Prepared for: Manitoba Public Insurance

Review of MPI's Road Safety Program Model

Sirius Strategic Solutions Ltd

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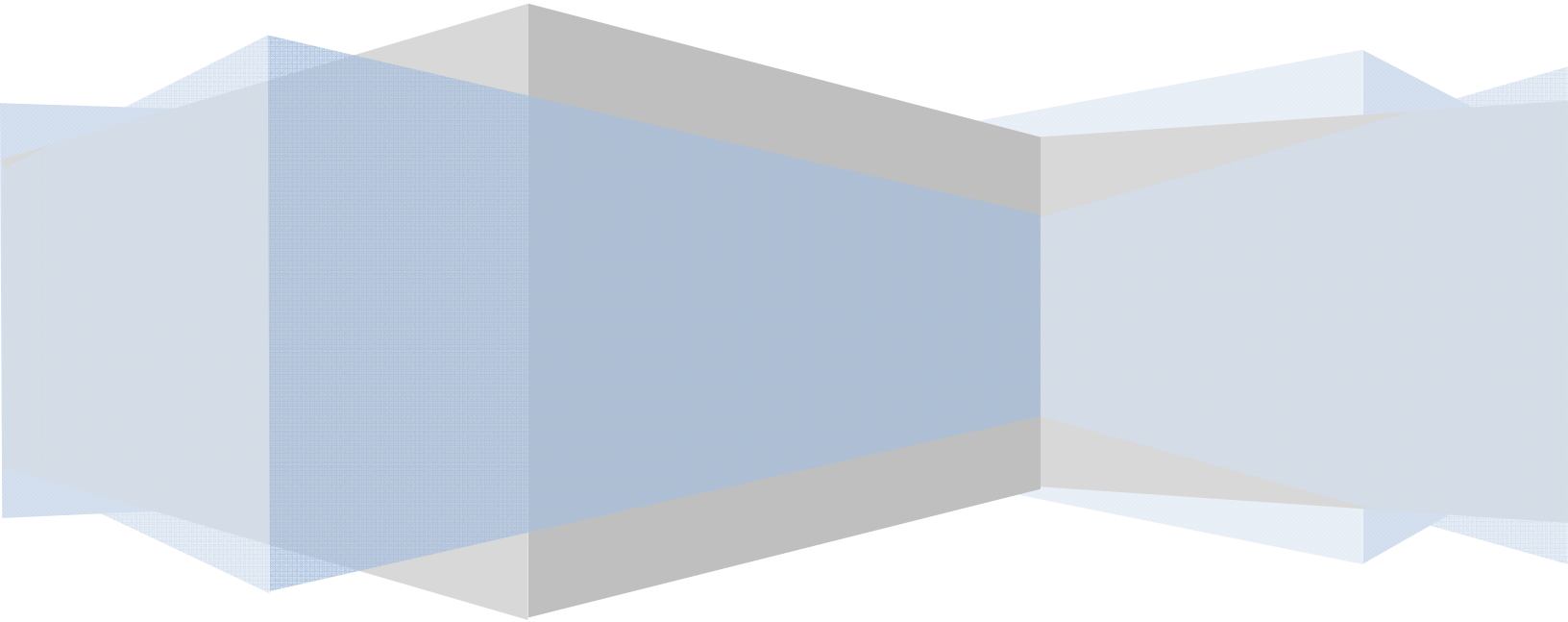

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EXECUTIVE SUMMARY

Introduction

In order to ensure that its road safety program is well aligned with the Corporate Strategic Plan, current road safety best practices, evidence-based strategies, Manitoba Public Insurance (MPI) has undertaken an independent assessment of its road safety model. The review is also intended to advise on the appropriate size of a road safety budget for MPI and if the current budget is being optimally used. Finally, it presents an opportunity to consider MPI's road safety contribution in light of two new governance elements: the Loss Prevention Strategy and Framework and the Provincial Road Safety Committee.

This assessment report provides an overview of the literature on the nature of road safety governance, policy and program planning, and how different jurisdictions structure road safety programming to address road safety issues and priorities. The literature review also provides the basis for selecting criteria against which to assess MPI's road safety model.

A jurisdictional matrix has been developed as a means to provide a summary assessment for comparison of Canadian provinces and territories against each of the criteria. A more detailed assessment of MPI's road safety program is provided and includes recommendations on how to continue enhancing its overall effectiveness in achieving road safety goals, within its mandate.

The Nature of Road Safety

Current Road Safety Models

Road safety is a complex system and a number of models have evolved to try and develop a framework that grapples with its complexities. It involves different elements of the economy and society; understanding of contributing crash factors; sustainable resourcing; education; and political will. A number of approaches and models have evolved internationally: three Es – engineering, enforcement and education; the systems approach to road safety; and the public health approach. Currently, the safe systems approach appears to be the model of choice. It seeks to identify and address the major sources of error or design weaknesses that contribute to crashes and mitigate the severity and consequences of injury.

External factors such as medical and emergency services, which are linked to other government sectors, are also affected by, and have an influence on, the operation of the road transport

system.[1] The public health model, reflected in a global focus on road safety by the World Health Organization, brings a systematic approach to road safety problem solving that has traditionally been applied to issues of disease and injury control.[2]

Road Safety Governance

Despite scant literature on the effectiveness of road safety governance models, there is global recognition that road safety losses[3] result in significant financial, economic, health care and social loss; underpinning the view that jurisdictions continue to look for more effective ways to enhance their road safety models (Great Britain Department of Transport, 2011; United Nations, 2014).The complexity of road safety contributes to the difficulties governments have in grappling with the development and implementation of solutions to issues. A review of global jurisdictions and relevant literature shows that various types of governance structures exist to implement road safety programs. While choice of structure depends on local conditions, a number of key organizational elements may be applied at all governmental and organizational levels for example, designating an organizational lead; collaborating with partners; and, sustainable funding.

A few key studies have tackled the larger issue of assessing or reviewing road safety models and move beyond a mere descriptive or conceptual approach. A nine-component analytical framework for developing, comparing, and evaluating road safety strategies was proposed by Loo et.al. (2005), that provides a systematic approach for assessing road safety strategies. The World Bank (2006) has emphasized that effective movements to generate action on road fatalities and injuries as a public health crisis will depend on scientific evidence, political will and social strategy and has articulated components for road safety projects which reflect a safe systems approach.

Policy and Program Planning

There is a growing body of scientific evidence on the steps necessary to improve road safety (OECD, 2009). Strategies exist that are proven to reduce road traffic injuries and a number of countries have successfully used these strategies to reduce their road traffic deaths. While traditional road safety strategies try to reduce crashes through analysing crash patterns and characteristics, and providing remedial measures, they do not rectify the root causes of crashes.[4]

[1] Tingvall and Haworth, 1999.
[2] *Strategic Framework for Road Safety,* Department of Transportation, London, 2011.
[3] 1.23 million fatalities in 2010 according to the United Nations (2014).
[4] Kopits & Cropper, 2005.

Also, there are many possible interventions for reducing the chance of a crash or reducing a crash's severity. Moreover, multiple responsibilities exist in ensuring road safety - those in charge of road engineering, vehicle design, driver licensing and testing, enforcement, etc. Finally, a choice must be made from a wide variety of possible interventions, each must be judged as to its effectiveness, efficiency and social acceptance, costs for public and government (Great Britain, Department of Transport, 2011).

Increasingly, road safety has been viewed as a public health problem in particular by the World Health Organization (2004) which includes road crashes among the eight leading causes of death worldwide. Reduction of crashes in all countries depends on a collaborative approach with many authorities overseeing policing, health, law and the courts, transportation and engineering, vehicle standards, driver licensing, and local planning, among other factors, depending on the jurisdictional structures and mandates. Given the complexity of authorities, mandates and relationships, there is a diversity of views on formulating and implementing road safety strategies and structures to minimize the large costs associated with road crashes (Wong et al., 2002). And while the literature speaks to varying roles in road safety development and implementation from an holistic perspective, it is important to note, for the purposes of this review, that MPI's mandate is but one in the overall governance of road safety by the province.

Funding Road Safety

Research has shown fairly conclusively that without secure and stable funding, significant action to improve road safety is unlikely. Numerous interventions designed to improve road safety have failed due to lack of sustainable funding.[5] Over the past decades, a large body of practical knowledge has been built up to show which measures are effective in which situations. Identifying and securing sustainable funding is thus a key element underlying successful road safety programs and strategies.

While many jurisdictions have chosen different approaches to road safety governance and funding, there is by no means consistency in terms of how dollars are allocated to various program areas. It often depends on how society perceives the importance of road safety, effective measures, viable and sustainable sources of funding, and political and executive will. The situation in Canada is no less complex, even when trying to compare those jurisdictions with public auto insurance where all have different responsibilities including with respect to road safety related mandates and activities. What is consistent is that sources of funding

[5] Silcock, 2002.

remain within a public sector context, that is, no private sector funds are generally budgeted for road safety programs within public sector agencies or ministries.

