Submission No 8

MOTORCYCLE SAFETY IN NSW

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FCAI Response to The StaySafe Committee, (responsible for Motorcycle Safety in NSW), inquiry into Motorcycle Safety in NSW.

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1.0 INTRODUCTION

The Federal Chamber of Automotive Industries (FCAI) is the peak industry organisation representing vehicle manufacturers and importers of passenger vehicles, light commercial vehicles and motorcycles in Australia and welcomes the opportunity to provide a response to the StaySafe Committee, responsible for Motorcycle Safety in NSW.

Safety is a high priority for the FCAI and its member brands and we have a history of supporting safety initiatives including promoting the uptake and the purchasing of technologically advanced and safer vehicles and motorcycles. The FCAI has also supported the introduction of the Learner Approved Motorcycle Scheme (LAMS) from its inception, and agrees that power to weight ratio is the appropriate way to differentiate the motorcycles suitability for an inexperienced rider.

The FCAI considers motorcycling to be an important transport mode offering significant benefits to regulators, planners, and communities, and to the riders themselves.

The FCAI and its member brands represent a significant majority of the new motorcycles sold into the Australian market. It is however, important to note that non-reported motorcycle sales do make up a significant percentage (approx. 10%) of the Australian market, and in particular the non-registered segment of the market is to a large degree not well known.

It is also important to note that motorcycle sales in Australia of any given brand or model are a very small percentage of the global sales of those brands and or models. As such the ability for Australian regulations or regulators to influence global design and production is minimal. Therefore Australia should look to European and or US regulations for its direction with regard to design and technological advances in safety systems for the product.

Motorcycling in Australia offers an affordable, accessible and sustainable mode of transport and can provide significant benefits in transport policy and urban planning.

2.0 FCAI MOTORCYCLING STRATEGY

The FCAI would like to present the attached document *Motorcycling in Australia: Directions for the Motorcycle Industry 2014 – 2016* as the response to the NSW StaySafe Committee call for responses into Motorcycle Safety in NSW.

Motorcycling in Australia: Directions for the Motorcycle Industry 2014 – 2016 outlines the range of issues affecting motorcycling in Australia and sets out directions to be taken by the industry over the three year period 2014-2016. The issues and directions reinforce the status of motorcycling as an important transport mode offering significant benefits to regulators, planners, and communities, and to the riders themselves.

The document was developed to be relevant to importers and retailers who constitute the motorcycle industry, government agencies (from national regulators to local planners), and stakeholders in related industries – in fact, anyone with an interest in motorcycling.

Motorcycling is a smart and affordable way to travel, ideally suited to the Australian lifestyle. Motorcycles come in many style and sizes from trail bikes to cruisers to touring bikes and

scooters. Compared to passenger cars and other light vehicles, motorcycles have lower travel costs, produce less CO2 emissions, reduce travel time and traffic congesting in urban areas, and make more effective use of inner-city parking space.

The FCAI considers that document, *Motorcycling in Australia: Directions for the Motorcycle Industry 2014 – 2016,* provides a good overview of the various aspects of motorcycling and recommends that the StaySafe Committee considers this document as part of its inquiry into motorcycle safety.

3.0 RESPONSE TO THE INQUIRY TERMS OF REFERENCE

The Terms of Reference for the Inquiry are;

a. *Trends of motorcycle usage, injury and fatality in NSW;*

For some time now the popularity of motorcycle usage in all states has been on the increase. It is of particular note that the sales of new motorcycles through the years from 2000 to 2008 saw an almost doubling of the recorded sales. Correspondingly the number of people using motorcycles on the nations roads increased dramatically, and recreational use also increased. Whilst sales of new motorcycles has (for the past few years) remained reasonable steady, one of the biggest selling segments within the market has been the Learner Approved Motorcycles (LAMs). Whilst not all LAMS bikes are necessarily sold to beginner motorcyclists, it is an indication of the increasing popularity of motorcycle riding.

It should also be noted that the sales numbers released by the FCAI are numbers for those brands of motorcycles that choose to report their sales numbers. Whilst this is the majority of motorcycle sales in Australia, there is approximately 10% more motorcycles sold in Australia that are not reported.

Recent analysis by MCC (NSW) has shown that when figures for accidents (fatalities) for motorcycles are recorded against the number of registered motorcycles, the fatality rate has actually declined over the recent past, and that whilst it remains too high, efforts to reduce the number of fatalities has been successful when the numbers are looked at on a per registered motorcycle basis. This is summarised in Appendix 1.

In Appendix 2 is an abridged version of an article prepared by Eva Gripps that provides an analysis of trends in motorcycle safety in terms of increased motorcycle registrations.

The FCAI acknowledges that while motorcycling safety is improving, there is still the opportunity for further improvements. For example, if a motorcyclist is involved in an accident that they still remain more likely than a car driver to sustain injury from that accident.

b. *Crash and injury risk factors including rider (and driver) behaviour, conspicuity and vehicle instability*;

Driver behaviour is the issue least referred to in motorcycle accident reporting. As motorcycles and motorcyclists are always more likely to be adversely affected by any adverse interaction or physical contact, avoidance is a high priority for a rider when confronted by any given situation. This may lead to the motorcycle crashing on its own and

subsequent reports and conclusions about the accident and its cause being incorrectly diagnosed.

Nearly all new motorcycles sold in Australia today are equipped with a hard wired headlight. That is the headlight is always on. Again driver behaviour (as in either not looking for, or looking, but not "seeing" a motorcycle) is a factor in the cause of many motorcycle accidents. Driver training and education needs to be more targeted at ensuring new drivers (and all other drivers) are given the "tools" to equip them to recognise vulnerable road users, and how their (the drivers) actions and behaviour can affect these road users.

A motorcycle is a single track vehicle. By its very nature it is less stable than a dual track vehicle. Electronic aids can enhance the stability of a motorcycle under certain circumstances, however the stability is always going to be less than a car (for example). The single track vehicle has many advantages in terms of manoeuvrability, and taking up less road space, but instability is inherent.

c. *The effectiveness of the current action plan to enhance motorcycle safety including communications and education campaigns, road environment improvements, regulation of safety equipment and gear*;

The current work being done in NSW is very good, and very encouraging. The campaigns targeting motorcyclists is effective and being received well by them. However, the area where these communications and education plans are falling short are the ones that should be directed at car drivers, and particularly learner car drivers.

Road environment, regulations and safety gear and equipment are again leading edge in NSW, and should continue in the same direction.

