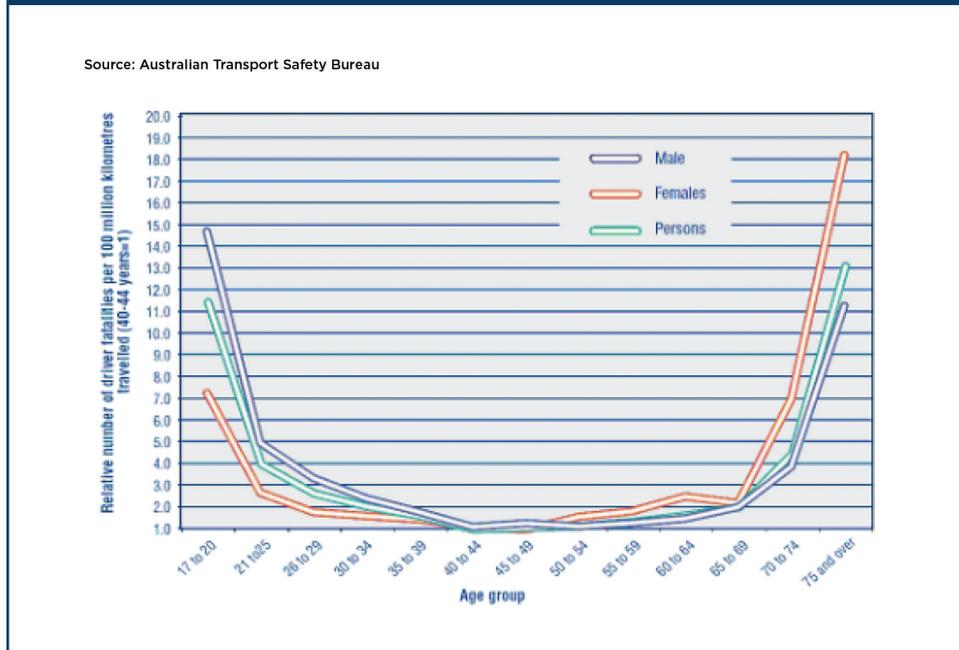
“The Australian Government Office for Youth coordinates the Government’s commitment to working for and with young people (aged 12–25). The Office for Youth manages programs and initiatives to engage, support and work with young people.”
(Department of Education Employment and Workplace Relations)

- “Injury is the single biggest killer of Australian youth; more than all other causes combined.
- 45 per cent of all young Australian injury deaths are due to road traffic crashes.
- The injury death rate for Indigenous youth is 5 times greater than for non-Indigenous youth.
- Of all hospitalisations of young Australians, almost half are drivers involved in a road traffic crash and another quarter are passengers.
- Young drivers (17-25 years) represent one-quarter of all Australian road deaths, but are only 10-15% of the licensed driver population.
- A 17 year old driver with a P1 licence is four times more likely to be involved in a fatal crash than a driver over 26 years.
- The biggest killer of young drivers is speeding and around 80 per cent of those killed are male.
- One-third of all speeding drivers and riders in fatal crashes are males aged 17-25; 6 per cent are females aged 17-25.”

(The George Institute)

Figure 3: Relative risk of death per kilometre travelled by age group

Source: Transport Planning and Infrastructure SA



Imagine the positive consequences for young drivers (and older drivers - a growing cohort) in our society if road trauma improvements could be implemented immediately. The positive ripple effects for our families and communities would be immense.

F. Rural and Regional Australia – *Regional Australia, Local Government, Arts and Sport portfolio*

“The Department of Regional Australia, Local Government, Arts and Sport is responsible for regional Australia policy and co-ordination; the delivery of regional and rural specific services; regional development; matters relating to local government; and the administration of Australian territories.”

(Regional Australia Local Government Arts and Sport)

Two thirds of the Australian population live in capital cities and metropolitan areas but more than half of the road fatalities occur on rural and remote roads (Figure 4).

Despite this, the rural and remote road safety problem has received limited attention.