There are no precise guidelines about the maximum percentage of a scheme budget that is worth spending on an efficiency or effectiveness assessment.[6] But expenses for the efficiency assessment should be in proportion to the project scale and especially to the financial budget that is underlying the implementation process of the safety measure. In those cases where a detailed analysis cannot be afforded, other techniques have to be regarded (e.g. a "Mini"-CBA, where detailed time and cost consuming assessments and calculations are substituted by rough estimations with average values for effects and economic valuations and approximate data on the measure's costs).

Road Safety Model Assessment

Introduction

Given the literature reviewed, a number of elements consistently appear which provides the basis for the proposed assessment framework. The criteria identified are based on road safety jurisdictional models more generally and have been selected given their relevance to MPI's road safety mandate and role in provincial road safety governance. The report outlines MPI's structure, mandate, roles and relationships with respect to road safety and assesses them against the selected criteria. Thus, the extent to which MPI efforts achieve these elements is a good indication of the soundness of its programming and structure.

There is a description of Manitoba's road safety structure and the mandate of MPI with respect to its role in road safety. A jurisdictional comparison has been presented to provide the basis for a comparison of road safety government models with the MPI model.

Manitoba's road safety model has been developed with considered research, consultation and feedback from numerous sources. MPI identified the need to identify how programming should change to reflect demographic trends. Given the recently announced Provincial Road Safety Committee, the extensive work it has undertaken in developing its road safety program will continue to be refined and more broadly supported by its partners and stakeholder network. The assessment demonstrates MPI's approach to the enhancement of its road safety program model, including proactive consideration of the new Loss Prevention Strategy and Framework.

[6] Rosebud Thematic Network, 2006.

Summary of MPI Road Safety Model Assessment

Overall, MPI's road safety model has evolved to a sophisticated and comprehensive level in terms of key elements required of a good road safety framework. From an holistic perspective, documentation of the processes and criteria for decision making, planning, research, and monitoring, are underpinned by a data-driven and evidence-based approach and appears to exceed most Canadian jurisdictions. The current framework and its continuing enhancement will serve MPI well in re-shaping governance and program relationships including its participation in the new Provincial Road Safety Committee.

MPI has demonstrated substantial consistency with the assessment criteria and recommendations (see Appendices I and II) are intended to enhance and polish its model. They are also intended to provide guidance in terms of consistency both across the road safety model (structurally), and with respect to process and assessment criteria (functionally), recognizing that relevant work is continuing as MPI and the province maintain a high priority on road and community safety.

Conclusion

This review has been undertaken to determine if MPI's safety program is well aligned with the Corporate Strategic Plan, current road safety best practices, and evidence-based strategies as well as to advise on the appropriate size of a road safety budget for Manitoba Public Insurance and if the current budget is being optimally used. The material provided for this review, including a high-level comparison with other Canadian jurisdictions and international literature, reflects a significant commitment to road safety by the government and MPI. The principles, guidelines, policy and procedures captured in documentation are extensive, thorough, and reflected in the road safety research and literature on best practices. Their aggregation and support by corporate Executive to date, is not found in any other Canadian jurisdiction. While elements of this work are found internationally, collectively they form a superior program model, which when fully integrated and refined, should be shared as an ideal, recognizing that the model will continue to evolve, be flexible and transparent.

With respect to the appropriate size of a road safety budget and whether the current budget is being optimally used, a number of conclusions can be drawn. First, the appropriate size of a road safety budget is not subject to simple formula. In any jurisdiction the complexities of government structures; the nature of road safety issues and relative priorities; political and public will; and, competition for available resources, will drive budget decisions including the optimal use of funds. Second, to achieve these outcomes, MPI has developed a framework for

road safety prioritizing and decision making that is based on research, data, and evaluative evidence to support sound and reasonable decisions on the allocation of funding. Finally, the road safety framework also recognizes that evidence changes and thus priorities will shift; necessitating an ongoing consideration of priorities and funding needs.

In sum, the work to date and the commitment to continually enhance elements of the road safety framework to focus resources on priorities that will contribute to MPI's goals and optimize funding, has been considerable and substantive. While there is no uniform or simple formula for determining how much funding should be spent on road safety initiatives in any one jurisdiction or organization, MPI has chosen a model intended to optimize its funding, or provide a return on investment that will contribute to achieving its goals. In linking the elements of its road safety framework including priority setting and program development, priority validation and issue analysis, and, monitoring and evaluation, allocation of funding to support the programs is a creditable and supportable approach to successful road safety programming.

MPI ROAD SAFETY PROGRAM MODEL REVIEW

REPORT

Introduction

In order to ensure that its road safety program is well aligned with the Corporate Strategic Plan, current road safety best practices, evidence-based strategies, Manitoba Public Insurance (MPI) has undertaken an independent assessment of its road safety model. The review is also intended to advise on the appropriate size of a road safety budget for MPI and if the current budget is being optimally used. It presents an opportunity to consider the road safety contribution to MPI's vision in light of the new Loss Prevention Strategy and Framework which focuses on collision, claims and claims cost reduction.

Manitoba Public Insurance has historically engaged in a range of loss prevention and reduction activities that independently carry the objective to reduce the number and/or the cost of claims to the Corporation. The Loss Prevention Strategy and Framework brings all elements of loss prevention in scope, including road safety, and provides a process and criteria to support financial commitments to achieving its goals. It is within this framework that MPI has committed to optimize funding for initiatives that contribute to collision, claims and claims cost reduction.

This assessment report provides an overview of the literature on the nature of road safety governance, policy and program planning, and how different jurisdictions structure road safety programming elements, processes, funding, and relationships to address road safety issues and priorities. A review of the literature on the effectiveness of road safety programs and models has been undertaken to develop an assessment framework. The framework includes governance and program criteria which are then used to assess MPI's road safety model.

A jurisdictional matrix has been developed as a means to provide a summary assessment for comparison of Canadian provinces and territories against each of the criteria, and in relation to MPI's road safety model. This assessment is based on available information including some consultation with jurisdictional representatives to address accuracy and completeness of the information. Assessment of MPI's road safety program is provided in more detail and includes recommendations on how to continue enhancing their overall effectiveness in achieving road safety goals, within their mandate. However, context is important in determining the quality and soundness of MPI's road safety model and thus a review of the literature provides insight into the research and evidence-based best practices.

Background

The origins of the current road safety mandate for MPI may be traced back to a 1970 report by the Manitoba Insurance Committee which set out general objectives for a public auto insurance system,

including the pursuit of traffic safety and loss prevention programs.[7] The Manitoba Public Insurance Corporation (MPI/the Corporation) was created in 1971 pursuant to the *Manitoba Public Insurance Corporation Act (MPICA)* with its primary purpose to administer basic compulsory, universally available auto insurance and administer vehicle registration. S.6(1)(c.1) of the MPICA provides MPI with the power and capacity to administer *The Drivers and Vehicles Act*, and to perform the duties and exercise the powers described in subsection 2(2) of that Act. Under the DVA, MPI is designated the Act's administrator.

MPI's road safety focus is reflected in its mission and vision statements and as a key initiative and specific goal in its Corporate Strategic Plan 2012-2016: "Manitoba Public Insurance will lead driver and vehicle safety initiatives that reduce risk and protect Manitobans...." (p.17). The Corporation's focus is on maximizing opportunities of the merger of Driver and Vehicle Licensing, within the current legislative mandate as supported by road safety experts, stakeholders, and ratepayers, and provides a strong framework for reducing risk on Manitoban roads. However, there is a recognition that the global financial climate and unpredictability of weather patterns will continue to impact costs, therefore it is important that all expenditures are appropriate and necessary.[8] To this end, MPI has established a Road Safety Operational Plan (2014-2017) which is intended to support its goal to make meaningful progress on road safety priority issues and targets.

The Nature of Road Safety

Current Road Safety Models

Road safety is a complex system and a number of models have evolved to try and develop a framework that grapples with its complexities. Road safety management and oversight is complex regardless of governmental structures, approach and level of community support; especially in light of the more recent global shift to a focus on a safe systems approach. It involves different elements of the economy and society; understanding of contributing crash factors; sustainable resourcing; education; and political will. While the governments are ultimately responsible for road safety, understanding authorities, responsibilities and the need for collaboration and partnerships involving various governmental and non-governmental entities, ensures that all important aspects are adequately covered. It is equally important that there is a designated body with clear responsibility for coordination to ensure coherent programs and effective use of available resources.[9]

One model is the three Es – engineering, enforcement and education. For example, one local government in B.C. has developed a Safer City approach that integrates and leverages a 3'E' approach. Safer City integrates the three Es into one framework to maximize key resources. This is done by working with key stakeholders to:

- Reduce crashes

[7] Corporate Strategic Plan 2012-2016, p.2
[8] Corporate Strategic Plan, 2012-2016, p.3.
[9] OECD, 2014.

