

Planning Road Safety

Peter Bilton

Developing the Gold Coast Road Safety Plan 2015





Abstract

The Gold Coast Road Safety Plan 2015-2020 (GCRSP) was adopted in April 2015 by the Council of the City of Gold Coast in April 2015. The GCRSP is underpinned by the Gold Coast City Transport Strategy 2031. The GCRSP development focused on providing Gold Coast residents and visitors a safe and efficient transport system, no matter what modes of transport they utilise.

A partnership approach was undertaken to develop the GCRSP which involved a number of stakeholder organisations including:

- City of Gold Coast
- Department of Transport and Main Roads
- Queensland Police Service
- Royal Automobile Club of Queensland (RACQ)
- Centre for Accident Research & Road Safety Queensland (CARRS-Q)

The plan is based upon the "Safe System" approach to road safety, ensuring that the City (and delivery partners) is able to work with the community and deliver transport system infrastructure to improve road user safety. The GCRSP aims to achieve a 30% reduction in the number of serious injuries and fatalities associated with road trauma by 2020 (compared to a three year rolling average at 2010).

This paper provides a broad outline of the GCRSP while focusing on the lessons learned; the research and statistics developed to inform the strategic direction of the plan and some of the key challenges will be explored. This includes the development a long term road safety plan that accommodates both a geographically demanding area, unique visitor patterns, as well as accommodating a range of organisational priorities.



Introduction

This paper focuses on the provision of an outline which details the key processes, considerations, research and analysis methodologies and lessons learned throughout the development of the Gold Coast Road Safety Plan (GCRSP) 2015-2020. The GCRSP was adopted in April 2015 by the Council of the City of Gold Coast. This paper is not intended to present the key findings or content of the plan in detail, but rather it will focus on the processes undertaken in the Plan's development.

Documenting the lessons learned during the development of the plan is intended to provide those organisations considering the development of a road safety plan guidance to successfully undertake the journey from concept to production. These lessons are particularly relevant to the development of a holistic and integrated road safety plan for a large geographic region with a growing and demographically diverse population, which supports a variety of organisational priorities, to provide a range of strategies and actions reduce transport related trauma and fatalities.

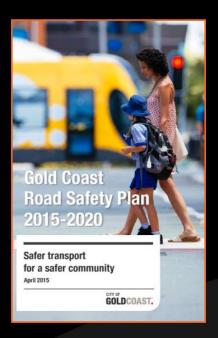


Figure I Gold Coast Road Safety Plan Cover Title (source GCRSP 2015)



The Gold Coast Road Safety Plan

The City of Gold Coast Transport Strategy 2031 broadly recognises the importance of providing a safe and functional environment for all road users. The Transport Strategy recognises the need to consider all road users (including drivers, passengers, motorcyclists, pedestrians, cyclists and public transport users) and identifies the need to progressively improve the safety of the City's transport system.

The development of the Gold Coast Road Safety Plan 2015-2020 (GCRSP) is part of the City of Gold Coast's efforts to provide all users of the Gold Coast transport network the safest and most efficient system possible.

A partnership approach was undertaken to develop the GCRSP to utilise the capabilities of each stakeholder organisation and recognises that a holistic, collaborative approach to road safety has the greatest chance for successful outcomes. The development of the GCRSP involved a number of stakeholder organisations including:

- City of Gold Coast
- Department of Transport and Main Roads
- Queensland Police Service
- Royal Automobile Club of Queensland (RACQ)
- Centre for Accident Research & Road Safety Queensland (CARRS-Q)

The GCRSP is closely aligned with global, national and state road safety planning initiatives. These higher level plans provide targets and frameworks for road safety planning, while the GCRSP addresses the issues specific to the needs of the Gold Coast community. The GCRSP is an inclusive, actionable plan which outlines the road safety vision and aspirations for the Gold Coast. The plans key features include:

- A focus on directly achieving a long term reduction of serious injury and fatality associated with travel on the transport network within the Gold Coast.
- A Safe Systems framework consisting of four themes that provides a holistic approach to road safety while acknowledging the limited domain of influence of the stakeholders responsible for the plan.
- To reflect the collaborative nature of the plan and the focus on shared responsibility (an element of the safe systems framework), the plan is framed in the inclusive plural sense (using Our and We), to place emphasis on commitment and levels of responsibility.
- The plan establishes a vision: "The GCRSP (2015-2020) will enable the City, its partners and stakeholders to implement sustainable and effective solutions that will reduce crashes, save lives, and prevent serious trauma on the Gold Coast transport network."
- The plan establishes a target: "to reduce both serious injuries and fatalities by 30% by the year 2020 (based on the 3 year rolling average as of 2010)".
- The plan is structured around four Safe System "themes" which are presented in Figure 2.
- Within each theme, the related statistics and local issues that contribute to road safety are identified and the associated actions that directly address these issues are identified (see Figure 3). This provides a very clear and tangible correlation between identification of issues and commitment to actions.
- The plan consolidated existing actions with future actions to ensure meaningful outcomes.
- Case studies that outline excellent examples of work already being undertaken by the City and its stakeholders (see Figure 4).