- “It is estimated that at least 700 people are killed annually in rural areas, with many thousands seriously injured.
- These crashes make up just under half of all fatal road crashes (46%) and fatalities (48%), despite less than a third (31%) of the Australian population living outside major metropolitan centres.^{vi} Local Government is keen to act (see Australian Local Government Association’s Safer Roads Conferences).
- Rural road crashes are not decreasing at the same rate as urban trends.
- Many of the mainstream interventions adopted in urban areas have not been effective in rural areas due to a lack of direct community relevance and involvement in their design.”
- (CARRS-Q Fact Sheet - Rural and Remote Road Safety, 2012)

Figure 4: Road deaths per 100,00 population by remoteness area, Australia, 2006
Source: Sheehan, 2012



Imagine the positive outcomes for rural and remote regions of Australia if the significance of road trauma as an issue for these families and communities is more adequately recognised.

G. Workplaces – Education, Employment and Workplace Relations portfolio

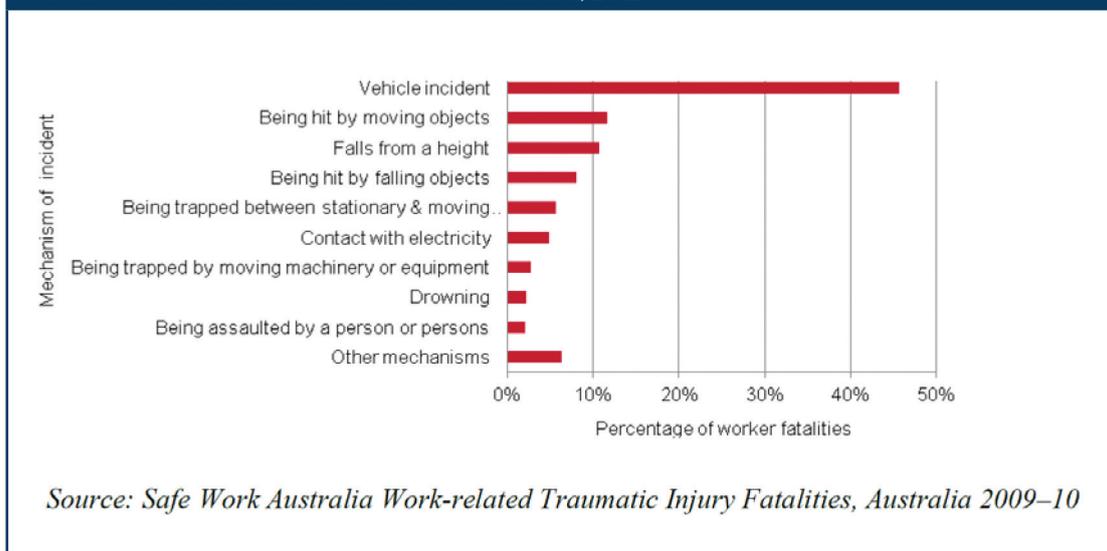
“The Department of Education, Employment and Workplace Relations (DEEWR) is the lead government agency providing national leadership in education and workplace training, transition to work and conditions and values in the workplace.” (Department of Education, Employment and Workplace Relations)

Workplace Safety

Work-related crashes are the most common cause of work-related death, injury and reduced productivity in the industrialised world (Wheatley, 1997). In Australia, Work-related Traumatic Injury Fatality figures indicate that over the last seven years, two thirds of workers killed at work were killed as the result of motor vehicle incidents (Safe Work Australia, 2012). In addition, according to Safe Work Australia (2012) work fatalities involving motor vehicles as the primary mechanism of injury clearly accounts for the highest proportion of fatalities (46%) (Figure 5).

Figure 5: Worker fatalities: Proportion by mechanism of incident, Australia, 2003-04 to 2009-10 combined

Source: CARRS-Q Submission to Safe Work Australia, 2012



Road safety is the greatest threat to human life in workplaces, resulting in the deaths of around 450 Australians in the course of their work every year. It is therefore tragic and completely unacceptable if this issue and catastrophic human cost goes unrecognised in the Australian Work Health and Safety Strategy.