- Reduce calls for service for the police
- Create a safer road network, and
- Raise the profile of road safety in the community.

While a useful framework, it does not look at specific target groups, issues and risks. More recently there has been an interest in both the systems approach to road safety and the public health approach. The systems approach seeks to identify and address the major sources of error or design weaknesses that contribute to crashes and mitigate the severity and consequences of injury. A number of elements in a system need to go wrong for a serious crash to occur and the safe systems approach places a priority on systematically addressing major factors involved in specific crash types to achieve substantial road trauma reduction benefits over time. The safe system approach can be summarised as:

- Safe roads - predictable and forgiving of mistakes
- Safe vehicles - that prevent crashes and protect road users
- Safe road use - road users (drivers, riders, pedestrians etc.) that are skilled and competent, alert and unimpaired. They comply with road rules and take steps to improve safety.

Another factor that has been integrated into the safe systems model is safe speed; setting road travel speeds that suit the function and level of road safety. The safe system approach, including safe speed, has been introduced in Europe, Scandinavian countries, Australia, New Zealand and Canada. It is also the framework supported by the OECD in developing countries as a comprehensive approach to traffic safety development.

External factors such as medical and emergency services, which are linked to other government sectors, are also affected by, and have an influence on, the operation of the road transport system.[10] The public health model, reflected in a global focus on road safety by the World Health Organization, brings a systematic approach to road safety problem solving that has traditionally been applied to issues of disease and injury control.[11] The OECD (2009) specifically speaks to data collection in that governments need to encourage collaboration between the different sectors involved in collecting and reporting on road and traffic injuries, including police, transport and health services. Road traffic injuries need to be recognized by governments and communities as an important health problem and enhance support for prevention (OECD, 2009).

Road Safety Governance

The complexity of road safety described above, contributes to the difficulties governments have in grappling with road-safety related issues. However, political will in many countries has been increasing along with more recent international attention and support. The OECD (2009, 2013) identifies the need for clarity in jurisdictional leadership and that institutions designated as responsible for road safety must foster "multi-sectoral collaboration and have the necessary human and financial resources to act effectively" (p.11).

[10] Tingvall and Haworth, 1999.
[11] *Strategic Framework for Road Safety,* Department of Transportation, London, 2011.

A review of global jurisdictions and relevant literature shows that various types of management structures are in use to coordinate road safety work at the national level e.g., a high-level unit or agency established for the purpose, a designated lead department (e.g. Department of Transport), or committees or councils as in Norway and Tanzania. While choice of structure depends on local conditions, a number of key organizational elements may be applied at all governmental and organizational levels:

- Designated lead organization/position
- Assigned responsibility for planning
- Collaboration with partners
- An evidence based approach to policy and program decision making
- Sustainable funding and resourcing of initiatives
- Evaluation of the outcomes/impact of road safety actions.

Management of road safety as with management of any other tasks in the road sector requires an approach that focuses scarce resources on effective priorities; clear objectives; strategies based on evidence; and a monitoring and evaluation framework that tracks the paths to success. However, a review of the literature on the effectiveness of road safety models shows that the research evidence is scant. There has been little written about effective road safety programs and models compared to individual strategies or proposed solutions and best practices to address single issues such as new drivers, impaired driving, speed, vulnerable road users, rural roads, etc. Regardless, there is global recognition that road safety losses[12] result in significant financial, economic, health care and social loss; underpinning the view that jurisdictions continue to look for more effective ways to enhance their road safety models (Great Britain Department of Transport, 2011; United Nations, 2014).

Although many programs have been implemented across the globe, research on effectiveness is less than cohesive and often inconsistent. For example, the literature on the use of targets in road safety planning is mixed. Loo et. al. (2005) believe that a crucial component of an effective road safety strategy is to have a quantitative target. Elvik (1993) found that Norwegian counties with quantified safety targets performed better in reducing the casualty rate per kilometre of travel than did counties with qualitative targets only. Results showed that safety performance was related both to targets and to the level of spending on road safety programs.

Road safety is also complicated by the dearth of scientific literature about how decision making is shaped (Wegman, 2003). First of all, this is because of the nature of the phenomenon: no crashes are identical, crashes involve a large number of factors, crashes are incidental occurrences with low individual chances, and are spread along an extensive road network. Road crashes are due to a number of factors that are deeply rooted and reinforce each other, including drivers' attitude and behavior, insufficient enforcement of traffic and transport regulations, physical inadequacies in the urban and interurban road networks (Transportation Research Board, 2006). In addition, shortcomings in road safety information and education, inadequate driver training and testing, insufficient control of vehicles' roadworthiness, weaknesses in the rescue and emergency service, underdevelopment of monitoring

[12] 1.23 million fatalities in 2010 according to the United Nations (2014).

and evaluation systems, and fragmented institutional governance are also seen as contributors to the effectiveness of road safety outcomes (Transportation Research Board, 2006).

A few key studies have tackled the larger issue of assessing or reviewing road safety models or programs and move beyond a mere descriptive or conceptual approach. Loo et.al. (2005) found that the effectiveness of road safety programs is evaluated by five common approaches:

- Simple comparison
- Statistical analysis of casualty rates
- Cost-benefit analysis
- Before and after analysis
- Trends of secondary parameters e.g., number of projects or agencies funded

A nine-component analytical framework for developing, comparing, and evaluating road safety strategies was proposed by Loo et.al. (2005) and may be applied at various organizational levels with respect to road safety governance. The nine components are: (1) vision; (2) objectives; (3) targets; (4) action plan; (5) evaluation and monitoring; (6) research and development; (7) quantitative modelling; (8) institutional framework[13]; and (9) funding. While the first four components are essential for the formulation of a road safety strategy[14], the remaining components are key to its successful implementation. Their proposed framework provides a systematic approach for assessing road safety strategies in other administrations. The evaluation of the six case studies[15] forms a benchmarking platform for the planning, formulation, and implementation of good practices for road safety strategies.

Another approach provides a checklist for effective road safety policy implementation recognizing that it is important to understand the policy context and monitor the economic, social and political environment and obtain public support for programs and solutions (Wegman, 2003). Four core subjects are needed to achieve successful road safety policy implementation:

- Organization – there is no blueprint as to what the best type is for promoting road safety (OECD, 2002)
- Coordination of policy making and implementation (also no blueprint). There is no 'best practice'; consensus is that every country has found its own and most desirable way of coordinating and implementing road safety policy
- Financing – goals are not realistic if it is impossible to obtain the necessary financing to implement the plans, and
- Knowledge/information.

In addition, it is necessary to monitor implementation progress and support from key stakeholders. As with all policy development, road safety policy requires the systematic measurement of progress The following recommendations aim at improving policy implementation:

- obtain political commitment

[13] Institutional framework – commitment and coordination of public and private sectors. Political commitment to maintain priority. Cooperation of stakeholders needed for measures to be carried out.

[14] OECD, 2002.

[15] Australia, California, Great Britain, Japan, New Zealand, and Sweden.

- ensure that there is a road safety leadership role ('road safety champion')
- make stakeholders who implement policy items accountable for those tasks allotted to them
- organise coordination between the key-stakeholders
- establish a relation, in a well-founded way, between goals, plans, organisation, and financing
- make the best possible knowledge and information available by ways of an information system
- monitor and evaluate systematically the implementation of plans and programmes
- make trained road safety professionals available
- include target groups in policy preparation and implementation: politicians, administrators, policy makers, road safety practitioners, and the population and road users respectively (Wegman, 2003).

Wegman's approach is also supported by work in Australia that looks at overcoming barriers to creating a well-functioning safety culture (Williams & Haworth, 2007) and Peden et.al. (2004) who identified three factors critical to an effective road safety program. The World Bank (2006) has emphasized that effective movements to generate action on road fatalities and injuries as a public health crisis will depend on scientific evidence, political will and social strategy and has articulated seven components for road safety projects which reflect a safe systems approach. Of those components, the need for road safety monitoring and evaluation systems, and institutional development and support (including development of improved road safety legislation, guidelines for allocating funds to road safety, and safety planning) are consistent with other studies.

Policy and Program Planning

There is a growing body of scientific evidence on the steps necessary to improve road safety (OECD, 2009). Strategies exist that are proven to reduce road traffic injuries and a number of countries have successfully used these strategies to reduce their road traffic deaths. In the World Health Organization's (WHO) *World report on road traffic injury prevention* (2009, 2013), extensive information is provided on leading risk factors for road traffic injuries and evidence on effective interventions, and recommendations are made on how to improve national road safety.[16]

Planning for road safety, regardless of structure, needs to include evidence-based mechanisms and strategies to identify problems as well as justify, prioritize, time and coordinate implementation of solutions to address them. Common requirements for effective planning are:

- reliable, consistent and timely data and analysis
- research and information on potential measures that may mitigate or solve the problems, and their likely impact
- clear criteria for justifying resource use, appraisal of alternative measures, and prioritizing of selected activities.