Our people

Our city is recognised as one of Australia's most active cities, where people of all ages, gender and abilities safely walk, cycle and actively move for leisure, recreation and transport. Our road users are caring, taking responsibility to understand the road rules and act in a safe supportive manner.

Our transport system

Our city is connected by an integrated and multi-modal transport system that safety and efficiently moves residents, visitors and commodities. Our transport modes seamlessly connect, making journeys safe, convenient and intuitive.

Our places

Our city and its neighbourhoods are purposefully designed considering the interactions of people with land use and transport. Our streets are safe, comfortable and engaging, and our transport infrastructure is more forgiving of human error.

Our shared responsibility

Our city fosters a collaborative and inclusive approach to road safety.

Figure 2 Gold Coast Road Safety Themes (source GCRSP 2015)



53%

of serious crashes involving a pedestrian occur within 1km of the coastline



22%

of serious crashes involving a pedestrian are reported in Surfers Paradise



50%

of serious crashes involving a pedestrian in Surfers Paradise occur between 8pm and 6am (7 days)



35%

of serious crashes involving a pedestrian in Surfers Paradise are reported between

8pm and 6am on Friday and Saturday nights only.

Figure 3 Our People Theme Analysis example: Pedestrians (source: GCRSP 2015)





Figure 4 Our Transport System Theme Case Study example (source: GCRSP 2015)



Developing a Regional Road Safety Plan

The Gold Coast City Transport Strategy 2031 was adopted by the Council of the City in December 2013. This Strategy details the City's long term objectives for the transport network and within the key action was the commitment to devise and implement a Road Safety Strategy to provide a safe and functional environment for all users. In addition, road safety is defined in the City's Corporate Plan 2009-2014. In response to these commitments, in 2013, the City commenced the process of developing a road safety plan. This process consisted of four basic stages which are outlined below. The remainder of this paper focuses on the key learnings from Stage 2 of the process which involved the majority of the research, technical analysis and development of the plan in consultation with stakeholders.

Stage 1, Project initiation planning and definition:

- Establish suitable governance structure to ensure leadership commitment which included an Executive Steering
 Committee, consisting of stakeholders with executive authority from key organisations; City of Gold Coast;
 Department of Transport and Main Roads; and Queensland Police Service). The Executive Steering Committee
 met quarterly with a strategic intent. A Partnership Advisory Group was created to guide the development of
 the Plan. It consisted of a wide range of operational level stakeholders who met monthly to inform and
 progress the project.
- The commission of three small-scale case study investigations from July to September 2013 to further analyse the road safety implications of key topics of relevance. These explored issues associated with aspects of emerging issues such as the light rail, international visitors as well as specific sub-sets of the population)
- Project plan development including the implementation of Stages 2-4, and identification of resource requirements. A suitable consultant was commissioned to undertake Stage 2.

Stage 2, Project implementation:

- developing a collaborative approach with stakeholders through a series of workshops to establish agreement and commitment to, the project objectives reviewing best practise approaches to development of Road Safety Plans
- identifying a plan framework suitable to the local context and the relevant domains of influence of the key stakeholders
- establishing an agreed vision and high level target for the reduction of road safety trauma
- evaluating existing and future road safety trends of Regional, State and National significance
- analysing historic road safety data and research into future population and technology trends that may have regional significance
- identifying contemporary road safety strategic policies and actions to address key issues
- determining a series of actions that support the policies with a focus on actions that address key trends, provide value for money and create early wins"
- communicating the Draft Road Safety Plan in a technical document suitable for engagement with key stakeholders with expertise in road safety



Stage 3, Project delivery:

- development of public consultation version of the plan in draft form and final refinement with key stakeholders
- with internal and external stakeholders to gain formal endorsement and support for the plan
- formal adoption of the Plan as policy by the Council of the City of Gold Coast

Stage 4, Project evaluation and closure:

- documentation of lessons learned
- public launch of the plan (officially launched in May 2015)
- transition from development into Road Safety Plan governance to facilitate GCRSP delivery
- implementation and monitoring the GCRSP

Review Best Practise Road Safety Planning

The initial development of the Draft GCRSP began with a high level review of a selection of contemporary road safety strategic and action plans for global, national, state and local authorities to identify relevant requirements that the City and its stakeholders was bound to adhere to and align with (or acknowledge) as well as examples of best practice and opportunities for further investigation. This review focused on the guiding principles by which the plans have developed, the frameworks in which the plans are presented, and how existing strategies and actions within the documents may align with the GCRSP (or require consideration). The key findings of the review are outlined below.