While the strategy itself is not unsound, neither is it sufficiently robust to ensure that workplace health and safety generally will significantly improve. The strategy needs to include more concrete activities to be effective. Specifically, the following actions are urgently required to improve workplace road safety:

- 1) Commission a Productivity Commission Inquiry into the costs of road safety and the benefits of the full range of countermeasures and responsibilities.
- 2) Safe Work Australia includes workplace road safety in the Australian Work Health and Safety Strategy 2012–2022 and every model code of practice.

- 3) Safe Work Australia prepares a specific model code of practice for road safety in workplaces.
- 4) Safe Work Australia and all workplace safety regulators include road crash data in workplace safety data.
- 5) Safe Work Australia commission analysis of the costs of road safety covering each State and industry sector, different crash types, and the beneficiaries and contributors.
- 6) Safe Work Australia and all workplace safety regulators promote and apply the forthcoming ISO39001 Standard for Road Traffic Safety Management Systems Standard.

Safe Work Australia, other workplace safety regulators and all Australian governments must lead by being totally committed to saving the lives of Australians on our roads while at work (Australasian College of Road Safety & 33,900 Collaboration submission to Safe Work Australia, 2012).

Fleet Safety

Work-related driver safety has become the subject of increasing attention for road safety research in recent years (e.g. Downs, Keigan, Maycock, & Grayson, 1999; Haworth, Tingvall, & Kowadlo, 2000; Murray, Newnam, Watson, Davey, & Schonfeld, 2002; Wills, Watson, & Biggs, 2004).

This is not surprising given that work-related traffic crashes are the single largest cause of work-related fatality in Australia, accounting for approximately 25% of all occupational fatalities (Harrison, Mandryk, & Frommer, 1993; National Occupational Health and Safety Commission, 1998) and approximately 6-7% of all road fatalities in Australia each year (Federal Office of Road Safety, 1999).

The issue has also been recognised as a major public health and safety problem in the United States, the United Kingdom, and Europe (Bibbings, 1997; Bylund, Björnstig, & Larsson, 1997; Gregersen, Brehmer, & Moren, 1996; Moser, 2001)(Wills A.R. et al, 2005).

Australian Fleet Managers both public and private are acting to improve driver skills and vehicle safety, but more can be done. (See Australian Fleet Managers Association and Public Sector Fleet Manager's recent conferences).

Imagine the consequences for our workers if workplace road trauma was recognized as a major contributor to workplace death and injury in Australia and appropriate resources were mobilised to reduce it.

H. Disability and community services – Families, Housing and Community Services and Indigenous Affairs portfolio

“The Department of Families, Housing, Community Services and Indigenous Affairs is the Australian Government’s principal source of advice on social policy and is responsible for about a quarter of the government’s budgetary outlays.” (Families Housing Community Services and Indigenous Affairs)

In addition to the 25 people who are killed every week on our roads, there are 600 seriously injured.

These 600 people enter our emergency departments and hospitals, and are released to their families and communities, some with considerable disabilities and lifelong health consequences. The cost to our families is immeasurable, and the impact on our community services immense. 600 people injured, week after week, year after year.

Carers Australia President, Mr Tim Moore, strongly supports a concerted effort towards reductions in road trauma:

“Families experience firsthand the tragedy of these deaths and the impact of the serious injuries sustained in these accidents. Every day too many ordinary Australian families will become a caring family – this means that one or more family members will need to change their own way of life to provide support (including emotional, personal, clinical and financial) to the injured person. Australian and international research indicates that these carers are likely to have significantly lower health and wellbeing (including social and financial) than non carers and that this impact increases with the duration of their caring responsibility.

Carers Australia strongly supports The Australasian College of Road Safety in its aim to reduce the level of deaths and serious injuries from road accidents in Australia through evidence-based strategies.”