While traditional road safety strategies try to reduce crashes through analysing crash patterns and characteristics, and providing remedial measures, they do not rectify the root causes of crashes.[17]

[16] OECD, 2014.
[17] Kopits & Cropper, 2005.

Approaches in Holland emphasize prevention at the planning and development stage (Van Uden and Heijkamp, 1995). Greater attention is paid to an integrated approach to traffic safety. An evaluation of the Dutch approach found that the key factors for success or failure of road safety initiatives are political will, proper organization and knowledge (Wegman et.al., 1991).

Also, there are many possible interventions for reducing the chance of a crash or reducing a crash's severity. Moreover, multiple responsibilities exist in ensuring road safety - those in charge of road engineering, vehicle design, driver licensing and testing, enforcement, etc. Finally, a choice must be made from a wide variety of possible interventions, each must be judged as to its effectiveness, efficiency and social acceptance, costs for public and government. Thus many jurisdictions have moved and are moving to a more sophisticated method of monitoring road safety progress to help assess and prioritize actions and impact assessment based on a systems approach (Great Britain, Department of Transport, 2011).

Increasingly, road safety has been viewed as a public health problem in particular by the World Health Organization (2004) which includes road crashes among the eight leading causes of death worldwide. Reduction of crashes in all countries depends on a collaborative approach with many authorities overseeing policing, health, law and the courts, transportation and engineering, vehicle standards, driver licensing, and local planning, among other factors, depending on the jurisdictional structures and mandates. Given the complexity of authorities, mandates and relationships, there is a diversity of views on formulating and implementing road safety strategies and structures to minimize the large costs associated with road crashes (Wong et al., 2002).

Targets can be useful where they encourage action across multiple agencies and countries but they must be considered in terms of level of use. The literature on the use of targets in road safety planning is mixed. Loo et. al. (2005) believe that a crucial component of an effective road safety strategy is to have a quantitative target. Elvik (1993) found that Norwegian counties with quantified safety targets performed better in reducing the casualty rate per kilometre of travel than did counties with qualitative targets only. The best performance was achieved by counties with highly ambitious quantified targets. In addition, the safety performance was related both to targets and to the level of spending on road safety program.

Alternately, a similar comparison conducted at the country level showed that the evaluation of effects on road safety performance of quantified road safety targets was inconclusive and no causal relationships could be drawn (Elvik, 2001). Nonetheless, the results did suggest a positive statistical association between the setting of quantitative road safety targets and the percentage reduction of road accident fatalities in the countries concerned. Moreover, more ambitious and longer term targets were statistically associated with greater than average casualty reductions (European Transport Safety Council, 2003). For example, over-arching national targets may not be the most appropriate course for road safety partly because it is not possible to determine, a decade or more in advance, what level of intervention would be economically efficient or necessary to meet any given target and if it would be a proportionate response when analyzed against other priorities. It is this latter approach that is

consistent with Canada's Road Safety Strategy 2015. Unlike predecessor plans, the Road Safety Strategy 2015 does not include hard percentage based targets, but seeks to achieve directional downward trends in fatalities and serious injuries throughout its five-year duration. While the Road Safety Strategy 2015 will not include hard quantitative targets like RSV 2010, it does not prevent individual jurisdictions, should they wish to do so, from establishing their own targets.

Jurisdictions and road safety authorities must also continually be looking for changes in the environment, including technology, that impact the effectiveness of road safety elements, interventions, practices and behaviours. Data, research, and evidence should support changes to policies and programs, which often requires collaboration and partnership due to the complexities of jurisdiction, responsibilities and road safety factors as noted above. Key elements of an effective road safety framework include sharing of evidence and data to support better informed decision making and encourage an evidence-based approach to interventions.

In sum, while the literature speaks to varying roles in road safety development and implementation from an holistic perspective, it is important to note, for the purposes of this review, that MPI's mandate is but one in the overall governance of road safety by the province. Other roles are fulfilled by, for example, the Ministry of Infrastructure and Transportation, policing and community groups. Thus assessment criteria, drawn from the above literature, have been selected based on their relevance to MPI's mandated contribution to the overall provincial road safety portfolio.

Funding Road Safety

Without secure and stable funding, significant action to improve road safety is unlikely. Numerous interventions designed to improve road safety have failed due to lack of sustainable funding.[18] Over the past decades, a large body of practical knowledge has been built up to show which measures are effective in which situations. The resources available, however, are rarely if ever sufficient to be able to do everything so a decision must be made about which measures to implement.[19] Identifying and securing sustainable funding is thus a key element underlying successful road safety programs and strategies.

Road safety is normally regarded as a key responsibility of government and programs and initiatives have generally been financed through the budgets of concerned public sector agencies, including Crown agencies and public insurers in the Canadian context. Due to the varying structures, roles, responsibilities and the definition of "road safety-related", it is difficult to determine and compare the full costs of initiatives and programs. A detailed study in the UK has shown that most public sector spending is incurred by ambulance and hospital services (50 percent) and the police (27 percent). The remaining 33 percent spent by the public sector includes spending by the transport ministry, the

[18] Silcock, 2002.
[19] Rosebud Thematic Network, 2006.

national road agency and local authorities. Nearly 57 percent of the total expenditure on road safety is incurred by the private sector (e.g., for driver training and testing, vehicle inspection).[20]

The decision making process for safety interventions is also complex, involving varying governance structures, a number of actors (experts, public, politicians, etc.) and issues (environment, economy, congestion) competing for scarce resources. The risk of making poor decisions and the cost of making better decisions can be reduced by the use of reliable studies and data on the effectiveness of different safety measures (OECD, 2012) including road safety governance. A number of countries have introduced legislative requirements for insurers of compulsory third party injury liability to invest in road safety. Finland and the State of Victoria in Australia have been recognized by the World Bank (1997) as exemplars in this approach.

While many jurisdictions have chosen different approaches to road safety governance and funding, there is by no means consistency in terms of how dollars are allocated to various program areas. It often depends on how society perceives the importance of road safety, effective measures, viable and sustainable sources of funding, and political and executive will. Zeitlow (2006) contends that in high income countries (as opposed to low income countries) expenditures range from 10-15% of the cost of road construction on rehabilitation, and maintenance road safety engineering measures, while 2.5 -7.5% of that amount goes to enforcement and 3 - 4% on road safety programs. Specific budgets for road safety research are less common, but are available in some countries (e.g., in Austria, the U.S. and Switzerland). In general, overall road safety budgets are allocated in relation to the national annual budget, GDP, and the size of the countries.[21] However, the actual target of how much should be spent on road safety measures, including research, depends on the road safety situation in a specific jurisdiction, the perceived road safety improvements in relation to other spending priorities, and the ways and means available to effectively and efficiently improve road safety.

The situation in Canada is no less complex, even when trying to compare those jurisdictions with public auto insurance where all have different responsibilities including with respect to road safety related mandates and activities. What is consistent is that sources of funding remain within a public sector context, that is, no private sector funds are generally budgeted for road safety programs within public sector agencies or ministries. In some Canadian jurisdictions, private insurers may benefit from public investment in road safety activity and may provide support to initiatives where partnerships contribute to reduced collisions and their related costs, for example, in educational campaigns.

Cost Benefit and Cost Effective Analysis

Monetary assessment methods are often used to spend a fixed budget on the most efficient measures (in economic terms). The two main methods used to assess road safety measures, including various structural, policy and governance options, and support funding decisions, are cost benefit and cost effectiveness analysis. Cost benefit analysis is a systematic approach to analysis strengths and

[20] Global Road Safety Partnership, online at http://www.grsproadsafety.org/
[21] Conference of European Directors of Roads, 2008.

weaknesses of various alternatives. It presents benefits and costs in monetary terms and adjusts for the time value of money so that all flows of benefits and project costs over time are expressed on a common basis in terms of their net present value. Cost effectiveness analysis is a form of economic analysis that compares the relative costs and outcomes (effects) of two or more courses of action. A cost-benefit or a cost-effectiveness ratio can only inform about the (economic) efficiency of an alternative.

Although cost-effectiveness studies are widely adopted in order to prioritise road safety initiatives, other factors are also considered. Factors like the users' acceptance of a measure, implementation strategies (e.g. involvement of citizens concerned by a measure), and financing considerations, regional Specifications or political interests can rarely be included in the monetary assessment. In Switzerland, for example, the feasibility of implementing each measure, the protection of vulnerable users, the impact of each measure on personal freedom, and its compatibility with goals in other fields of federal policy are all taken into account. In France, a general socio-economic assessment is carried out, taking into consideration not only road accident costs, but also the costs of other effects such as time benefit and environmental issues. Therefore decision makers need to debate other relevant factors besides economic terms. However, monetary efficiency assessment helps to increase the transparency and objectivity of decision making.