Review of Road Safety Plans at Global, National, State and Local Level

United Nations Global Plan for the Decade of Action for Road Safety

The Global Plan for the Decade of Action for Road Safety (GPDARS),) was adopted by the United Nations General Assembly in 2010, with 2011-2020 declared the Decade of Action for Road Safety. The plan sets the global goal of stabilising and then reducing the forecasted level of global road fatalities by increasing activities conducted at the national, regional and global levels. The plan provides guidelines for the implementation of road safety plans and is based on the Safe Systems principles based around five pillars of road safety management, road infrastructure, vehicle safety, road user behaviour and post-crash response. As the plan is a guideline, actions are not specifically accountable to specific organisations and the actions are not time specific.

National Road Safety Strategy

Australia's National Road Safety Strategy 2011-2020 (NRSS) is closely aligned with the GPDARS. The NRSS represents the commitment of governments at the federal, state and territory level to strive to achieve road safety goals and objectives, and develop action plans to address prioritised issues. Comprehensive reporting and performance monitoring is prescribed to evaluate the success of plans.

The NRSS is based on the Safe System approach, as advocated by the GPDARS. This approach emphasises a holistic view of the road transport system and recognises the interaction of various road user groups including drivers and their passengers, motorcyclists, heavy vehicle drivers, cyclists and pedestrians. The Safe



System Framework adopted in NRSS is a four pillar approach consisting of safe roads, safe speeds, safe vehicles and safe road users.

Acknowledging the long term focus of the vision of zero deaths and serious injuries, the plan sets ambitious targets for reduction in road safety trauma, aiming to reduce the number of fatalities and the number of severities by at least 30% (of 2010 levels) by 2020.

Queensland Road Safety Action Plan 2013-2015

The Queensland Road Safety Action Plan 2013-2015 (QRSAP) is a plan to address areas of the road network that have the greatest potential to reduce the number of casualties on Queensland roads. The plan predominately focuses on the state controlled road network but does have actions relating to partnership with, and investment in, local road authorities as well as broad based actions that will have benefits for all road users (behaviour modification campaigns, research etc).

The plan acknowledges the national 30% target established in NRSS and the state's commitment to the Global Decade of Action for Road Safety. At the time of preparing the GCRSP, the Queensland Government intimated that a renewed action plan for beyond 2015 was being prepared.

Relevance and Alignment of Global, National and State Actions with GCRSP

The three tiers of global, national and state based road safety planning have a general alignment of principles (i.e. a Safe System Approach and shared responsibility) and there is some degree of consistency of alignment of specific actions/priorities/activities outlined in each plan.

To guide the development of the GCRSP and ensure that alignment with higher level plans is achieved where appropriate, a tabular summary was prepared indicating actions stated within each plan that were relevant to the GCRSP development.

Local Government Road Safety Plans

In 2009, Austroads published the *Guide to Road Safety Part 4: Local Government and Community Road Safety* with the purpose of applying road safety principles to local government programs. The guide states that local government programs should be based on the same general principles as those managed by national and state bodies while retaining specificity towards the local environment. It follows that local government should similarly adopt the Safe System approach as the conceptual framework and underlining principles used in the development of local road safety programs.

Local knowledge of the area allows the plan to be proactive as well as reactive, as high-risk areas can be identified in advance of incidents occurring. Unlike higher level authorities, local government has direct links with community members and networks, allowing specific community issues to be raised and acted upon. In addition, local governments have responsibility for the majority of local land use planning and development approvals, and therefore have the ability to directly influence road safety outcomes relating to infrastructure associated with new development and the activities and movement of people associated with specific land uses (e.g. licensed premises, aged care housing, youth facilities etc). Local governments also have strong



relationships with community groups and are able to customise education and behaviour change programmes to specific demographics.

Local government road safety plans are limited by the domain of influence of local governments (and other stakeholders). At the local government level there is limited influence and resources available to control or change a range of key issues that directly influence road safety outcomes at the local level such as:

- National and State legislation which may include road rules, vehicle design standards, licensing and registration.
- Road design and engineering standards and policies typically established at the State level
- Public education and behaviour change campaigns which target the broad population
- Driver education systems and policies outside of its region (including interstate and international systems)

Safe System

Safe System Principles

Common to all the global, national, state and to most local road safety plans is the adoption of the Safe System principles. The following from GPDARS summarises the essence of Safe System principles:

"It starts from the acceptance of human error and thus the realization that traffic crashes cannot be completely avoided. This approach means shifting a major share of the responsibility from road users to those who design the road transport system."

Central to the Safe System approach is the recognition that people make mistakes and that crashes are inevitable, but the system should be designed such that crashes should not result in serious injuries or fatalities. In order to achieve this, the road transport system must be designed such that the forces impacted in crashes are within the limits of those tolerated by the human body. The system also promotes the need for shared responsibility. Road safety is not an issue that can be solved in isolation but needs government, communities, business, and individuals to all take responsibility, ownership and action.