(Moore, T; Carers Australia President, 2013)

Imagine if we could, as a nation, acknowledge this huge burden on our families and communities, and work together to achieve improvements. The positive effects for our families and our national well-being would be immense.

I. Health, social and welfare payments & services – *Human services portfolio*

“The Department of Human Services (DHS) offers a range of health, social and welfare payments and services through the: Medicare program, Centrelink program, Child Support program, CRS Australia and Australian Hearing.” (Department of Human Services)

The burden of 600 serious injuries every week of the year, year after year, impacts our Medicare and Centrelink programs. The cost to our government to support the large community of carers responsible for providing support to road trauma victims with lifelong injuries is also immense.

A nationally coordinated approach to reduce the burden of road trauma deaths and injuries would have a significant effect on our nation’s human services support mechanisms.

Imagine the reduction in pressure on our nation’s human services support mechanisms if road trauma was recognised as a significant burden in this area.

J. Police and Emergency Services – Attorney General’s portfolio

“The Australian Government Attorney-General’s Department serves the people of Australia by providing essential expert support to the Government in the maintenance and improvement of Australia’s system of law and justice and its national security and emergency management systems.”

(Attorney-General’s Department)

“The Australian Institute of Police Management is part of the Australasian Common Police Services. The Institute provides executive leadership and management development opportunities to improve the corporate performance and productivity of Australasian law enforcement and allied agencies.” (Australian Institute of Police Management)

“The Australian Federal Police (AFP) is the principal law enforcement agency through which the Australian Government pursues its law enforcement interests. The AFP is unique in Australian law enforcement in that its functions relate both to community policing and to investigations of offences against Commonwealth law enforcement in Australia and overseas”. (Australian Federal Police)

Although the number of deaths and injuries from road trauma totals 33,900 per year, the number of crashes is significantly higher.

Road trauma incidents inevitably necessitate the presence of police and emergency services, including ambulances. This places significant pressure on our already stressed police and emergency sector work forces.

Imagine the decrease in pressure for our Police and Emergency Services if a significant reduction in road trauma rates can be achieved.

K. Research and innovation – Industry, Innovation, Science, Research and Tertiary Education

“The research and innovation portfolio shapes Australia’s future economy through skills, learning, discovery and innovation by:

- *Developing competitive and innovative industries*
- *Strengthening scientific research, engagement and awareness*
- *Developing a skilled and productive workforce*
- *Fostering collaboration between industry, business and research sectors”*

(Department of Industry Innovation Science Research and Tertiary Education)

A \$3 billion Building Australia’s Future Workforce package of funding was part of the May 2011 Budget. The Trade Union Education Fund received a grant of \$11m in 2012 to establish a long term program of education and skills development to support cooperative and productive workplace relations that promotes national economic prosperity and social inclusion for all Australians. This was part of a \$22m package of funding paid to The Union Education Foundation (\$11m) and two employer organisations, Australian Industry Group (\$5.5m) and Australian Chamber of Commerce and Industry (\$5.5m).

No such fund exists for road safety skills training, although the costs of annual costs of road trauma to the economy is \$27bn.

No national research budget for road safety exists.

“Skills Australia also believes that road safety is critical to all Australians. The financial and emotional costs certainly warrant attention and action.”
(Skills Australia, 2011)

Imagine if road safety research efforts were coordinated and took into account all stakeholders, all user groups, all advocacy groups, and all Australian government portfolios. Imagine the positive effect on our road toll.

L. International Relations – Foreign Affairs and Trade Portfolio

“Advancing the interests of Australia and Australians internationally.” (Department of Foreign Affairs and Trade, 2013)

Australia is an active supporter of the UN Decade of Action for Road Safety program, which aims to halt the rise in road trauma within this decade, and our nation is currently the largest single government donor to the World Bank’s Global Road Safety Facility.

The benefits of linking Australian road safety projects, researchers and practitioners to international programs, as is well recognised in other area, are valuable to not only the developing countries but to assist in adding skills, experience and knowledge.