There are no precise guidelines about the maximum percentage of a scheme budget that is worth spending on an efficiency or effectiveness assessment.[22] But expenses for the efficiency assessment should be in proportion to the project scale and especially to the financial budget that is underlying the implementation process of the safety measure. In those cases where a detailed analysis cannot be afforded, other techniques have to be regarded (e.g. a "Mini"-CBA, where detailed time and cost consuming assessments and calculations are substituted by rough estimations with average values for effects and economic valuations and approximate data on the measure's costs).

Road Funds

One financing model has been the designation of road funds in various countries. Setting national goals on road safety is common practice among European countries where special funding is allocated to the improvement of road safety levels.[23] Funds are allocated to various activities in accordance with the specific road safety targets and priorities set out in each country's road safety plan.

The revenue for road funds typically comes from a levy added to the price of fuel, vehicle registration fees, direct road user charges such as tolls and weight-distance fees. Some road funds try to encourage spending on road safety by allocating a percentage of their revenues for road safety. For example, the Ethiopian Road Fund Board has recently proposed that up to 3 percent of the road fund be allocated for road safety.

[22] Rosebud Thematic Network, 2006.
[23] Conference of European Directors of Roads, 2008.

New Zealand has had a road fund since 1953 with its most current iteration restructured in 2004 and named the "National Land Transport Fund". The fund operates on the principle that road users will have to pay for the usage of roads and proceeds are managed outside the government's budget. Revenue comes from:

- a portion of the fuel levy added to the price of gas, LPG and CNG
- weight-distance charges paid by diesel vehicles
- motor vehicle registration fees
- interest earned on the fund account
- revenues earned from sale of surplus and
- refund of GST (NZ equivalent of VAT).[24]

Total revenue for 2005/6 was about $1.2 billion US with funding allocated to policing, road safety engineering measures, road safety works and services which are competitively bid and contracted out. Actual outputs are funded on their merits using a cost/benefit approach.

In Greece, according to 2005 data, a total of approximately €93 million was allocated to road safety actions, with large amounts allocated to mainly short-term interventions at hazardous locations, short-term interventions on the national road network, and enforcement of better driving behaviour by means of electronic cameras. In Iceland, according to the national road safety plan, approximately €19 million was spent directly on road safety in the period 2005–2008, excluding the costs of major changes in infrastructure, whereas in Ireland in 2006, €33 million was allocated to road safety initiatives.

In Fiji, auto insurance is provided by a small number (5-6) of companies and premiums are controlled by the Commissioner of Insurance. With the establishment of the National Road Safety Council (NRSC) a levy of 10% of third party motor insurance premiums was introduced to finance the NRSC. The income from the insurance companies provides about 60% of NRSC's annual income with a further 10% being received from government. A further 30% is raised by the council from commercial sponsorship (vehicle dealers, oil companies and banks) and from fund-raising.

Road Safety Model Assessment Framework

Given the literature reviewed, a number of elements consistently appear which provides the basis for the proposed assessment framework. The criteria identified below will be used to assess MPI's road safety model. These criteria, while based on road safety jurisdictional models more generally, have been selected given their relevance to MPI's road safety mandate and role in provincial road safety governance. Thus, the extent to which MPI efforts achieve these elements is a good indication of the soundness of its programming and structure:

1. demonstrated road safety leadership

[24] Zietlow, 2006.

An organizational lead for road safety planning and oversight should be clearly articulated. Alternately, those organizations with key roles in road safety programming should articulate their role within their mandate and relationships to other key road safety partners.

2. appropriate organizational structure to support road safety priorities

Structure and governance relationships, roles, responsibilities and financial commitments among government partners with a role in road safety, should be clearly articulated in a road safety model and plan. This helps to ensure efficient use of funds and other resources and commitment to a safe systems approach which necessity prioritizing and collaboration among road safety partners.

3. road safety planning – flexible and including targets where appropriate

Jurisdictions need to demonstrate that there is an over-arching commitment to an holistic approach to road safety planning. This necessitates collaboration with other government partners and relationships should be captured in government document or information. An identifiable lead should be clear as well as the relationships to the roles and responsibilities of other partners. This is generally seen as an element of governance and legislated mandate as well as a government commitment.

4. the need for sound data and research to support policy and program development and interventions (evidence base)

Jurisdictions should explicitly note their commitment to an evidence-based approach to road safety policy and program decision making and prioritizing. Commitment to enhancing the reliability and accessibility of data is also valuable.

5. ongoing environmental monitoring (evidence base)

Technology, political, environmental and social contexts and constantly changing and those responsible for road safety planning need to have mechanisms in place to proactively monitor progress and change that impacts the elements of a safe systems approach: road users, vehicles, speed and roadways.

6. sound decision making criteria to determine priorities

A demonstrated commitment to evidence-based criteria for decision making and prioritizing. Criteria and a process are articulated.

7. appropriate funding to support priorities

Available budget and expenditure information to demonstrate this commitment.

8. collaboration and coordination between and among key road safety partners and stakeholders

Beyond government, roles and relationships of external partners and stakeholders should be specified as part of a collaborative approach to identifying and addressing road safety priorities.

9. ongoing monitoring and evaluation of impacts and outcomes

Jurisdictions should articulate the ongoing approach to data monitoring and analysis; policy and program development and implementation; and outcomes. In addition, there needs to be a commitment to evaluating road safety initiatives to ensure their effectiveness and value; are they contributing to achieving road safety goals in a cost-effective and efficient manner.

The application of these criteria to MPI's road safety model will result in a qualitative review. Results will provide more detailed analysis and recommendations on improvements as appropriate, including a comparison with other Canadian jurisdictions as a means of determining relative accomplishment of MPI's road safety model.

Road Safety Structure in Manitoba

Introduction

Recognizing that the jurisdiction of the Manitoba Public Utilities Board relating to road safety is focused on the question of whether the proposed expenditures of the Corporation are prudent and reasonable, MPI's focus on road safety has continued to evolve with an enhanced profile on its website, in its annual report, and in its mission to work with Manitobans to reduce risk on its roads. The following section outlines the MPI's structure, mandate, roles and relationships with respect to road safety.

MPI

The Manitoba Public Insurance Corporation (MPI/the Corporation) is established under *the Manitoba Public Insurance Corporation Act (MPICA)*. Its primary purpose is to administer the basic compulsory, universally available auto insurance program. MPI also offers competitive optional expanded benefits auto insurance for all Manitobans and competitive auto insurance for fleets based in Manitoba. Under the *MPICA*, the Corporation has the powers and capacity to:

- Introduce, establish, supervise, finance and promote research or educational programs relating to health, rehabilitation, safety and the reduction of risk in respect of any branch or class of its insurance, either on its own or in partnership with another entity; and
- Promote or carry out research into the causes of crashes and the more equitable distribution of losses resulting from highway traffic collisions.

MPI also has the power and capacity to do anything necessary or required to carry out its functions including conducting surveys and research programs, and obtaining statistics for its purposes. It has the broad power to introduce, establish, supervise, finance and promote programs relating to health,

rehabilitation, safety and the reduction of risk in respect of any branch or class of insurance in which the corporation is engaged and to carry it out either alone or jointly with other government body or private organizations. Finally, MPI can promote or carry out programs of research into the causes of accidents and research into the more equitable distribution of losses resulting from road crashes.

S.6(1)(c.1) of the MPICA provides MPI with the power and capacity to administer *The Drivers and Vehicles Act*, and to perform the duties and exercise the powers described in subsection 2(2) of that Act. Under the DVA, MPI is designated the Act's administrator. MPI must perform the duties that are imposed on it under this or another Act or regulation and any other duties that the Minister may require. S.2(3) states that the minister may give directions to the administrator or the registrar to achieve the purposes of this Act, *The Highway Traffic Act, The Off-Road Vehicles Act* and the regulations under any of those Acts, including, but not limited to, directions for the purpose of (a) achieving provincial objectives and priorities respecting the regulation of Manitoba highways and persons and vehicles using highways and (c) coordinating the work of the administrator and the registrar with the programs, policies and work of the government in regulating highways and transportation.
While Manitoba Public Insurance has a vested interest in improving road safety in Manitoba, it is recognized that the Corporation is but one provincial organization with areas of responsibility and accountability for elements of road safety programming. Regardless, MPI has developed its own road safety program with strategies to:

- Develop and manage education initiatives about the causes of accidents and how to prevent them, and
- Support community-based initiatives that promote road safety awareness and education.

MPI currently reports through the Ministry of Justice and collaborates with the Ministry of Infrastructure and Transportation and other agencies and partners to deliver road safety benefits. It leads initiatives on education to increase opportunities for drivers to enhance their driving skills and to increase public concern regarding risky driving behaviour. Road safety goals include:

- Having road safety become (and remain) a provincial priority for Manitobans as well as for decision-makers who have a mandate to enhance public safety.
- Reducing public tolerance for injuries and fatalities related to road transportation and promoting an environment where crashes will become (and remain) a significant public health concern.
- Ensuring that Manitobans become more safety conscious, and the organizations tasked with improving road safety will incorporate the principles of safety conscious planning into their programs, projects, initiatives, and campaigns.