The Safe System approach is based on the principles:

- we all make mistakes
- we have natural limits to withstanding the forces of crashes
- our transport system should by designed to reduce the risk of crashes occurring and reduce the injuries that result from crashes
- nobody should die as the result of a crash
- everyone shares responsibility for improving road safety

All of the road safety plans and guidelines discussed acknowledge the Safe Systems approach and are consistent in what principles the 'Safe System' advocates. The plans vary, however, with regard to what constitutes the strategic framework of the "Safe System" and use a variety of terminology to describe it. The Safe System Framework is referred to using a variety of terms including, 'pillars', 'cornerstones', 'categories', and 'strategic priority areas'. For clarity these will be called "themes" herein. There is general alignment in most frameworks around the four themes of Roads, Speeds, Vehicles and Users, particularly at the global,



national and state level. Some plans also include themes such as Community, Partnerships, Communication, Land Use and Transport Planning, Traffic Management and Post-Crash Response.

Notably, Post-Crash Response is included as a core theme at the global level but is absent from national, state and local level plans. This point of difference seems unusual given the role national and state governments have in Australia (i.e. being responsible for emergency response services and health care).

Localising the Safe System Approach

As there is a wide variety of themes and conceptual frameworks used to present the Safe System (and no one specific standardised 'Safe System' framework), there is opportunity for the GCRSP to tailor the Safe System framework to best suit local conditions and to meet the objectives of the plan. The development of the plan should consider themes that reflect the areas of influence of the stakeholders and local issues. The most common themes (speeds, roads, vehicles, users) are all areas of influence of the stakeholders. Other areas the stakeholders can influence are land use and transport planning, post-crash response, and community ownership.

At the core, the GCRSP's objective is to reduce road safety trauma on the Gold Coast through collaborative based approach with both organisational stakeholders and the Gold Coast community. This collaborative focus should be reflected in the themes and terminology chosen for the GCRSP. In order to highlight the collaborative nature and shared responsibility principles that the plan will advocate, the following themes were recommended as the basis for the GCRSP Safe System framework:

Our Responsibility reflects partnerships between stakeholders, community engagement, as well as emphasising that ownership of road safety is everyone's responsibility.

Our People reflects that all people are part of the system, and everyone shares the responsibility for reducing trauma on our roads. This includes all road users and influencers; pedestrians, cyclists, riders, drivers, parents, educators, legislators, enforcers, designers, planners, maintainers, the community in general and public influencers such as the media.

Our Places reflects use and planning of public space, and specific geographic areas that require unique action plans to address specific issues (such as pedestrians around the beachfront and motorcyclists in the hinterland). Land use planning issues reflect the City of Gold Coast's role in ensuring safety is considered in development applications and planning. Our Places also considers major events that are held in public areas or place large demands on the transport network and community responsibility for the safe use of public space.

Our Transport System includes not only roads, but public transport infrastructure, such as the Gold Coast Light Rail, as well as cycling and walking infrastructure. The system also includes non-physical infrastructure including traffic signal software systems, post-crash response systems, vehicles and speeds. While vehicle design is outside of the stakeholders' domain of influence, policies and education and the responsibility of everyone to make safer choices and maintain safe vehicles are included in the plan. Local actions for use of alternative vehicles such as electric bikes and mobility scooters were also considered.



Project Management Considerations

Ensuring sound project management principles underpin the plan's development, will ensure the successful implementation and monitoring of the any project to develop an interagency plan. Of the local government road safety plans reviewed during the development of the GCRSP, a wide range was observed in the level of detail and project management principles incorporated in the Plan. Examples of best practices including the following content:

- I. A Vision or Objective Statement articulating the purpose of the Plan.
- 2. A Specific and Measurable Target.
- 3. Desired outcomes of the plan and strategies and actions that can be quantifiably or qualitatively measured to determine when and if they have been achieved, with specific targets are established for each action.
- 4. Ensuring that actions are achievable and relevant to the stakeholder organisations and their resource constraints (e.g. not identifying more actions that the organisation can realistically deliver given the time and resources it has available).
- 5. Acknowledgement that funding is likely to come from a wide range of sources and may be indirectly funded by existing budget through modification of existing programs or external funding sought by application for grants or sponsorship.
- 6. Allocation of responsibility for implementation of actions to a specific organisation or branch.
- 7. A governance structure to ensure accountability.
- 8. Timeframes for implementing actions.
- 9. Methodologies and responsibilities for the review, evaluation and monitoring of all project objectives and actions.