The FCAI would like to highlight the effectiveness of the current engagement with motorcyclists and motorcycle lobby groups to work in conjunction with NSW RMS to a common theme, with mutually agreed upon outcomes.

d. *Strategies of other jurisdictions to improve motorcycle safety*;

The FCAI is a leading the call for uniform regulations and rules across Australia. In a country of only 24 million people, but the same geographic area as the USA, we only do ourselves a disservice by having different rules and regulations for each state. NSW should aim to adopt "best practice" but not at the expense of adopting conflicting rules and regulations from the rest of Australia.

e. Licensing and rider training;

Again the call for uniformity is the overarching concept from the FCAIs perspective. Adopting an approach of having uniform licencing requirements across Australia is paramount. Rider training is a well-accepted requirement for both learners and other riders within the licencing system. It is also accepted as a well-accepted practice as riders seek to either improve or update their riding skills. Rider training organisations are becoming more

professional, and entrenched in our transport and road use education system. This is to be encouraged and enhanced by whatever means is necessary, with a view to working towards National Uniformity whenever and wherever possible.

f. *Any other related matters*.

The FCAI would like to offer the following information to the discussion regarding the effectiveness of antilock braking systems (ABS) on motorcycles, and its potential contribution to accident reduction.

The FCAI supports the introduction of motorcycles fitted with ABS, and is supportive of incentives to encourage the uptake of ABS equipped new motorcycles. However it must be remembered that ABS is a single technology, which will aid the rider in the event of an over application of the motorcycles brakes for the available conditions.

It is important to understand what ABS is and what effect it may have on a motorcycle. ABS prevents the continued locking-up of (or skidding) of a wheel on the road surface. Wheel lock-up may be caused by several different factors, one of which is the sudden over application of braking pressure to the brake lever (either hand [front brake] or foot [rear brake]). Over application of the brake can be a response to an unforeseen circumstance or as a result of another road user performing a manoeuvre in close proximity to a motorcycle, putting it in danger of a collision.

Another cause of a wheel locking on the road surface is the change in available grip for a tyre in any given circumstance. For example a tyre having braking pressure applied to it on a dry road surface to achieve a reduction of speed, then (with the same braking pressure being applied) moving on to a damp or wet road surface (which offers less grip), thus causing the wheel to lock. In both these circumstances, assuming the rider has applied enough braking pressure to achieve near maximum exploitation of available grip, ABS would become activated, and electronic sensors would detect the wheel lock-up and activate the ABS technology which essentially releases braking pressure (without the rider needing to adjust their applied braking pressure) allowing the wheel to begin turning again, thus maintaining stability of the motorcycle.

Available grip in any given circumstance is dependent on many factors, and many variations of those factors. Influences on grip are (in no particular order);

- Tyre temperature
- Type of tyre (type of compound, tread pattern, tread wear)
- Road conditions (uneven surface, broken surface, fluids on road, line markings etc.)
- Speed of application of the brake (front and rear) grab versus squeeze

ABS will, in most circumstances, assist in maintaining control of the motorcycle and allow a motorcyclist to bring their motorcycle to a stop, or at least reduce its speed in the shortest distance possible for the prevailing conditions. ABS can also give the rider more confidence to brake harder on poor surfaces, without fear of locking up.

The limitations of ABS also need to be recognised;

- ABS will not necessarily reduce the stopping distances of a motorcycle.

- ABS will not be activated if the brake is not applied to the maximum.
- ABS will not work if the brake is not activated at all.
- ABS will not activate a brake that is not applied by the rider (i.e. it will not activate a front brake, if only a rear brake lever is applied). There are various "combined braking systems" currently available on modern motorcycles that can assist the rider in this area.

It must also be acknowledged that ABS is not desirable under certain riding conditions, such as off-road riding on unsealed roads, in typical trail or Enduro riding conditions.

It is well documented (Hurt Report[1]) that in many circumstances where motorcycles have been involved in collisions, that for any number of reasons, riders fail to apply the brakes at all. Irrespective of the braking system, and it's, or the rider's capability, unless the braking system is activated and used to near its maximum ability, ABS will have no effect on the outcome of a particular scenario.

4.0 CONCLUSION

The FCAI welcomes the opportunity to provide a response to the StaySafe Committee on Motorcycle Safety.

The FCAI supports NSW RMS in its efforts to make motorcycling safer in NSW.

However, the FCAI points out that motorcycle riding, licencing, accident investigation, and implied safety initiatives must be looked at from a motorcycle perspective and in conjunction with subject matter experts. Too often extrapolation of four wheel (car) type safety and regulations do not work, and actually may have detrimental effects on motorcycle safety.

The FCAI also points out that one of the overarching considerations of the regulators should be a drive towards national uniformity of safety strategies and (where justified) regulations and standards.

We should also look to the European Union and United States for direction in particular with reference to technological and vehicle regulations.

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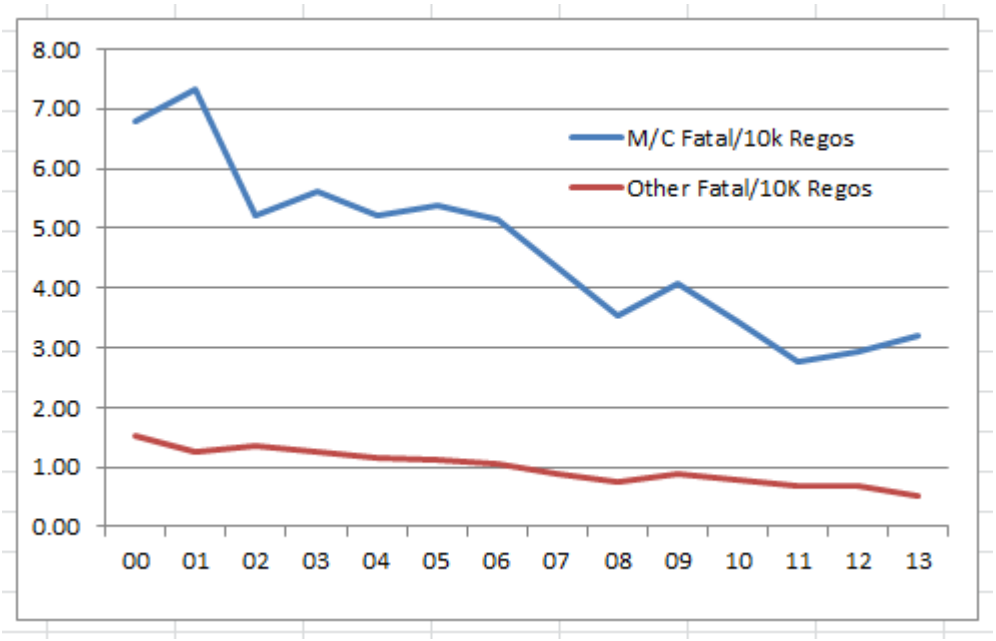
[1] Hurt, H.H., Ouellet, J.V. and Thom, D.R., (1981) Motorcycle Accident Cause Factors and Identification of Countermeasures, Volume 1: Technical Report, Traffic Safety Center, University of Southern California, Los Angeles, California 90007, Contract No. DOT HS-5-01160, January 1981 (Final Report)

APPENDIX 1 – MOTORCYLCING FATALITIES

MCC of NSW graph (courtesy of Christopher J Burns Vice President of MCC of NSW)



Using the figures from the NSW RMS website for fatalities and registration increases, the fatality rate in NSW has gone from something like 7.3 deaths per 10,000 registrations in 2002 to 2.9 deaths per 10,000 registrations in 2012, halved in fact.