Other road safety-related program areas are housed within the Ministry of Infrastructure and Transportation.

Manitoba Infrastructure and Transportation

Most recently, the province has announced the creation of a new road safety committee which will be jointly chaired between MPI Manitoba Infrastructure and Transportation (MIT). To date, there had not been an explicit recognition of MIT's road safety role but this change in governance elevates road safety further on the government's and MIT's agenda. Its transportation responsibilities include corporate policy and provincial legislation development, motor carrier safety and regulation enforcement, carrier permits and the development and implementation of sustainable transportation initiatives. MIT also provides ongoing government policy support for driver licensing and vehicle registration issues. Finally, it provides an appeal procedure through the Licence Suspension Appeal Board, for citizens whose driving privileges have been suspended while driver fitness falls to the Medical Review Committee.

Jurisdictional Comparison

Canada's Road Safety Strategy 2015

In Canada, responsibility for road safety is divided among various levels of government which come together under the auspices of the Canadian Council of Motor Transport Administrators (CCMTA) to develop national guidelines and standards for adoption and application by individual jurisdictions. The CCMTA led the development of Canada's third national road safety strategy which is based on a safe systems approach. The strategy articulates four objectives:

- raising public awareness and commitment to road safety
- improving communication, cooperation and collaboration among all stakeholders
- enhancing enforcement
- improving road safety information in support of research and evaluation.

Unlike predecessor plans, the current strategy does not include hard percentage targets at the national level; progress is measured using rate-based measures to determine trends in fatalities and serious injuries. This approach is not intended to prevent jurisdictions from establishing their own targets and indeed, they should "own" the strategy and use its best practices framework to develop their own plans. This approach underscores the need for collaboration and cooperation in the development of road safety strategies to reduce fatalities and serious injuries on Canada's roadways.

British Columbia

Primary leadership for road safety falls to RoadSafetyBC in the Ministry of Justice. RoadSafetyBC launched the government's Road Safety Strategy in August 2013, based on both safe systems and public health platforms. The strategy was a result of considerable collaboration with many partners and stakeholders who have agreed that research and data specific to B.C. will be enhanced to better support policy development, program evaluations, public education and interventions the field and communication. The government committed to implementing a new governance structure for road safety to strengthen and expand partnerships, encourage input and leverage everyone's efforts to

reduce road trauma. The government also committed to enhancing road safety research capacity to support operational decision making and development of legislation and policy.

In addition to the strategy's principles of a comprehensive safe system approach and public health perspective, and collaborative effort focused on results, focus will be on sustaining successful measures and identifying and addressing new areas that require attention. Based on analyzing motor vehicle crash trends and consulting with stakeholders. The fourth and final principle is to encourage innovation and flexibility among partners.

Measuring success and reporting on progress is based on continually declining year-to-year numbers of fatalities and serious injuries from road crashes. Specific initiatives may also have specific targets such as the new approach to drinking and driving which included a target of a 35% reduction in alcohol and drug motor vehicle related deaths by the end of 2013.

The Ministry of Transportation also has an objective to improve highway safety and reliability. Given the Ministry's responsibility for commercial vehicle safety and enforcement (commercial motor carriers and the National Safety Code), a second related road safety objective is to provide effective road safety enforcement, education and programs for the commercial transport industry as well as:

- Establish and enforce regulations to enhance vehicle safety in B.C. and to ensure public safety;
- Participate with other jurisdictions on initiatives to coordinate and harmonize programs, policies and standards for commercial vehicles;
- Ensure information systems provide quality and timely commercial vehicle safety data for compliance and enforcement; and
- Build on existing technologies and policies to promote safety and improve efficiency for the commercial transport industry

Provincial budget documents do not appear to provide dollar amounts for specific road safety initiatives. More specifically, there are budgets for commercial transport regulation and highways operations which both inherently include road safety considerations. Commercial transport regulation was budgeted at $1.5m for 2014/15 and planned at $1.54, $1.55 and $1.56 m for the next three fiscal years respectively.

Another key road safety partner is the Insurance Corporation of B.C. (ICBC). The corporation works with a network of partners across the province to deliver road safety programs that help protect customers from risks on the road by preventing and minimizing the impact of crashes and crime. As a Crown corporation, ICBC is committed to making investments in road safety to improve the safety of all communities; reduce crashes and losses on B.C. roads; and to assist in managing claims costs. Its partners include the Ministry of Justice and Attorney General, the enforcement community, the Ministry of Transportation and Infrastructure, municipalities, community groups, and volunteers. Policing agencies are also key partners in road safety planning and program implementation. ICBC makes targeted investments in enhanced traffic police enforcement that focuses on high-risk driving

behaviours and locations. Its partnership with the Ministry of Transportation focuses on contributions to road improvements designed to make high-crash intersections and corridors safer for drivers.

Internally, ICBC is responsible for driver licensing where licensing and testing standards (including graduated licensing for new drivers), and driver training regulation, play a key role in turning out safe drivers.

While no specific goals or strategies are articulated in ICBC's strategic plan, its 2013 Annual Report stated that $43 million was invested in road safety programs. In 2014, $7.7 million was dedicated to road improvements and their related studies. Using a safe systems approach, road safety investments are targeted to major risks that impact customers and costs in the business including distractions, impaired driving, unsafe speed and intersection crashes. In addition, to align with the corporate focus on managing bodily injury claims frequency, some programs were adjusted to focus on rear-end collisions and those involving cyclists and pedestrians. Policing collaboration is also focused on loss prevention to help reduce the impacts of auto crime, including programs that target thieves and help reduce auto crime in high-risk areas, and programs to prevent and reduce the impact of fraud on its customers.

The corporation takes a collaborative approach with respect to road safety initiatives, for example, partnering with the provincial government and the RCMP on enhanced traffic enforcement and the Intersection Safety Camera program, with 140 dedicated digital cameras in 26 communities to deter drivers from running red lights. ICBC also contributed to over 400 road safety engineering projects through its partnerships with road authorities to reduce crashes at high-risk road locations.

B.C. engages in ongoing environmental monitoring through a number of channels:

1) CCMTA membership and participation
2) BC Road Safety Strategy
3) Regular issues and media monitoring
4) Public consultations on emerging issues
5) Liaising with Ministry of Justice barristers on relevant litigation
6) Periodic research projects conducted by the RoadSafetyBC on areas of emerging interest.

With respect to evidence-based criteria for decision making and prioritizing, RoadSafetyBC strives to provide sound evidence basis for recommendations, and works within the data rules framework established by its Research and Data Unit. Significant decisions and project prioritization are linked to the government and ministry strategic plans.

Alberta

Alberta's first Traffic Safety Plan (TSP) was introduced in 2007 aimed to contribute to the province's over-arching goal of improving Albertans' quality of life and provide safe and secure communities. A comprehensive strategy, it was designed to address crash factors relating to drivers, passengers, pedestrians, cyclists and other vulnerable road users. It outlined initiatives to help prevent motor vehicle

crashes, build safer roads, establish and enforce traffic laws and better educate Albertans about traffic safety; reflecting the Three E's approach to road safety program design: enforcement, engineering, and education. To provide leadership and implement the TSP strategies, the Office of Traffic Safety (OTS) was established. Partnership and collaboration were key to the development and successful implementation of the plan as was leadership and a governance structure which reflected the government's focus on road safety.

Road safety's governance structure in Alberta has leadership at both the Ministerial and Deputy Minister level, with responsibility for various transportation safety roles. The lead ministry is Alberta Transportation which houses the Office of Traffic Safety within the Safety, Policy and Engineering Division. The Deputy Ministers' Coordination Committee has oversight of the current Traffic Safety Plan's development and implementation. Other participating groups from Alberta Transportation include the Corporate Service and Information Division and the Delivery Services Division. Various other government departments are engaged in implementing the TSP including Aboriginal Relations; Agriculture and Rural Development; Education; Health; Human Services; Justice and Solicitor General; Municipal Affairs; and Service Alberta.

Throughout the life of the plan, Advisory Working Committees and Subject Matter Expert (SME) Groups are formed to take a strategic focus on an issue. The SME groups are integral part of the plan as they bring key stakeholders together to work towards the actions in the plan.[25] In the next plan it is recommended that both a driver and vehicle SME group be added. In addition to these SME's there are local traffic safety committee/groups at the grass roots community level across the province. The regional traffic safety consultants (14) are active participants at the local level.

The subject matter expert groups include expertise on research and data which has been identified as necessary for well-functioning and effective road safety program models. In addition, Alberta establishes targets, monitors and analyses its data, and evaluates measures to determine if they are having the desired impact, for example, initiatives related to unbelted occupants, alcohol-related collisions and speed-related collisions.