Communication

Communicating Road Safety Concepts

Road Safety is conceptually a topic that may mean many different things to many different people. For example, many people may be concerned about specific locations, where as a driver or pedestrian, they "feel unsafe" (commonly referred to in road safety literature as 'security' whereas the location may have a low crash record (generally considered as the definition of road safety in engineering and road safety research literature). Discussing road safety with a wide range of stakeholders requires communication about often complex road safety issues (including statistics, human behaviour and psychology, engineering principles and methods of evaluation of road safety countermeasures). The context and terminology required to discuss these issues may not be equally understood by all stakeholders and even less so for the broader community.

To ensure discussions about road safety are broadly understood and accepted by key stakeholders and the community in general, the following should be considered during the development of the plan:

- Terminology should be concise and absent of jargon or similar terms.
- Terms must be used consistently and defined where the colloquial use has a broad range of meanings (examples of commonly confused terms include road safety, crashes/accidents).
- The importance of concepts related to analysing road safety statistics and evaluation of road safety actions must be clearly communicated without requiring the reader to have expertise in statistics or engineering (this may include concepts such as crash risks relative to travel exposure and "regression to the mean").



Marketability

A regional road safety plan will require not only the support of key road safety stakeholders but requires communication, collaboration and buy-in to the plan's objectives by a broad range of stakeholders. This may include, but not be limited to local and state representatives, police, community organisations, businesses, and the wider community. To achieve success, the plan will need to be presented in a clear, easy to follow format. They should clearly identify the core issues, the actions which will be taken (and why) and present the actions, desired outcomes, responsibilities and reporting requirements and timeframes in a clear and logically structured manner. Many regional road safety plans reviewed either provided actions in very complex tabular matrix formats or in very concise actions in a list form, absent of details about implementation, targets, responsibilities etc. Both leave the reader in some doubt about what the "plan" is aiming to achieve and how it will succeed.

In the production of the Final GCRSP document, the readership was considered. The use of infographics offered an opportunity to communicate complex concepts and evidence in an easy to understand format. Images were carefully considered, to communicate positive messages and showcase the City's transport infrastructure, whilst supporting the Plans themes and actions. Case studies added the current flavour and communicated more broadly the existing effort the City has taken toward road safety and its bold five year commitment.

Questions to Address during the Best Practise Review

Based on the lessons learned from the development of the GCRSP, it is recommended that a best practise review be undertaken at the earliest stage, if possible prior to formally establishing a project to develop a road safety plan, to inform the project scope and assist with articulating the project aims to stakeholders. It is recommended that a best practise review should seek to answer the following questions:

- What are the lead and partner organisations existing obligations or directions established by Global, National, State and Council commitments that must be considered?
- What regional boundaries/population area will the plan consider? For example, an issue discussed during the
 development of the GCRSP was whether to evaluate the prevalence of Gold Coast residents in crashes outside the Gold
 Coast to determine if residents were involved in fatigue related crashes associated with high levels of commuter travel.
- What are the stakeholder organisations areas of responsibility, influence and expertise does this limit the scope of the strategies and actions to be developed?
- What framework is appropriate for road safety planning at the local road authority level?
- Types of transport and areas of the transport network to be considered? For example the project team discussed whether the plan should apply to rail, off-road vehicles (4WD, motorcycles, and mountain biking) and a range of other transport modes. Figure 5 and 6 below, reveal a range of potential safety issues associated with motorised and non-motorised vehicles off roads within the Gold Coast. While noted as serious issues, the project team identified these as not in scope, due to the City's limited domain of influence.
- Timeframes the plan should apply to?
- What other stakeholders should be engaged early? Local authorities typically have strong relationships with State road authorities and the Police, but may not have strong connections to key road safety stakeholders that represent areas such as Health, Education, Social Welfare, and Senior Citizens.





Figure 5 RACQ Airlift of an injured mountain biker in Gold Coast hinterland (source: Gold Coast Bulletin website July 2014)



Figure 6 Scene of a vehicular injury on beach at Surfer's Paradise (source: Courier Mail website December 24, 2013)

Research and Data Analysis for Regional Road Safety Planning

The purpose of a Regional Road Safety Plan is to develop policies and actions, which will be implemented over an extended period. Analysis of historic trends and research into emerging trends is required to enable informed decisions are made to support the plan. At a national and state level, road safety issues and statistics in Australia are well researched and widely understood. These issues, alcohol, speeding, seatbelts, fatigue, distracted drivers, generally apply equally to regional plans.

The level of research and focus of the analysis required to understand specific regional issues needs to reflect the size of the region, complexity of its transport network, population size and the number of crashes in the region. A large region with a complex transport network, large population and significant number of annual crashes such as the Gold Coast therefore requires a "big picture" approach.

To inform development of the GCRSP, crash statistics and trends for the ten year period 2003-2012 were reviewed to identify specific categories and sub-categories of causal and contributing factors, demographics, seasonality and geographic influences on crash locations and types. Literature reviews were then undertaken to understand the most effective countermeasures to address specific issues as well as understand the implications of future changes to the regions transport network and population.