We have seen rego's in NSW increase from about 87,000 to just over 220,000 in the past ten years and yet the average fatal rates is about the same.

APPENDIX 2 – ARTICLE BY EVA GRIPPS

(Abridged version of original article, courtesy of Eva Gripps via www.bikeme.tv)

The mainstream media would have you believe that motorcyclists are dying at an increasingly alarming rate. 'Motorcyclists deaths on the increase despite campaigns to improve awareness' screamed the headlines of the national news. This somewhat misleading and sensationalist campaign was based on the June 2015 quarterly report from the Australian Automobile Association, which claimed that motorcyclists deaths have increased 3.2 per cent on the same quarter last year.

While this in itself sounds concerning, it is based on the distortive method of reporting fatalities by using actual numbers without any reference point. Reported alone, it understandably sounds terrible that 201 motorcyclists were killed on Australian roads in the past 12 months, compared with 194 in the previous year. But motorcyclists aren't just numbers. They are people. They are Australians. And the deceptive reporting of motorcycle fatalities is nothing more than a melodramatic attempt to mark motorcycling as the grossly dangerous sport that the media likes to portray it as.

The latest rolling monthly summary from BITRE – the government department responsible for tracking road fatalities in Australia, provides a little more information which puts the deaths into perspective. And it paints a rather different picture.

Thanks to some data analysis from Victorian motorcyclist, Rob Salvatore, the actual rates of motorcyclists deaths over the past decade have reduced dramatically. Sure, there have been some bumps along the way, but overall, the rate of fatalities per 10,000 registrations has decreased by over 50%.

The media states that a massive 58 motorcyclists died over the past year in NSW, followed by Queensland (47 deaths), Western Australia (36 deaths), Victoria (31 deaths), South Australia (13 deaths), Tasmania (8 deaths), Northern Territory (5 deaths) and the ACT (3 deaths). This is in the context of an overall Australian population of approximately 23.8 million people – almost 1 million of those being motorcyclists.

In 2005, 5.52 motorcyclists died for every 10,000 motorcycle registrations. In 2014, this had reduced to 2.46 per 10,000 motorcycle registrations.

Why isn't the media crowing about this? Why isn't there a national campaign to applaud this?

In NSW, the fatality rate per 10,000 registrations was 5.66 in 2005, and in 2014, 2.84 per 10,000 registered motorcycles.

This means that motorcyclists in NSW have a 0.00028 percent chance of dying from a crash.

In Western Australia, the rate per 10,000 was 3.96 in 2005, and 3.50 in 2014. In Victoria the rate per 10,000 registrations was 4.46 in 2005 and 1.72 in 2014. In Queensland, 5.25 in 2005 and 2.04 in 2014. In South Australia the rate was 6.51 in 2005 and 2.11 in 2014, in the Northern Territory, 5.89 in 2005 and 8.66 (a high of 20.28 in 2008). In Tasmania the rate per 10,000 registrations was 7.40 in 2005 and 1.66 in 2014. The ACT has seen a huge decrease from 10.83 in 2005 to a mere 1.53 in 2014.

By comparing the rates of deaths per 10,000 registrations, it is possible to determine a much more realistic overall picture of motorcyclist fatalities. Unlike the favoured approach of simply reporting numbers of deaths which completely misrepresents the risk of motorcyclists dying in a crash.

According to Australian Bureau of Statistics data, motorcycle registrations across Australia increased by 22.3 percent between 2010 and 2015. Nearly a million Australians now ride motorcycles. That is 4.34 per cent of the population.

In fact, riding a motorcycle is now more than twice as safe as it was a decade ago.

Motorcycling in Australia

Directions for the Motorcycle Industry 2014-2016

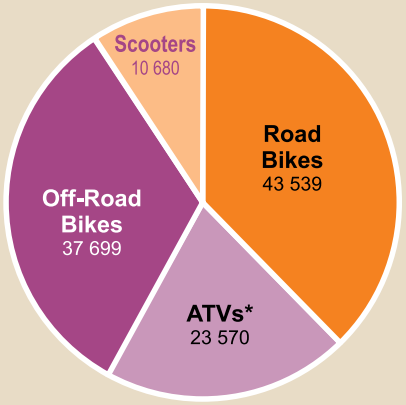






Motorcycling in Australia

Scope of the Industry Analysis



Motorcycle Sales in Australia, 2012
**ATVs not included in this document*
(Source: FCAI)

This document is concerned with two-wheeled vehicles – motorcycles (both road and off-road) and scooters (smaller vehicles with a step-through frame and a floor for the rider's feet).

These machines are sometimes referred to as Powered Two Wheel vehicles (PTWs).

One in five of the vehicles sold in Australia that are classed as "motorcycles" are All-Terrain Vehicles (ATVs). Almost all of these are four-wheeled vehicles which are mainly used on rural properties.

ATVs are not included in this analysis of the motorcycle industry.

There is also a small number of three-wheeled motorcycles (trikes) entering the market and being used on the public roads. These are discussed in the "New Technology" section on page 11.

Directions for the Motorcycling Industry 2014–2016

This document has been prepared by the Federal Chamber of Automotive Industries' Motorcycle Group. It outlines a range of issues affecting motorcycling in Australia and sets out directions to be taken by the industry over the next three years (2014-2016). These will reinforce the status of motorcycling as an important transport mode offering significant benefits to regulators, planners, and communities, and to the riders themselves.

The document is relevant to the importers and retailers who constitute the motorcycle industry, government agencies (from national regulators to local planners), and stakeholders in related industries – in fact, anyone with an interest in motorcycling.

FCAI – the Federal Chamber of Automotive Industries

FCAI is the peak industry organisation representing manufacturers and importers of passenger vehicles, light commercial vehicles, and motorcycles in Australia.