Alberta's current Traffic Safety Plan 2015 has evolved to reflect the safe systems approach consistent with the Canadian, OECD and other European models including setting priorities and targets after reviewing and analyzing collision data. Targets provide a focus for the traffic safety strategy and influence decisions about coordination, legislation and promotion needs; funding and resource allocation; monitoring and evaluation as well as research, development and knowledge transfer. Targets represent the road safety results the province wishes to achieve over a given timeframe and have also been set for intermediate outcomes, for example, reduction in speed, increased seat belt usage, etc. In addition, in all of its iterations, has identified opportunities for research to be completed. New legislative strategies would have evaluation plans, for example, for the enhanced impaired and distracted driving sanctions.

[25] The SME Groups are the Provincial Impaired Driving Committee; Communications; Research; Engineering; Enforcement; Alberta Occupant Restraint Committee; and Work Safe Alberta.

The Alberta TSP was developed and very closely aligned to national strategies and outcomes. Business areas of the OTS were established and FTE's were allocated to each of the following areas.

Executive Directors Office- responsible for leadership and oversight of the strategy, grants, financial support for Subject Matter Expert Committee's, additional technologies (2 FTE's, 1 secondment)

Community Mobilization - responsible for the development of Traffic Safety Strategies in Alberta Communities, including Aboriginal and Metis Settlements. (2FTE's, 15 contract employees)

Research, Communication and Public Education -responsible to provide ongoing research and evaluation to support TSP strategies. Provided education and awareness strategies to support the Traffic Safety Calendar (7 FTE's, contract funds for research)

With respect to prioritizing funding for road safety programming, budgeting for the Traffic Safety Plan initially focused on the development of return on investment measures for initiatives. A business case was developed that looked at where money was being spent on road safety in the department and recommended establishing a sustainable source of ongoing funding for road safety initiatives.

Prior to the establishment of the OTS the department spent approximately, $2.4 million on the Traffic Safety Initiative (TSI). The TSI funds were spend on education and awareness tools ranging from Traffic Safety giveaway items (e.g., erasers, pens) to radio, online and bill board information related to various Traffic Safety Issues. This education funding was the core starting point of estimating the cost of the business of the OTS. Because there was so many more topics to cover these education funds were increased to $5 million for TSP. There was an additional $3 million for the remaining activities and technologies listed above. Thus the original budget for the Alberta TSP was approximately $8 million dollars. The Office of Traffic Safety budget for 2014-2015 was estimated at $8 million.

Saskatchewan

Responsibility for road safety in Saskatchewan has been with Saskatchewan Government Insurance (SGI) since the mid-1980's when the Driver and Safety Services Department was transferred to SGI from the Department of Highways. Although SGI is responsible for virtually all road safety legislation, regulations, programs and policy, some aspects of commercial vehicle safety remain with the Ministry of Highways and Infrastructure.

In 2005, SGI established a long-term traffic safety strategy which set out goals for 2006-2010.[26] Key areas of focus were: reducing impaired driving, improving use of occupant protection (seatbelts, child restraints and head restraints); improving intersection safety; better speed management; additional

[26] Saskatchewan Traffic Safety Strategy 2011-2015.

roadway-based solutions (design and operation of road systems); and, addressing human factors (new drivers, aging drivers, distracted or fatigued drivers, motorcycle and bicycle safety).

In 2010, the next iteration of the traffic safety strategy was developed for the 2011-2015 timeframe. The purpose of this strategy includes helping to prioritize traffic safety expenditures and ensure traffic safety countermeasures are cost-effective and in areas where they can have the greatest impact in reducing the number and severity of collisions. This strategy relies on data and research to help identify dominant factors and pathways causing traffic collisions in the province, and to identify opportunities for achieving the greatest crash reductions through program renewal and enhancements, new programs and partnerships. Thus, detailed program and tactical plans are data-driven and evidence-based.

Traffic safety initiatives are expected to deliver programs that target the most serious road safety risks and minimize the harm (i.e. death, injury and property damage); proactively partner with stakeholders and individuals; ensure that programs and tactics are monitored and evaluated; and are to be guided by a clear plan that considers both provincial and local needs. Cost-benefit analysis is used to estimate the impacts of individual safety programs and assist in guiding program/initiative selection. Analysis is pursued from two perspectives: overall societal costs and claim costs paid by SGI.

Traffic safety management usually involves a systems approach to develop safer roads, safer drivers and safer vehicles. Although SGI is responsible for road safety, many factors outside of SGI's control influence the occurrence of property-damage-only, injury and fatal collisions, such as the provincial economy and weather conditions. SGI also relies on collaboration working closely with many partners including the Ministries of Justice, Highways and Infrastructure, and Education.

SGI's 2013 budget for road safety was $28.72 million. This includes safety programs such as driver training and examinations or driver medical review; support service costs, such as systems, human resources, facilities; ongoing traffic safety initiatives; traffic safety advertising; engineering, education and awareness; enforcement-based initiatives; and traffic safety evaluation group and associated projects. Initial estimates suggest that the introduction of tougher drinking and driving laws, wildlife collision mitigation measures, expansion of traffic enforcement and photo radar would cost an estimated $52.5 million over the next five years and result in an estimated $162.3 million savings in claims—a five-year benefit cost ratio of 3.1

Ontario

In Ontario, responsibility for road safety related programs, driver and vehicle licensing, motor carrier regulation and compliance, infrastructure, road safety public education and awareness rests with the Ministry of Transportation. While Ontario does not have a formal road safety plan, strengthening road safety is identified as a Ministry priority in the Minister's September 25, 2014, mandate letter for the Ministry. The Ministry's recent initiatives and projects continue to align with the vision and principles of CCMTA's Road Safety Strategy 2015. Strengthening road safety is also a publicly identified ministry

priority. Recent areas of focus have included pedestrian, cycling and truck safety, driver distraction and impaired driving.

Three divisions within the Ministry have a role in road safety development and implementation:

- Road User Safety
- Provincial Highways Management
- Policy and Planning.

These divisions take an evidence-based approach to road safety development by looking at collision data and trends, research and best practices. Currently there is no explicit road safety plan, prioritization or evaluation framework but staff look at emerging trends, other plans such as CCMTA's, and what other jurisdictions are doing to identify its key initiative.

The focus is on being proactive and a collaborative approach with stakeholders is critical to this approach. Collaboration has been identified as key to enhancing transportation infrastructure and planning and this philosophy is also embedded in road safety initiatives, for example, in establishing a regulatory framework for autonomous vehicles and, working with the Minister of Health and Long-Term Care, stretcher transport services.

Ontario annually monitors its progress in improving road safety through the Ontario Road Safety Annual Report (ORSAR). The report provides valuable data and guides the government as it determines where more effort is required. ORSAR is used by the Ministry for policy development, program analysis, road safety research, public education and performance measurement. ORSAR data is also used by road safety and injury prevention organizations, transportation associations, research institutions, police services and other ministries and governments. To produce ORSAR, the ministry collects data from several different sources, including police services, other ministries, and the Office of the Chief Coroner of Ontario.

Collaboration has been identified as key to enhancing transportation infrastructure and planning and this philosophy is also embedded in road safety initiatives. Specific to road safety, the ministry works with 150 road safety partners and community groups to raise awareness of safe driving practices through local and provincial initiatives.

Quebec

Currently the Société de l'assurance automobile du Québec (SAAQ) plays a key role in road safety planning and programming along with its responsibilities for driver and vehicle licensing and registration; driver fitness and remedial programs; heavy vehicle regulation; and road safety education, awareness and communication. Its mission is to protect individuals against the risks of road crashes by:

- Carrying out road safety promotion and prevention campaigns
- Setting insurance contributions and manages the trust patrimony
- Managing access to the road network (drivers' licences and vehicle registration)

- Monitoring and controlling the transportation of persons and property, and
- Compensating road accident victims and facilitating their rehabilitation.

The SAAQ has a Road Safety Research Section which provides research reports on various aspects of road safety, statistics and other data related to research conducted by the SAAQ.

The Ministry of Transportation (MTQ) is currently working on a new governance structure for road safety in Quebec. An integrated road safety plan is also in development but not yet approved. It is based on the Safe System approach. The Ministry of Transport Quebec has been responsible for producing a high standard, safe and reliable transportation network.

The province also has a road safety roundtable called " Table quebecoise de la sécurité routière" (Highway Safety Roundtable) which is currently being reviewed**.** It was established in December 2005. Its mandate is to make recommendations to the Minister of Transport in order to improve the balance of road accidents in the province of Quebec. It consists of nearly 50 members representing road users, the municipal sector, the police community, government agencies, departments and other sectors, such as academia and hospitals. In early April 2015, governance of the roundtable was transferred from the Ministry of Transportation to the Societe de l'assurance automobile du Quebec (SAAQ).