The wide range of statistical analysis and issues identified through literature reviews were then consolidated into 20 focus areas. Each focus area represents a distinct category of issues and trends (that may have a range of underlying contributing factors). A key criteria for inclusion of an issue as a focus area was that the domain of stakeholders' influence would enable the issues to be addressed at a targeted, regional and local level.

Table I Gold Coast Road Safety Plan Focus Topics

| OUR PEOPLE | OUR PLACES | OUR TRANSPORT SYSTEM | |
|-------------------|----------------|--------------------------------|--|
| Our Youth | Our Beachfront | Our Critical Roads | |
| Our Seniors | Our Suburbs | Our Signalised Intersections | |
| Our Motorcyclists | Our Hinterland | Our Common Crash Types | |
| Our Pedestrians | Our Events | Our Critical Periods | |
| Our Cyclists | | Our Speed Limits | |
| Our Visitors | | Our Light Rail | |
| Drink Driving | | Our Cycle Networks | |
| Our Speeds | | Our Alternative Vehicles | |
| Our Compliance | | Our Emergency Response Systems | |

Identifying targeted focus areas provides an opportunity to achieve "early wins", reduce crashes in the most cost effective manner, align stakeholder resources to collaborate effectively and align policies and actions. Having a wide (but manageable) range of focus areas allowed stakeholders to adopt a Safe Systems approach which acknowledges that achievement of substantial reductions in road safety requires targeted action across a wide range of organisations and disciplines.

To inform stakeholders and obtain input into the development of appropriate policies and actions to address each of the plans, a technical report was presented to stakeholders for review and discussion which outlined each of the focus areas, presenting relevant statistics and analysis associated with that focus area.

Developing Actions

Following the review and confirmation of key focus areas by stakeholders, the next stage in the development of the draft plan was to identify existing action programs and determine if these could be aligned with the focus areas. Additionally stakeholders explored potential future actions that would address the focus areas while considering organisational resources, priorities and commitments.

Establishing a register of the current programs and road safety actions for a five year timeframe across four organisations was a significant challenge. Key aspects that made this process difficult included:

- As the organisations involved did not already have a formal documented road safety plan specific to the region, representatives from those organisations had to populate the register of programs and actions following internal discussion within their respective organisations (and therefore the extent of projects and programs identified may be limited).
- Road safety is frequently a secondary aim of infrastructure projects and programs. It is also considered as an
 important function of the operations and maintenance programs of road authorities, and therefore determining
 which projects should be considered and included within the road safety plan was ambiguous.



- Sensitivities were involved regarding public commitment to future spending programs which were likely to be subject to change with any change in organisational policy and/or government.
- For many actions a business case would need to be developed that quantified the costs of the program and the
 likely effectiveness of an action, in many instances actions needed to be carefully worded to limit the intended
 action to future research, investigation or case studies to evaluate the benefits of significant resource
 commitments.

Following an iterative process to identify existing and potential future actions which involved consultation with a wide range of stakeholders within each organisation, a final draft plan was produced which presented actions aligned with focus areas. The final GCRSP publication presents actions in the format shown in Figure 5 below. Each action is presented in clear and concise language with a target timeframe to undertake the action and organisation responsible for implementation of the action identified. The GCRSP contains a total of 59 individual actions that in the four stakeholder organisations involved in preparing the plan will seek to implement between 2015 and 2020. These include actions to monitor and evaluate the effectiveness of the plan and its actions throughout the period.

| No. | Action | Timeframe | Lead/partners |
|------|---|----------------|--------------------|
| 2.11 | Develop a strategic view of speed limits with the priority aim of delivering safer road environments for all users: | Short - medium | City TMR |
| | investigate increased implementation of the 50 kilometre per hour urban default speed limit in existing 60 kilometre per hour signed roads | | QPS |
| | investigate and implement lower speed limits (for example, 30 or 40 kilometres per hour) at locations of pedestrian priority and during times of high pedestrian activity. | | |
| 2.12 | Investigate and trial temporary speed zones in beachfront entertainment precincts and other locations with high numbers of pedestrian users (e.g. 40 kilometres per hour in Surfers Paradise and Broadbeach on Friday and Saturday nights between 8pm and 5am). | Short - medium | City TMR QPS |

Figure 7 Our Transport System: Speed Limits - Actions (Source GCRSP 2015)



Summary

The Gold Coast Road Safety Plan 2015-2020 (GCRSP) was adopted in April 2015 by the Council of the City of Gold Coast in April 2015. The Gold Coast Road Safety Plan 2015-2020 (GCRSP) is underpinned by the Gold Coast City Transport Strategy 2031 and focuses on providing Gold Coast residents and visitors with a safe and efficient transport system, regardless of transport mode.