The manufacturers represented in the Motorcycle Group are:

- BMW Motorcycles Australia
- BRP Australia Pty Limited
  [Can-Am, BRP]
- Harley-Davidson Australia Pty Limited
- Honda Australia Pty Limited
- John Sample Automotive Pty Limited
  [Aprilia, Moto Guzzi]
- Kawasaki Motors Pty Limited
- KTM Australia
- KYMCO Australia
- NF Importers
  [Ducati]
- Peter Stevens Importers
  [Triumph, Hyosung, Vespa, Gilera, Piaggio]
- Suzuki Australia Pty Limited
- Victory Motorcycles
  [Victory, Indian]
- Yamaha Motor Australia Pty Limited

Issued November 2013

If you would like more information about the issues discussed in this document, please contact:

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The Australian Motorcycle Industry

A Vision for Australian Motorcycling

Motorcycling is a smart and affordable way to travel, ideally suited to the Australian lifestyle. Motorcycles come in many styles and sizes from trail bikes to cruisers to touring bikes to scooters. They have lower travel costs, produce less CO_2 emissions, reduce travel time and traffic congestion in urban areas, and use valuable inner-city parking space more effectively. The smaller, more efficient engines also have less impact on urban air quality. Riding motorcycles and scooters encourages outdoor activity and a healthy lifestyle.

Motorcycling in Australia –

- Offers an affordable, accessible, and sustainable mode of transport
- Can provide significant but often overlooked benefits in transport policy and urban planning
- Provides a variety of sporting and recreational opportunities and promotes a healthy outdoor lifestyle
- Makes a significant contribution to national economic activity

This document sets out a number of key issues to be considered and addressed by governments at all levels, the wider community, and the motorcycle industry itself in order to ensure this vision is achieved:

The Australian Market

There are more than 40 brands of motorcycles and scooters imported into Australia. They are sold by approximately 700 authorised dealers across Australia, supported by more than 2000 other motorcycle-related businesses such as workshops and sellers of clothing and accessories.

Motorcycling employs nearly 15 000 people, either directly or indirectly, and contributes $3.6 billion each year to the Australian economy.

In 2012 nearly 92 000 new motorcycles and scooters (excluding ATVs) were sold; 41% of these were off-road bikes. Adding used motorcycle sales takes this annual total to about 200 000 motorcycles.

New Motorcycle and Scooter Sales in Australia, 2003-2012
(Source: FCAI)

Motorcycling in Australia

- More than one million motorcycles
- 200 000 new and used sales each year
- More than 40 brands imported
- 700 authorised dealers
- 2000+ related businesses
- Contributes $3.6 billion to the national economy
- 15 000 people employed
- 800 000 motorcycle licence holders
- 678 000 registered motorcycles
- 47 500 sport or single event licences
- 3500 motor sport events each year

SA Ambulance Service's Motorbike Response Unit

Essential & Commercial Services

The combination of manoeuvrability, ease of parking, and ability to cover larger distances at speeds equivalent to cars make motorcycles the ideal vehicle to be put to work in the urban environment. We have been long accustomed to seeing police officers and posties on motorcycles providing essential services which cannot be done effectively or economically by other vehicles.

It is not about speed, it is about safe and timely access to emergency patients

In March 2012, the SA Ambulance Service introduced the Motorbike Response Unit (MRU) which has proven to be highly successful. The MRU can easily negotiate heavy traffic and built up areas to quickly gain access to patients.

Motorbikes, along with other first responder vehicles such as SPRINT cars and bicycles, are fully equipped emergency response vehicles. This means senior paramedics can provide a patient with lifesaving treatment whilst an ambulance with patient-carrying capabilities is on the way.

Seconds count in emergency medical situations: the sooner that patients receive lifesaving treatment, the better their chances of survival.

This total is based on importers who choose to report their sales in combination with registration figures obtained from the state authorities. There are a number of imported motorcycles (mainly smaller capacity non-registerable motorcycles imported from Asia) that are not included in these official figures. On current estimates about 30 000 of these motorcycles were brought into Australia in 2012.

The estimated total "park" of motorcycles in Australia (ie, vehicles registered for use) is currently in excess of one million motorcycles. In addition it is estimated that there are approximately twice as many off-road motorcycles in operation as those on-road.

Motorcycle Riders

People of all ages and from all walks of life ride motorcycles. Mini-bikes allow children to be introduced to motorcycling at a very young age. They are able to enter motorcycle sports as young as age seven which helps build skills and responsibility. At the other end of the scale, mature-age riders have the time and money to enjoy recreational riding and touring.

There are about 750 000 – 800 000 motorcycle licence holders in Australia and around 678 000 registered motorcycles [ABS: 2011].

Motorcycling – A Part of the Community

Motorcycle sport and recreation is popular with an estimated 3500 events each year conducted by Motorcycling Australia (MA), the national body for organising motorcycle racing around the country. About 21 000 motorcycle sport riders hold a full racing or competition licence – another 27 500 single event competition or recreational licences are issued each year. These events contribute millions of dollars to the economy, particularly in regional and rural areas.

International motorcycle events bring visitors to Australia and local municipalities. Currently Australia hosts rounds of both the World MotoGP and World Superbike championships; from time to time, other international motorcycle events are held in Australia such as Speedway World Championships, Trials World Championships and Motocross World Championships. Other world-recognised events include the Australasian Safari and the annual Finke Desert Race (500 entrants and at least three times as many support crew). The Ulysses AGM (3000 – 5000 older riders participate) and Junior Motocross Championships (700 entrants and over 1000 family members for support) are just two more examples of hundreds of community events run every year by motorcyclists.

There is a major contribution to society from motorcycle-related events such as the "Snowy Ride" (which raises funds for the Steven Walter Children's Cancer Foundation) and the many Toy Runs in each state which collect toys and goods for the less fortunate in our society.

In addition to motorcycles for sport and recreation, nearly every farm in Australia has one or more motorcycles of some description and motorcycles are a familiar sight on our streets – from the small motorcycles Australia Post uses to deliver mail throughout city and regional areas to the powerful machines used on roads and highways by police patrols. The "last kilometre" in delivering goods and messages in the CBD is extremely important to the city's services and businesses: motorcycles are an intermediate solution between bicycle couriers and light commercial vehicles. Items now being delivered by motorcycle include fast food, medical supplies and samples, and spare parts. However, there is significant potential within Australian urban areas for the greater use of motorcycles.

Motorcycles in Transport Policy & Urban Planning

Motorcycling offers significant benefits in managing traffic and in urban planning and therefore warrants greater attention in the development of transport policies. Motorcycles have significantly less impact on roads than any other type of vehicle which means infrastructure assets last longer. However, most strategies focus on walking, cycling, and public transport, and make only cursory mention of motorcycling.