AusAID is increasingly including road safety factors in its aid programs. The World Health Organization’s (WHO) Global Road Safety Partnership (GRSP) has built programs with the help of Australian organisations, research institutions and consultants.

iRAP, the International Road Assessment Program built partly on Australian expertise and with links to the AusRAP program, is a successful, low cost program evaluating and assisting in the implementation of safer road networks in over 50 countries.

In May 2012 in Malaysia, many Australian road safety experts through ANCAP contributed to the first ASEAN Automotive Safety Week.

Australians travelling overseas are increasingly venturing into countries where injury risks from road crashes are high. Australia can assist all countries in many ways to reduce road trauma, providing benefits for locals as well as travelling Australians.

There needs to be continued extension of the AusAID funding/investment in the GRSP and WHO on road safety work for Australia to be able to be a constructive player in ensuring the Decade of Action on Road Safety is successful.

Imagine if Australia was even more effective in leading the drive to reduce road trauma, by at least 50% in the next decade, rather than the 30% target outlined in the NRSS. This would meet targets set out in the UN Decade of Action for Road Safety 2011-2020, and make us a world leader in this field.

M. Climate change – *Climate Change and Energy Efficiency portfolio*

“The Australian Government is committed to action that will safeguard our environment, sustain our society and support our economy.”

(Department of Climate Change and Energy Efficiency website)

“Although Australia is gripped in drought, climate factors including increases in temperature ranges and intensity of adverse weather conditions are expected to have a significant effect on not only the road transport system but also on road safety and driver behaviour.

“Weather is one environmental risk factor that is known to affect road crash rates in Australia and elsewhere. Weather that reduces road friction, impairs visibility and/or makes vehicle handling more difficult creates a serious road safety threat (Andrey et al., 2001). Globally, the World Meteorological Organization (2003) stated that extreme events are on the rise as a result of anthropogenic perturbation of the climate system, and climate models indicate the potential for increases in both temperature and extreme storms (IPCC, 2001). The incidence of extreme weather (storm intensity) and high temperatures in Australia is expected to increase with global warming (Pittock et al., 1999).

“Research has established that adverse weather increases crash risk, suggesting that drivers’ adjustments to weather are insufficient to completely offset the hazards associated with reduced road friction and poor visibility (Rowland, 2007).

The Climate Commission has recently released a report titled *“The Critical Decade: Extreme Weather”* (Climate Commission, 2013). This report states:

- “Climate change is already increasing the intensity and frequency of many extreme weather events, adversely affecting Australians. Extreme events occur naturally and weather records are broken from time to time. However, climate change is influencing these events and record-breaking weather is becoming more common around the world.”
- “Climate change is making many extreme events worse in terms of their impacts on people, property, communities and the environment. This highlights the need to take rapid, effective action on climate change.
- “The climate system has shifted, and is continuing to shift, changing the conditions for all weather, including extreme weather events.
- “There is a high risk that extreme weather events like heatwaves, heavy rainfall, bushfires and cyclones will become even more intense in Australia over the coming decades.
- “Only strong preventive action now and in the coming years can stabilise the climate and halt the trend of increasing extreme weather for our children and grandchildren.”

It is therefore predicted to be increasingly important to recognise and prepare for the increased pressure climate change is likely to put on road safety.

Imagine if the Australian Government could recognise the increased pressure climate change will put on road safety. Pre-emptive mechanisms could be researched and implemented to significantly reduce the impact of road trauma into the future.

7. Conclusion

The 2013 ACRS Submission to Federal Parliamentarians informs you all, as Australia's peak policy makers, of the continuing significant impact that road trauma has on our national well-being.

This submission outlines the many opportunities that are available to address road trauma in Australia.

Much can be done, and not necessarily requiring a significant outlay from the government. We have successfully reduced road trauma rates dramatically in the last 40 years, despite past views that such reductions were not possible. Reduction rates have now plateaued even though we have better knowledge and better technologies. We need to reignite that past determination to save lives and injuries.