A partnership approach was undertaken to develop the GCRSP to utilise the capabilities of each stakeholder organisation and recognises that a holistic, collaborative approach to road safety has the greatest chance for successful outcomes. The development of the GCRSP has involved a number of stakeholder organisations including:

- City of Gold Coast
- Department of Transport and Main Roads
- Queensland Police Service
- Royal Automobile Club of Queensland (RACQ)
- Centre for Accident Research & Road Safety Queensland (CARRS-Q)

The plan is based upon the "Safe System" approach to road safety, ensuring that the City and delivery partners) are able to collaborate with the community and deliver transport system infrastructure to improve road user safety. The GCRSP aims to achieve a 30% reduction in the number of serious injuries and fatalities associated with road trauma by 2020 (compared to a three year rolling average at 2010).

The plan was developed and implemented in four distinct stages. This paper focuses on the lessons learned during the second stage which involved development of a draft technical document.

In developing a regional road safety plan, it is recommended that organisation undertaking the work should consider:

- Conducting early reviews and workshops with stakeholders to confirm establish agreed project scope and answer key questions about the content and focus of the plan.
- Establish a project vision early to ensure all stakeholders are clear on the objective of the plan and are committed to achieving its outcome.
- Establish high level targets for reduction in road safety trauma in the region in a finite timeframe
- Adopt a safe system framework tailored to the size and characteristics of the region.
- Identify the appropriate level of technical analysis of crash data and road safety issues in the region based on the relative size of the regions transport network, population size and number of annual crashes.
- Identify a range of focus areas around which targeted actions can be aligned.
- Categorise focus areas within the safe systems framework to provide stakeholders and readers the context and relevance of proposed actions.
- Work with stakeholder organisations to determine how existing programs and projects can be aligned to focus areas.
- Work with stakeholders to develop additional future actions that target the focus areas and acknowledge the limitations and constraints of each organisation in terms of resources, political will, ability to make long term specific program commitments s and competing organisational priorities.



Bibliography

The following references were used in preparation of the Draft Gold Coast Road Safety Plan (and therefore indirectly inform the development of this paper).

- AASHTO. (2010). Highway Safety Manual Volume 1. Washington DC: American Association of State Highway and Transportation Officials.
- Adriazola, C., & Colin, B. (2013, February 21). World Resource Institute. Retrieved January 28, 2014, from http://www.wri.org/blog/more-urbanites-more-cars-challenge-urban-road-safety-and-health
- Alzheimer's Australia 2011 Queensland Report -Projections of Dementia Prevalence and Incidence in Queensland 2011-2050
- ANPHA. (2008). Road Fatalities and Preventative Health Action in Australia. Retrieved January 8, 2014, from http://www.anpha.gov.au/internet/anpha/publishing.nsf/AttachmentsByTitle/state-of-prev-health-2013/\$File/figure-1.2.png
- Archer, J., Fotheringham, N., Symmons, M., & Corben, B. (2008). The Impact of Lower Speed Limits in Urban and Metropolitan Areas. Victoria: Monash University.
- Aurecon Australia Pty Ltd. (2013). Road User Interaction with a New Mode of Transportation Road Safety Implications. Brisbane: Aurecon Australia.
- Australian Automobile Association. (2007). Road Safety and Young Australians. Australian Automobile Association.
- Australian Bureau of Statistics. (2011). 2011 Census. Brisbane: Australian Government.
- Australian Bureau of Statistics 'Underlying Cause of Death 2012'. Australian Government
- Australian Transport Council. (2011). National Road Safety Strategy.
- Australian Transport Council. (2011). National Road Safety Strategy 2011-2020. Australian Government: Department of Infrastructure and Regional Development .
- Austroads. (2006). Guide to Road Safety Part 2: Road Safety Strategy & Evaluation. Sydney: Austroads.
- Austroads. (2009). Guide to Road Safety Part 4: Local Government and Community Road Safety. Sydney: Austroads Incorporated.
- Austroads. (2009). Guide to Road Safety Part 8: Treatment of Crash Locations. Sydney: Austroads.
- CARRS-Q. (2012). State of the Road: Older Road Users Fact Sheet, 2012. Brisbane: CARRS-Q.
- Deller, J., & Stevenson, B. (2010, October). Comparisons of Emergent Road Safety Strategies in Queensland.
- Department of Transport and Main Roads. (2013). Queensland Road Safety Action Plan 2013-2015. Brisbane: Queensland Government.
- Department of Transport and Main Roads. (2012). Travel in South-East Queensland: Regions. Australian Government: Department of Transport and Main Roads.
- European Union . (2007). Best Practices in Road Safety . Belgium : Lexembourg Publications Office .
- Gold Coast City Council (2015) Gold Coast City Road Safety Plan 2015-2020.
- Gold Coast City Council . (2013). Gold Coast City Transport Strategy 2031: Technical Report . Gold Coast :
 Gold Coast City Council .
- Gold Coast City Council (2014). Senior Residents and Health Statistics http://www.goldcoast.qld.gov.au/thegoldcoast/gold-coast-seniors-statistics-888.html.
- Government of South Australia. (2011). South Australia's Road Safety Strategy 2020. Adelaide: Government of South Australia.
- Government of Western Australia. (2009). Towards Zero Road Safety Strategy. Perth: Government of Western Australia.
- Irwin, D. (2003). Safety Criteria for Light Rail Pedestrian Crossings. Portland: Transportation Research Board.