> To avoid future congestion, the municipality's road network needs to be optimised for the more space-efficient modes, including ... significantly better priority for space efficient vehicles at traffic lights especially trams, buses and pedestrians. Road space efficiency can also be achieved by lower speed limits, encouraging the use of more compact cars and vans, and the increased use of motorbikes and scooters.
> [*City of Melbourne Transport Strategy 2012*]

Transport Options

Motorcycling provides a low cost and flexible means of medium to long distance travel enhancing social inclusion whereas public transport is limited in the areas served and the hours of operation while cycling, even for dedicated cyclists, is only a viable option for relatively short-distance commuting.

An integrated transport strategy should recognise the role and advantages of motorcycling in areas of maximum density (inner-city and suburban centres); on arterial and main suburban roads; and for inter-city travel on freeways and motorways. Motorcycles are the only other transport mode capable of travelling at highway speeds.

Traffic Management

Greater use of motorcycling has the potential to offer significant benefits to commuters and the business community. Motorcycles –

- Take up less space and can take up to 48% less time to cover the same trip through congested traffic as a car
- Move more freely and are less likely to be caught in gridlocks; if a motorcycle breaks down, it does not block traffic
- Are better able to clear intersections and avoid traffic problems which benefits all road users

Full integration of motorcycles into urban traffic management would see motorcyclists able to use bus transit or priority lanes, and other real estate for both movement and parking. Encouraging urban motorcycle use would have benefits for all road users.

Parking

Motorcycle parking can be provided in smaller spaces which cannot be used by motor cars: this includes verandahs and other small spaces on private property, reducing the need for or impact on street parking in residential areas or at transport interchanges, a particular advantage when planning transit-oriented developments (TODs).

Currently Melbourne is the only capital city in Australia where a motorcycle can be legally parked on the footpath. In addition, within the Melbourne CBD, more than 300 on-road parking spaces have been designated specifically for motorcycles.

FCAI will continue to promote the benefits to the community of motorcycling to ensure it is given greater weight in transport policy and urban planning

Motorcyclists enjoy increased mobility and reductions of up to 48% in travel times ... and they spend less time looking for parking spaces

[The Motor Cycle Industry Association, UK, *The Case for Motorcycling,* June 2011**]**

Five motorcycles can park in the space normally allocated to one motor car

[The Motor Cycle Industry Association, UK, *The Case for Motorcycling,* June 2011**]**

Motorcycling: Energy Efficiency & Emissions

Motorcycling offers significant benefits in emissions reduction and local air quality.

- Motorcycle journeys are quicker and motorcyclists spend less time stuck in traffic
- Motorcycle engines are smaller and therefore inherently fuel efficient
- Motorcycles produce lower emissions of both CO_2 and other pollutants per kilometre of travel

Greater use of motorcycles has the potential to make a contribution to reducing the harmful emissions created overall by the transport sector. In 2011, the Australian average CO_2 emissions for passenger and light commercial vehicles was 206 g/km. European studies show an average for motorcycles of 110 g/km; smaller machines average 70 g/km.

Fuel consumption for smaller capacity motorcycles and scooters can often be as low as a couple of litres per hundred kilometres.

Embedded Energy

The finite resources that are required to produce, distribute to point of sale, and ultimately recycle (or dispose of) a motorcycle are far less than for a car. Ultimately less resources are required to manufacture a motorcycle, which is able to transport one or two people, than a car.

In addition, over its lifetime, a motorcycle will burn less fossil fuel, take up less space, and deliver its rider more efficiently in congested traffic. This leads to a strong environmental argument for the expanded use of motorcycles and scooters in the modern metropolitan area.

Efficiency Standards

Motorcycles complying with relevant Australian Standards and Design rules should be able to meet any emissions targets in the short to medium term. However, current transport policies do not include emission targets for motorcycles.

The need to lower emissions and develop more efficient engines is being driven by agencies in the Northern Hemisphere and this will result in further significant improvements. However, if more stringent targets for emissions, safety, or other aspects are contemplated in Australia, government agencies need to be aware that all motorcycles sold here are imported and the Australian market only represents a very small percentage of global production.

Electric Vehicles

A new sector is being developed to bring electric-powered motorcycles (e-cycles) to the market. At the point of use, these vehicles have zero emissions. The infrastructure required for other electric vehicles will also be suitable for e-cycles and so the industry will be able to take advantage of any developments in the medium to long term.

FCAI will continue to encourage the use of motorcycles to reduce urban traffic congestion, overall fuel usage, and emissions of the transport fleet

Motorcycles reduce fuel use and emissions for Australia Post

With more than 10 000 vehicles, Australia Post has one of Australia's largest transport fleets; however, 70% of these vehicles are motorcycles. They are critical in achieving Australia Posts's goals for reducing its fuel consumption and greenhouse gas emissions.

Motorcycles have been used by Australia Post since the 1970s and they travel more than 60 million kilometres each year, delivering mail to many Australians in towns and cities.

Australia Post also has a strong commitment to rider safety through a program of rider training, the use of high visibility clothing and panniers, and regular maintenance inspections.

– Australia Post Corporate Responsibility Report 2009-10

Motorcycling Safety: Policies & Programs

55% of serious casualty crashes involve another vehicle and in 57% of these crashes the motorcyclist was not at fault [SA Motorcycling Road Safety Strategy, 2005-2010]. Education and enforcement must therefore target all road users.

Training

Training and testing practices have developed independently in each Australian state and territory. Consequently there is a wide variation in the programs delivered and the skills tested. Government agencies often question the safety benefits of training; however, there is an increasing trend for licensing bodies to encourage new riders to undertake training whilst reducing the opportunity to gain a licence by simply taking a test.

Car driving experience should not be a pre-qualification in order to obtain a motorcycle licence. There is no evidence to show that riders with previous driving experience are safer than those without. Many of the important hazard perception and roadcraft strategies for riders are specific to riding and are only developed through riding experience.

Learners warrant special attention. FCAI encourages state agencies to include higher order skills such as Hazard Perception and Roadcraft in training and testing schemes.

Licensing

There are a number of different strategies, regulations and approaches to road safety and licensing throughout Australia. FCAI's preference is for a "best practice" licensing system that is uniform across all states. In this way all Australian motorcycle riders benefit from the application of consistent standards to ensure their safety and well-being. In particular:

- Prospective riders should be able to obtain a licence at the same age anywhere in Australia
- Prospective riders should be licensed to ride the same category of motorcycle in all states
- Riders should progress through the same Graduated Licensing Scheme (GLS) stages, at the same age and with the same qualification criteria in all states

The now almost nationally-recognised Learner Approved Motorcycle Scheme (LAMS) ensures learners and inexperienced riders have a range of relatively low power, low capacity vehicles to meet their needs during the early licensing stages. However, there are still variations between Australian jurisdictions in the motorcycle specification. The *total* Australian market is a small percentage of the global market and meeting the special requirements of an even smaller part of this already small market adds costs which must ultimately be borne by the community. Uniform licensing and registration categories across all jurisdictions would remove this burden.