The causes and consequences of road trauma impact many federal departments, and exist regardless of which party makes up the majority in Parliament. Our ability to address road trauma is therefore spread across these many portfolios, meaning a collaborative effort across all portfolios has the greatest potential to increase the wellbeing of our nation.

International studies and well researched recommendations emphasise the value and critical importance of national political leadership in road safety policy. The transport system is a public good, and on that basis alone governments, including the Federal Government, should make the safety of our transport system a priority.

The College urges all federal politicians:

- To reflect on the personal impact of the road trauma ripple effect, and ask all Australians to do the same;
- To provide strong leadership and support for a coordinated approach towards road trauma reduction; and
- To raise our collective level of ambition and commitment to recommended directions as outlined in the body of this report.

The ability for you, both personally and professionally, to 'make a difference' that is felt by all Australians is a real incentive to drive genuine change across many systems and portfolios involved in road trauma - from research, technology, engineering, health and emergency services, to our youth, our senior citizens, disability and community services, and rural and regional communities, to name a few.

We look forward to continuing to work together to make significant reductions to the level of road trauma experienced in our nation. The wellbeing of our nation as a whole will benefit greatly as a result. In turn, all of you, as determined and committed leaders of our nation, will achieve a high level of personal and professional satisfaction.

8. Bibliography

- ABC News. (2012, July 9). *NSW defends road safety job cuts*. Retrieved March 28, 2013, from <http://www.abc.net.au/news/2012-07-09/nsw-defends-road-safety-job-cuts/4118078>
- ABC News. (2013, March 27). *Budget cuts prompt road safety concerns*. Retrieved March 28, 2013, from <http://www.abc.net.au/news/2013-03-27/police-struggle-with-budget-cuts/4596818>
- ACRS & 33,900 Collaboration submission to Safe Work Australia. (2012, May 17). Retrieved April 1, 2013, from <http://www.safeworkaustralia.gov.au/sites/SWA/about/consultation/Documents/Public%20Submissions%20A/AWHS028-ACRS.PDF>
- Alzheimer's Australia. (n.d.). Retrieved from <http://www.fightdementia.org.au/understanding-dementia/statistics.aspx>
- Attorney-General's Department. (n.d.). Retrieved March 17, 2013, from <http://australia.gov.au/directories/australia/portfolio/attorney-generals>
- Australian Centre for Agricultural Health and Safety. (2012, March 28). Retrieved March 26, 2013, from http://www.aghealth.org.au/tinymce_fm/uploaded/Quad%20Bike/australian_quad_bike_deaths_and_injuries_in_2011.pdf
- Australian Federal Police. (n.d.). Retrieved March 17, 2013, from <http://australia.gov.au/directories/australia/afp>
- Australian Institute of Health and Welfare. (n.d.). Retrieved March 17, 2013, from <http://www.aihw.gov.au/media-release-detail/?id=6442464280>
- Australian Institute of Health and Welfare. (n.d.). Retrieved March 17, 2013, from <http://www.aihw.gov.au/publication-detail/?id=10737418510>
- Australian Institute of Health and Welfare. (2012, June 18). *Serious injury due to land transport accidents, Australia 2008-09*. Retrieved April 2, 2013, from <http://www.aihw.gov.au/publication-detail/?id=10737421997>
- Australian Institute of Police Management. (n.d.). Retrieved March 17, 2013, from <http://australia.gov.au/directories/australia/aipm>
- Bureau of Infrastructure, Transport and Regional Economics. (2013, January). Retrieved March 26, 2013, from http://www.bitre.gov.au/publications/ongoing/rda/files/RDA_1212.pdf
- Cancer Australia. (n.d.). Retrieved from <http://canceraustralia.gov.au/affected-cancer/cancer-types/breast-cancer/breast-cancer-statistics>
- CARRS-Q Fact Sheet - Rural and Remote Road Safety. (2012). Retrieved March 17, 2013, from http://www.carrsq.qut.edu.au/publications/corporate/rural_and_remote_fs.pdf
- CARRS-Q Submission to Safe Work Australia. (2012, May 20). Retrieved March 17, 2013, from http://www.safeworkaustralia.gov.au/sites/SWA/about/consultation/Documents/Public%20Submissions%20C/AWHS032b-Centre_for_Accident_Research_and_Road_Safety_Qld_University_of_Technology.PDF
- Climate Commission. (2013). *The Critical Decade: Extreme Weather*. Retrieved April 9, 2013, from http://climatecommission.gov.au/wp-content/uploads/ExtremeWeatherReport_web.pdf
- D'Elia, A. et al. (2011). *Alternative Measures of Serious Injury for National Road Safety Strategy Target Setting*. Retrieved April 2, 2013, from <http://arsrpe.acrs.org.au/index.cfm?action=main.paper&id=2252>