- ITS International. (2013). New Emergency Vehicle Green Wave Uses Existing Equipment. ITS International, 19 (6), 55-56.
- Jurewicz, C. (2014). Improving Roadside Safety Summary Report. Sydney: Austroads.
- Katharine Gibson, J. O.-S. (2010). Targeted Study of Injury Data Involving Motorised Mobilty Scooters. Melbourne: Monash University Department of Forensic Medicine.
- KPMG . (2013). Regional Development Australia Gold Coast Inc.: Analysis of the Gold Coast Long Distance Commuter Workforce . Melbourne : KPMG .
- National Institute of Economic and Industry Research. (2013). Gold Coast City Employment (Total) by Industry. Gold Coast: Economy id.
- Point8. (2014). Technical Note: GCRSP Road Safety Plan Review. Brisbane: Point8.
- Point8. (2014). Technical Note: Gold Coast Road Safety Issues. Brisbane, Queensland, Australia.
- Point8. (2014). Technical Note: Gold Coast Road Safety Plan Crash Statistics and Trends. Brisbane, Queensland, Australia.
- Quan, D., & Shi, A. (2013). Case Study: Crash Involvment of Male Driver/Riders under the Influence, While Driving/Riding on Gold Coast Roads. Brisbane: Cardno.
- Queensland Government. (2013). Queensland Government Data. Retrieved January 15, 2014, from https://data.qld.gov.au/dataset/crash-data-from-queensland-roads
- Queensland Treasury and Trade. (2013). Queensland Government Population Projections. Retrieved March 12, 2014, from Queensland Statistics:
- http://www.oesr.qld.gov.au/regions/gold-coast/tables/proj-pop-lga-qld/index.php
- SMEC. (2013). Road Fastey Case Study: International Road Users: Road Safety Implications Using Gold Coast Roads FINAL. SMEC.
- Sunshine Coast Council. (2011). Sunshine Coast Draft Road Safety Plan 2012-2031. Sunshine Coast: Sunshine Coast Council.
- Toowoomba Regional Council. (2011). Road Safety Strategic Plan 2011-2015. Toowoomba: Toowoomba Regional Council.
- Transport and Main Roads. (2007). Household Travel Survey Summary Report: Visitor Travel. Brisbane,
 Queensland, Australia. Retrieved from http://www.tmr.qld.gov.au/Community-and-environment/Research-and-education/Queensland-Household-Travel-Survey-summary-reports.aspx
- Transport and Main Roads Data Analysis Road Crash Glossary February 2014
- Transport and Main Roads (2011) 2011 Fatal road crashes in Queensland report
- Transport Research Centre . (2008). Towards Zero Ambitious Road Safety Targets and the Safe System Approach . OECD Publishing .
- Transport, Housing and Local Government Committee. (2013). Report No. 39 Inquiry into cycling issues Transprot, Housing and Local Government committee. Brisbane: Queensland Parliament.
- Turner, B. (2012). Effectiveness of Road Safety Engineering Treatments. Sydney: Austroads.
- United Nations. (2011). Global Plan for the Decade of Action for Road Safety 2011-2020. Switzerland: United Nations.
- Watson, A., Watson, B., & Vallmuur, K. (2013, August 20). Australian College of Road Safety. Retrieved January 18, 2014, from http://acrs.org.au/files/arsrpe/Paper%2092%20-%20Watson%20-%20Research%20Methods.pdf
- World Health Organization. (2004b). Facts: Road Safety Speed. World Health Organization.
- World Health Organization. (2004). World Report on Road Traffic Injury Prevention. France: WHO Publications.



ABOUT US

Point8 provides professional services in the field of traffic engineering and transport planning. Our small team of professionals have a diverse range of experience and skillsets. We value excellence and innovation in everything we do. Our focus is long term relationships with our clients and stakeholders, and we aim to provide exceptional client service. We work with a wide range public and private client, with specialist expertise in the areas of major infrastructure planning, construction traffic management, development services and road safety auditing. Our objective is to provide services that add value to our clients' organisations and to make a difference in the safe and efficient movement of people and goods throughout the communities we serve.

CONTACT US

offices: 433 Logan Road, Stones Corner QLD 4120

45 Nerang Street, Southport QLD 4215

phone: 07 3040 9998 fax: 07 3103 4341

email: info@point8.com.au

web: point8.com.au