FCAI advocates nationally uniform "best practice" training and licensing to ensure that all Australian riders have the skills to ride safely

Crash Factors

Motorcycle fatalities peak on weekends suggesting that many fatal crashes are associated with recreational riding.

More than half of fatal motorcycle crashes involve another vehicle which is most often at fault. The main reason given is that the motorist did not see the motorcyclist. The speed of an approaching motorcycle is difficult to judge resulting in motorists not giving the expected right-of-way. Defensive riding skills and risk management are therefore of paramount importance for riders.

Fatal single motorcycle crashes are more likely to result from running off the road on a corner or bend.

Road conditions have a greater impact on motorcycle crashes. Obstructions or lack of visibility; unclean road surfaces or loose material; poor road condition or road markings; and the horizontal curvature of the road can all be significant factors.

It is also clear that rider attitude and behaviour is a key factor in crashes:

- About 20% of motorcycle fatalities in Australia involve an unlicensed rider.
- As with other motor vehicles, alcohol, drugs, and inappropriate speed are known to be contributing factors in motorcycle crashes, especially single vehicle crashes.

– Centre for Accident Research and Road Safety, Queensland, 2012

Safer Riders

The key issues are the skills and attitudes of the riders. A higher level of skill and experience is necessary for higher-powered machines. FCAI has supported the introduction of the Learner Approved Motorcycle Scheme (LAMS) and Learner Approved Motorcycles across Australia. These motorcycles are restricted to an upper capacity limit of 650 cc and must have a power-to-weight ratio of less than 150 kW/tonne. This scheme has allowed the entry-level motorcyclist a far wider selection of motorcycles than the previous arrangement which restricted riders to an upper capacity limit of only 250 cc.

A significant number of riders killed or seriously injured in crashes were involved in risk-taking behaviour – 27% of riders killed were over the legal BAC limit, 4% were speeding or riding too fast for the conditions, and 8% were unlicensed or inappropriately licensed.

Personal Protection Equipment (PPE)

Helmets have been mandatory since 1971 and are now accepted as a normal part of motorcycling.

Whilst helmets are the only piece of PPE that is mandatory, there is a huge range of other products and types of clothing that is worn by riders for both comfort and protection. Most riders accept that there is a minimum standard of PPE that should be worn by all riders, but the differing needs of road riders, versus off-road riders means that what suits one group may not suit the other. Climatic conditions must also be taken into consideration, as what may be suitable in the southern parts of the country may be inappropriate for the tropical north.

Other Road Users

As driver aids (ABS, lane control, blind-spot technology) become increasingly utilised in cars, there is the potential for drivers to become more reliant on the car's technology and less on their own skills and awareness. Australia's licensing systems fail to make drivers aware of vulnerable road users and, unfortunately, do not convey the driver's responsibilities towards these groups adequately.

All road users should be educated and tested on their awareness of and interaction with motorcyclists and other vulnerable road user groups. The licence test should examine the driver's ability to observe, anticipate, and react to motorcyclists in a number of traffic situations. A Hazard Perception Test which includes vulnerable road users may be a good way of raising awareness at the licence testing stage.

The industry also continues to support riding with headlights on as a safety measure to help ensure that motorcyclists are clearly visible to other road users during the day.

FCAI endorses "The Good Gear Guide" *(www.infrastructure.gov.au/roads/safety/publications/2009/good_gear_guide.aspx)*

Although this focuses on road riding, it is an invaluable resource for any rider.

FCAI supports uniform licensing, training and testing standards and programs to make other road users more aware of motorcyclists

Safer Bikes

Motorcycles are intrinsically responsive and manoeuvrable. Technology is now available to control braking (ABS) and traction (TCS):

- **Antilock Braking Systems** (ABS) – the introduction of ABS on new motorcycles was an industry safety initiative which has been naturally taken up by consumers without the need for regulation.
- **Traction Control Systems** (TCS) – designed to eliminate wheel slip when accelerating out of corners.

Motorcycles have only two points of contact with the road so it is essential that tyres appropriate to the use are chosen and then properly fitted and maintained.

FCAI supports the continued development, introduction, and promotion of better technology for safer motorcycles

Safer Roads

Being two-wheeled vehicles, motorcycles can be affected by many factors that a car driver might not even notice: for example, the condition of the road surface is of greater significance. Features such as adverse camber and pavement maintenance practices can increase the risk to motorcyclists. As well as motorcycle-specific Black Spot programs, motorcyclists will also benefit from other safety initiatives such as shoulder sealing and the removal of hazardous objects on or near the roadside.

- **The road surface –** slippery road marking materials, unsealed shoulders, unfinished road works, all pose threats to a single track vehicle such as a motorcycle. It is essential that road maintenance crews abide by their own policies when constructing, altering or maintaining the road network.
- **Roadside hazards –** Ideally all "roadside furniture" should be designed and placed with vulnerable road users in mind. Given that there is an enormous amount of road network to cover, FCAI encourages all state jurisdictions to target Motorcycle "Black Spots" for roadside treatments as a priority.

The road system is designed for large four-wheeled vehicles. Not only does this compromise the safety of motorcyclists but it fails to take advantage of the smaller size of motorcycles. Motorcycles have negligible impact on the road surface, helping to maintain its condition longer and reducing the need for repairs and maintenance.

FCAI urges all road authorities (state and local government) to pay particular attention to the needs of motorcyclists in road design, construction, repairs, and maintenance

Antilock Braking System front sensor on a BMW 1100 LT motorcycle

Intelligent Transport Systems (ITS)

A 2006 study by the Monash University Accident Research Centre (MUARC) found that, apart from ABS, very few motorcycle-specific ITS have been developed. They developed a list of priority ITS for motorcycles. These range from active systems such as electronic stability systems to passive systems such as external air bags for motor vehicles to minimise injury to a rider in the event of a crash. Some developments such as Heads-Up Displays and rear vision systems for helmets are already commercially available.