- Department of Education Employment and Workplace Relations. (n.d.). Retrieved March 17, 2013, from <http://deewr.gov.au/youth>
- Department of Education, Employment and Workplace Relations. (n.d.). Retrieved March 17, 2013, from <http://deewr.gov.au/>
- Department of Foreign Affairs and Trade. (2013). Retrieved April 12, 2013, from <http://www.dfat.gov.au/>
- Department of Human Services. (n.d.). Retrieved March 17, 2013, from <http://australia.gov.au/directories/australia/human-services>
- Department of Industry Innovation Science Research and Tertiary Education. (n.d.). Retrieved March 17, 2013, from <http://www.innovation.gov.au/Pages/default.aspx>
- Department of Infrastructure and Transport. (n.d.). Retrieved March 17, 2013, from <http://australia.gov.au/directories/australia/portfolio/infrastructure>
- Department of Infrastructure and Transport - National Road Safety Strategy 2011-2020. (n.d.). Retrieved Mar 17, 2013, from https://www.infrastructure.gov.au/roads/safety/national_road_safety_strategy/files/NRSS_2011_2020_15Aug11.pdf
- Department of Infrastructure and Transport. (2012, November). NRSS Implementation Status Report. Retrieved March 17, 2012, from http://www.scoti.gov.au/publications/files/NRSS_progress_report_updated_30Nov12.pdf
- Department of Prime Minister and Cabinet. (2012, May 3). Retrieved April 4, 2013, from http://www.dpmc.gov.au/about_pmc/index.cfm
- Department of Transport and Infrastructure. (n.d.). Retrieved March 17, 2013, from https://www.infrastructure.gov.au/roads/safety/national_road_safety_strategy/files/NRSS_2011_2020_15Aug11.pdf
- Department of Transport and Infrastructure Annual Reports. (2009/10, 2010/11, 2011/12). Retrieved March 28, 2013, from Table A.3
- Department of Climate Change and Energy Efficiency website. (n.d.). Retrieved from <http://www.climatechange.gov.au/>
- Families Housing Community Services and Indigenous Affairs. (n.d.). Retrieved March 17, 2013, from <http://australia.gov.au/directories/australia/portfolio/families>
- Financial Review. (2012, Nov 13). Retrieved March 18, 2013, from http://www.afr.com/p/opinion/australia_defence_spending_real_UAkQFTEDwLkq7FzWjCQGUL
- Health and Ageing. (n.d.). Retrieved March 17, 2013, from <http://australia.gov.au/directories/australia/portfolio/health>
- Hollands, M; RACS President. (2013, March 28).
- McIntosh, L. (2013, Jan). Retrieved March 17, 2013, from <http://acrs.org.au/wp-content/uploads/ROAD-SAFETY-MANAGEMENT-IN-AUSTRALIA-A-call-for-cordinated-action-Jan-2013-Final.pdf>
- NSW Road Safety Strategy 2012-2021. (2013). Retrieved April 2, 2013, from http://www.rta.nsw.gov.au/roadsafety/downloads/road_safety_strategy.pdf
- PerthNow. (2012, October 6). *Concerns raised over frontline policing as budget cuts considered*. Retrieved March 28, 2013, from <http://www.perthnow.com.au/news/concerns-raised-over-frontline-policing-as-budget-cuts-considered/story-e6frg12c-1226489894699>
- Regional Australia Local Government Arts and Sport. (n.d.). Retrieved March 17, 2013, from <http://australia.gov.au/directories/australia/portfolio/regional>
- Rowland, B. E. (2007). Road transport sensitivities to weather and climate change in Australia. *30th Australasian Transport Research Forum*. Melbourne: QUT.