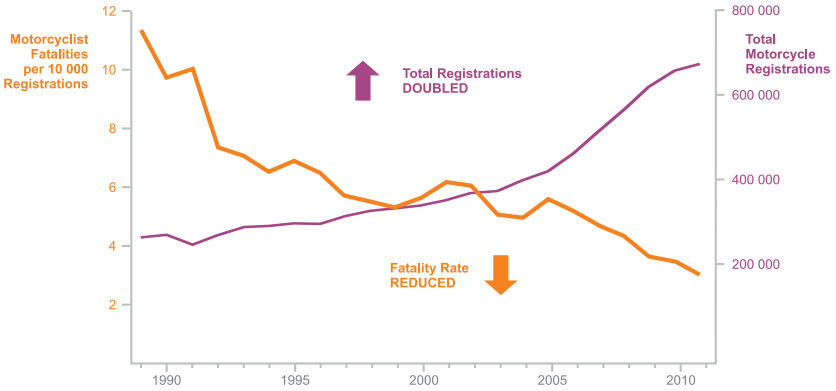
Motorcycling Safety: Perceptions

Small mobility vehicles such as gophers provide independence to many in the community – however, they should not be considered as "motorcycles".

These types of vehicles require their own technical, traffic, and licensing regulations.

Real and Perceived Dangers

There is no doubt that motorcyclists are more vulnerable than other road users; however, figures from the Bureau of Infrastructure, Transport and Regional Economics show that fatalities were down 10% in the period from April 2011 to April 2012 [BITRE, 2012]. Over the last 30 years the number of fatal crashes per 10 000 registered bikes has also dropped by 79% despite motorcycling being the fastest growing vehicle segment with numbers doubling over the last decade.



Motorcycle Fatalities and Total Registrations in Australia, 1989 -2011
(Source: BITRE and ABS)

Small Mobility Vehicles

One of the most significant areas of change in the PTW (powered two wheel) market is occurring at the entry level. Small mobility scooters and short distance commuting scooters are appearing in ever-increasing numbers in Australia. They range from engine-assisted bicycles to gophers and have a variety of power sources and configurations – electric, hybrid-pedal, and internal combustion engine. Many are not covered by motor vehicle regulations and can be ridden on footpaths in urban areas.

Mostly unregistrable, these scooters are not generally considered as part of the motorcycle fleet; however, licensing authorities, local councils and governments alike are being forced to come to terms with these forms of personal mobility which have not been fully taken into consideration in planning and licensing laws.

Of particular concern to the motorcycle industry is the categorisation of small mobility vehicles when one is involved in an accident. If they are not a registered vehicle being ridden by a licensed person, they should not be considered as "motorcycles" and should not form part of the "motorcycle" statistical record.

FCAI will continue to promote statistical reporting which provides a fair and balanced picture of motorcycling safety issues

Motorcycle Sport

Motorcycle Sport

There is a strong link between motorcycle sales and racing licence holders. This is often used as a measure of the "health" of the industry: good sales of dedicated racing motorcycles reflect strong interest in riding at all levels.

Australia has produced several high profile riders over the past three decades and, as a result, international interest and world championship events have come to Australia. World MotoGP and World Superbike events held annually in Victoria are a direct result of Australian riders competing successfully in those championships.

Motorcycle sporting events at all levels inject significant money into the local economy. These range from off-road events in rural and regional Australia to the high profile international events at Phillip Island in Victoria.

There is significant potential for high profile riders to promote motorcycling, attract new riders, and advocate safer riding (eg, the MAC campaign in South Australia which uses five-times World Champion Mick Doohan). There is also an opportunity for motorsport facilities to offer advanced rider training.

Recreational Motorcycle Sport

Beyond the high profile events, the so called "grass roots" motorcycle sport is taking place most weekends. These events can attract large numbers of competitors, and associated attendees such as family and friends. Events such as Junior Motocross, Enduro events, local and State Motocross and road racing, and Trail Park rides all have large followings of competitors, and bring people to a specific location. Other events such as organised trail and adventure bike rides and tours can cover large distances but also bring flow-on economic benefit to the areas and townships they pass through.

Unfortunately, off-road motorcycle sport is under considerable threat from the closure of venues and denial of access to facilities. Such restrictions on motorised off-road sport are often motivated by concerns about the environment and excessive noise that can be generated through irresponsible or unregulated use. However, these issues can be addressed through appropriate land use and facility management (see page 10).

FCAI will continue to work with Motorcycling Australia and the controlling bodies of Australian motorsport to support local events and rider development; and with land management and Government authorities to continue to facilitate access to areas for recreational motorcycle activities

Motorcycling: Off-Road Licences & Land Use

Off-road riding and mini-bike riding are healthy outdoor lifestyle activities that can involve the whole family and impart important skills and discipline to young riders. Off-road riding needs to be recognised as a healthy and legitimate recreational activity and adequately provided for with access to appropriate riding areas ranging from small outer urban tracks to trails in public forests and bushland.

Sanctioned events such as organised trail rides have been run in Australia for many years. One-off permits to run these events are granted to clubs and organisations with proven records of running safe and environmentally responsible events. A majority occur in regional and rural Australia and this has a strong economic impact on those communities (eg, the Blue Light Rally in Victoria).

Off-road motorcycles are by far the most popular vehicles in Australia and account for more than 40% of all motorcycle sales. This segment of the market is an important one for the industry while direct sales and associated expenditure make a significant contribution to local and state economies.

Vehicle and Licence Regulations

Off-road motorcycles are specially built to endure the rigours of off-road riding. There is a significant difference between the on-road legal requirements of indicators, mirrors, etc, and the practical requirements of riding in the bush. Governments are grappling with this issue in a disconnected and random manner. Recognition of a second tier registration for off-road motorcycles (restricted to riding in the bush) is urgently needed.

A special licence category for recreational riding for junior riders is also needed. A licensing system (similar in nature to recreational boating licensing) whereby a junior rider can legally ride, when accompanied by a fully licensed rider, would help control illegal riding activities.

Recreational Land Use

Land use pressure on the urban fringe has lead to conflict between different user groups and residents. Unfortunately an inconsiderate minority has tended to give the entire off-road motorcycle community a bad reputation. Most off-road riders care deeply about the responsible sharing of recreational areas and practice appropriate riding behaviour.

Designated land use is becoming a reality. Off-road riding parks are now economically viable. Examples include:

- Victorian Department of Sustainability and Environment (DSE) "Trail Bike Project" has recognised the legitimate use of the forest by trail bike riders
- Queensland Moto Park (QMP) has received major funding from the State Government and eight local councils through the Council of Mayors (South East Queensland)
- Wyaralong Trail Bike Facility offers a safe and legal site for nearly 230 000 trail bike riders in South East Queensland

FCAI will continue to promote appropriate recreational registration and some form of junior licensing system to support and encourage these activities; FCAI will also work to encourage responsible off-road riding and greater access to designated land use

Recreational Riding Research

A report prepared by the University of Queensland in 2009 concluded that recreational riders:

> ... perceive trail bike riding as a social activity which is beneficial to their personal well-being, their physical and mental health, and the relationship with their family and friends ... In addition, trail bike riders are concerned with being able to continue practicing the sport in an organised and well managed fashion while taking into consideration the concerns of local communities.