- Sheehan, M. (2012). The challenges for rural and remote road safety: nothing new really but what can we do about them? *Australasian College of Road Safety National Conference 2012*. Sydney: ACRS.
- Skills Australia (Shreeve, R; CEO). (2011, September 29). Email to ACRS President.
- Stroke Foundation. (n.d.). Retrieved March 17, 2013, from <http://strokefoundation.com.au/health-professionals/tools-and-resources/facts-and-figures-about-stroke/>
- The Age. (2012, 11 6). *Road repairs and safety under threat: budget cut hits VicRoads*. Retrieved March 28, 2013, from <http://www.theage.com.au/victoria/road-repairs-and-safety-under-threat-budget-cut-hits-vicroads-20121105-28u3x.html>
- The George Institute. (n.d.). *Young Driver Factbase*. Retrieved from <http://australia.gov.au/directories/australia/portfolio/education>
- Weekly Times. (2012, September 11). *Job cuts in Qld budget*. Retrieved March 28, 2013, from http://www.weeklytimesnow.com.au/article/2012/09/11/536705_latest-news.html
- Tooth, R. (2012, August 9). Retrieved April 2, 2013, from <http://acrs.org.au/wp-content/uploads/Tooth-ACRS012-Insurance-and-road-safety-v2.pdf>
- Transport Accident Commission - Victoria. (n.d.). *Older driver statistics*. Retrieved April 2, 2013, from <http://www.tacsafety.com.au/older-drivers/older-driver-statistics>
- Transport Planning and Infrastructure SA. (n.d.). Retrieved March 17, 2013, from http://www.dpti.sa.gov.au/roadsafety/safe_road_users/older_drivers
- Treasury. (n.d.). Retrieved March 17, 2013, from <http://australia.gov.au/directories/australia/portfolio/treasury>
- Victorian Department of Health. (2011). *Victorian State Trauma Registry 2010/11 Summary Report*. Retrieved March 28, 2013, from [http://docs.health.vic.gov.au/docs/doc/7E281433B46AA60ECA257A600018DE09/\\$FILE/VSTORM%20Annual%20Report%20web%20ready%20version.pdf](http://docs.health.vic.gov.au/docs/doc/7E281433B46AA60ECA257A600018DE09/$FILE/VSTORM%20Annual%20Report%20web%20ready%20version.pdf)
- Wegman, F. (2012). Retrieved March 17, 2013, from <http://www.thinkers.sa.gov.au/lib/pdf/Wegman/InterimReportbyFredWegman.pdf>
- Wills A.R. et al. (2005). *Road safety in corporate fleet settings: Approaches from organisational and industrial psychology*. Retrieved March 17, 2013, from http://eprints.qut.edu.au/2723/1/Wills_et_al_2005.pdf
- xLife. (n.d.). Retrieved March 17, 2013, from <http://www.xlife.com.au/trauma-insurance/ti-guides/ti-benefits/breast-cancer/>

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- i WHO, 2013
 - ii Australia's National Road Safety Strategy 2011-2020 (NRSS)
 - iii (Note: this is based on 130 passengers per plane, 33,900 people dying and seriously injured on roads in Australia per year, with the death proportion being 1,400 - using the NRSS as the basis (Department of Transport and Infrastructure)
 - iv (NRSS)
 - v (NRSS)
 - vi (NRSS)



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