In a proposal to carry out further research in this area in order to provide a sound basis for policy formulation, Dr Madeleine Brabant, a Research Fellow at Griffith University, noted:

> Exercise and physical activity such as trail bike riding can reduce weight gain, obesity and in turn reduce the risk of chronic disease. It can also reduce symptoms of depression and anxiety and improve mental health. Exercise enhances personal and social development and improves self-esteem. Active students produce better academic results than non-active students. Physically active workers report less absenteeism and improvements in productivity.

Design Standards & New Technology

European and North American markets drive design standards and new technologies, especially those that make motorcycling safer. Australia represents about 1% of world-wide sales and so cannot direct the development of future technology; however, as a sophisticated market, we do have access to the latest technology in the products imported.

Australian Design Regulations can specify United Nations Economic Commission for Europe (UNECE) standards which would lead to more global harmonisation of regulations. This would ensure that local design regulations will have less impact on local pricing and thereby give the consumer/end user greater access to the latest technology.

Grey (Parallel) and Personal Imports

Motorcycles coming in as grey or personal imports are supposed to comply with ADRs but, without effective auditing or monitoring, there is no guarantee that these vehicles actually do so.

The **Specialist and Enthusiast Vehicles Scheme** (SEVS) for vehicles manufactured before 1 January 1989 allows people to import historic and enthusiast bikes. These must simply comply with the basic state regulations applying at the time they were manufactured.

The **Registered Automotive Workshop Scheme** (RAWS) allows for the importation and supply of used specialist or enthusiast vehicles. Motorcycles manufactured in the past 10 years can be imported through RAWS; however, features such as ABS and security systems are often not included while advertisements regularly show bikes with noncompliant fittings (tyres, exhaust pipes) which should have been changed before sale. Many riders are therefore being exposed to unnecessary risks.

- There is no mechanism to audit or monitor ADR compliance
- There is no mechanism to manage safety recalls
- There is no mechanism to identify imports with a previous history of damage and repair or to guarantee stated vehicle mileage

There should be more rigorous enforcement of standards and greater penalties for breaches of regulation.

FCAI would like to see a level playing field where all motorcycles sold within Australia have to have the same levels of scrutiny and compliance to ensure customer safety and authenticity

New Technology

Several FCAI members have direct links to the Global Automotive Industry. Developments in technology quickly filter down to motorcycle manufacturers and are incorporated where appropriate in new models. Intelligent Transport Systems (ITS), Antilock Braking Systems (ABS), and Electronic Stability Controls (ESC) are already well integrated. Lower emissions, hybrid technology, electric powered vehicles and improved recycleability are all a reality while security features – such as ignition security systems (immobilisers) and data-dot technology (which identifies individual components) – are of direct benefit to the owner/purchaser.

FCAI will continue to support the uptake of new technology that will enhance consumer choice and rider safety

Three-wheeler "Trikes"

Three-wheeler motorcycles have been around for some time, often produced as one-off or low volume custom vehicles. Most of these trikes have two wheels at the rear; however, motorcycles and scooters with two wheels at the front have come on the market in recent years.

The three wheel design makes the vehicle more stable at rest and in motion. This reduces the level of rider skill and physical strength required and makes the open-air motorcycling experience available to a wider range of people.

Stability while stationary makes a trike easier to handle when starting and stopping. Stability in motion reduces some of the inherent risks of riding on rough roads or loose surfaces, or manoeuvring through corners and sharp turns.

However, the straddle-style seating of vehicles such as the Can-Am Spyder roadster means the rider is still actively involved in the vehicle's handling.

The new generation of trikes is providing the riding experience of a motorcycle with many of the convenient features of a traditional roadster.

Motorcycling Relationships

FCAI Motorcycle Group Members import 19 different brands of motorcycles which account for just under 90% of the total sales volume in the Australian market.

FCAI is the key communications channel for the industry, raising the motorcycle industry's needs with Federal Government, State and Local Government, Licencing and Registration Authorities, Technical and Regulatory bodies, and other organisations. The FCAI Motorcycle Group needs to ensure effective communication and cooperation with relevant authorities and understand the importance of having consistency in messages about issues and concerns.

State & Federal Governments

Having a voice in the development of policies and regulations is critical to the Motorcycle Industry and FCAI is the appropriate organisation to voice those concerns and issues relevant to the Motorcycle Industry.

Having credible input into policy that will affect the industry is essential to the long-term survival of the Industry, and will help with planning at a macro and micro level within businesses across the breadth of the motorcycle industry.

Motorcycle Dealers

Motorcycle dealers have a key role to play in information flow to the public and can be used as a conduit for feedback to the industry. Motorcycle Dealerships have an important role to play in the motorcycle industry. They are the front line of communication about all aspects of motorcycling to both current riders and potential riders looking at getting into motorcycling. They can also be an effective medium for communicating messages of industry-wide importance to the public.

FCAI will communicate with key Motorcycle Riders Groups; where appropriate, seek input into industry programs; and support raising skills and competencies throughout the industry

Directions for the Motorcycling Industry 2014–2016

Transport Policy & Urban Planning

FCAI will continue to promote the benefits to the community of motorcycling to ensure it is given greater weight in transport policy and urban planning

Energy Efficiency & Emissions

FCAI will continue to encourage the use of motorcycles to reduce urban traffic congestion, overall fuel usage, and emissions of the transport fleet

Safety: Policies & Programs

FCAI advocates nationally uniform "best practice" training and licensing to ensure that all Australian riders have the skills to ride safely

FCAI supports uniform licensing, training and testing standards and programs to make other road users more aware of motorcyclists

FCAI supports the continued development, introduction, and promotion of better technology for safer motorcycles

FCAI urges all road authorities (state and local government) to pay particular attention to the needs of motorcyclists in road design, construction, repairs, and maintenance

Safety: Perceptions

FCAI will continue to promote statistical reporting which provides a fair and balanced picture of motorcycling safety issues

Motorcycle Sport & Recreation

FCAI will continue to work with Motorcycling Australia and the controlling bodies of Australian motorsport to support local events and rider development

FCAI will continue to work with land management and Government authorities to continue to facilitate access to areas for recreational motorcycle activities

Off-Road Licences & Land Use

FCAI will continue to promote appropriate recreational registration and some form of junior licensing system to support and encourage these activities

FCAI will work to encourage responsible off-road riding and greater access to designated land use

Design Standards & New Technology

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