New Brunswick

The Ministry of Public Safety in New Brunswick (NB) is responsible for policy and program development for driver licensing and vehicle registration; driver and vehicle safety; and carriers and commercial vehicles, while administration of certain services is delivered by Service NB. The Motor Vehicle Branch within the Ministry provides licensing and registration services for motor vehicles (motor vehicle sales, ATV's), driver schools and instructors, dealers, garage and inspection stations.

Service New Brunswick has responsibility for service delivery of the motor vehicle programs throughout New Brunswick, whereas the program administration and responsibility rests within the Motor Vehicle Branch. The Branch is responsible for the accurate maintenance of all driver records and imposing sanctions on bad drivers; the primary objective being to ensure that only safe drivers maintain their driving privileges. The Branch administers legislation, which requires convicted impaired drivers to participate in an alcohol re-education program prior to reinstatement of their driving privileges.

Under the authority of the *Motor Vehicle Act*, the Branch administers the process of mandatory periodic medical review of drivers. The Medical Review Board, consisting of a team of physicians, meets regularly to provide recommendations to ensure adherence to the national medical standards that have been established for bus, truck, ambulance, automobile and taxi drivers. As well, this Board is also consulted with regard to other classes of drivers in situations where medical opinions are required for clarification and safety.

The Commercial Vehicle Enforcement Branch has a responsibility to enhance public safety on provincial highways, to reduce highway damage caused by overweight vehicles and to provide a unified approach to Commercial Vehicle Enforcement in New Brunswick.

A Traffic Safety Section within the Maintenance and Traffic Branch of the Operations Division of the Department of Transportation and Infrastructure has a narrow mandate to develop and manage highway safety programs, maintain and analyze collision data, complete site investigations and to monitor the effectiveness of highway signage.

Nova Scotia

The Department of Transportation and Infrastructure Renewal (the Department) has over-arching government responsibility for road safety in the province. In October 2014, the Department assumed responsibility for the registry of Motor Vehicles (RMV) from Service Nova Scotia. The RMV includes programs such as driver licensing, vehicle registration, driving records and compliance. The Department also oversees policy and program initiatives such as new rules for impaired driving, reduced speed limits in school zones, safety brochures, road safety signage, communication, and public/driver education.

The Department's Statement of Mandate (2014-2015) is effectively its business plan which contains a number of strategic outcomes with one of the four goals being to enhance value and safety of the transportation system in support of the province's economic growth (p.4). To achieve this goal, the Department will continue to develop a Road Safety Action Strategy in conjunction with other stakeholder departments. The plan will include engineering, education and enforcement initiatives designed to improve road safety.

The Statement of Mandate (2014-2015) also contains a section on performance measures for its strategic goals. For the above road safety goal, the outcome of improved highway safety is measured by the three-year rolling average of motor vehicle collision fatalities and serious injuries per 100,000 population with a soft target of decreasing that three-year average rate. Actions focus on roadway engineering projects, road safety reviews, Ministerial approval of a Road Safety Action Strategy and continuing the Road Safety Advisory Committee (RSAC) to provide advice to government on road safety initiatives.

The RSAC is a multi-disciplinary committee of province-wide stakeholder organizations representing the road safety community. RSAC provides strategic advice best on evidence and best practice regarding road safety initiatives. They are also instrumental in researching and advising government on road safety issues. RSAC reports and makes recommendations to a Deputy Ministers Steering Committee comprised of deputy ministers from the now three "road safety" government departments: Transportation and Infrastructure Renewal; Health and Wellness; and Justice. Recommendations approved by the RSAC

Deputy Minister's Steering Committee are directed to the individual Departments for action or to Cabinet in the event approval is required.[27]

At the Ministry of Transportation and Infrastructure Renewal, the overall road safety budget is $250,000 and the RSAC has a budget of $75,000. The other departments support road safety initiatives but their budget allotments for road safety contributions have not been determined. For example, some road safety initiatives supported through Health and Wellness may come out of the Active Living Branch and others may come out of Healthy Communities; and then within those divisions, it would depend on the programs. Additionally, given the current economic situation in Nova Scotia, some budget numbers may change.

Prince Edward Island (PEI)

Highway safety in PEI is under the authority of the Department of Transportation and Infrastructure Renewal (TIR), housed within the Highway Safety Division. This department includes driver licensing and fitness; vehicle registration; driver and public education; as well as regulating the trucking industry and commercial motor carriers. It is also responsible for public education, awareness and communication.

A Road Safety Strategy 2015 (TIR RSS) has been developed to guide initiatives within the department and to support Canada's commitment to reduce the number of traffic fatalities and serious injuries. The major objectives of the TIR RSS 2015 are to raise awareness of road safety on Prince Edward Island, to work towards safer journeys for all road users, and to promote TIRs best practices toward these efforts. The TIR RSS has taken the matrix (framework) from the nation's Road Safety Vision 2015 and focused it on PEI's target behaviours and target audiences. It is informed by collision statistics provided to the Department by the RCMP, "L" Division, and other police service units on the Island.

Although responsibility for each initiative has, or will be assigned to a specific safety agency or government department, the Department of Transportation and Infrastructure Renewal will continue to monitor progress on those initiatives for which it is directly responsible. The ultimate measure of success will be a continuing reduction in fatalities and serious injuries as a result of vehicle collisions.
Newfoundland and Labrador (NL)

Service Newfoundland (SN) appears to have over-arching responsibility for road safety-related initiatives including public messaging, education and awareness although there does not appear to be a provincial, coordinated focus on road safety. SN is responsible for driver licensing and vehicle registrations, commercial vehicle and carrier registration and the National Safety Code, and other highway safety-related activities.

Many road safety education and awareness programs are provided by a non-government and not-for-profit organization, Safety Services Newfoundland and Labrador. For example, they partner with many

[27] Johnson, Mavis. (2014). *Good Practice – National and International Road Safety Initiatives.* Report prepared for the Consumer Association of Canada, Manitoba Branch, and the Public Interest Law Centre.

community agencies for safety in the community through participation in and support of such initiatives as Students Against Drinking and Driving, the Lids for Kids bicycle safety program, and Operation Lifesaver.

Yukon

Responsibility for road safety is housed in the Transportation Division of the Department of Highways and Public Works. The Transport Services Branch (TSB) within the division:

- Promotes the safe and efficient movement of people and goods over Yukon highways;
- Develops and administers the Yukon transportation legislative and regulatory regime;
- Delivers services and programs related to driver licensing and vehicle registration;
- Develops transportation policies and programs in support of Yukon's health and economic development; and,
- Protects Yukon highway infrastructure.

The TSB is comprised of a Road Safety Unit, Carrier Compliance, National Safety Code, and Motor Vehicles unit**.** A formal provincial road safety plan is being finalized; a two-year action plan that will be continually evolving**.** Within the planning context, the branch is developing guidelines to address monitoring and analysis of data, research and monitoring and evaluation of impacts and outcomes of road safety initiatives.

With respect to specific criteria for decision making and prioritizing initiatives and resourcing, the TSB uses the CCMTA's matrix for contributing factors and key target groups. In addition, this evidence based approach is supported by the use of data from Yukon statistics on incident reports, geographic locations, time of day, vehicle types, level of injury/ fatalities to see emerging trends and find key target areas.

The TSB promotes road safety including developing messaging, communications, public education and oversees initiatives relating to alcohol and drug impaired driving; fatigue and distracted driving; vehicle restraints, commercial vehicle safety, school bus safety, seasonal driving, etc. It recognizes the need for partners including the RCMP and Mothers Against Drunk Driving (MADD) and national governmental bodies such as Transport Canada, the Canadian Council of Motor Transport Administrators (CCMTA) and the Commercial Vehicle Safety Alliance (CVSA).

Northwest Territories (NWT)

The Department of Transportation has responsibility for driver licensing and vehicle registration however there does not appear to be any explicit recognition of an over-arching road safety program.

Nunavut

No road safety plan is in place and additional information about programs and initiatives has not been provided.

MPI Road Safety Model - Assessment

General

Manitoba's road safety model has been developed with considered research, consultation and feedback from numerous sources. In 2012, MPI undertook its own public and expert consultation to learn if there was support for the new or a different role for the corporation given the merger of Driver and Vehicle Licensing in 2004. MPI also identified the need to identify how programming should change to reflect demographic trends, for example, the number of new immigrants is increasing yearly, and the fastest growing population is First Nations people. The resulting consultation paper concluded that there was support for a new and different role for Manitoba Public Insurance.

In 2013, MPI contracted with an external consulting firm for a review which contributed to the development of the Road Safety Operational Plan (May 2014). Recommendations included increased consultation and collaboration with public sector partners such as enforcement agencies and road authorities.

Given the recently announced Provincial Road Safety Committee and a clearly articulated leadership role for the corporation, the extensive work it has undertaken in developing its road safety program will continue to be refined and more broadly supported by its partners and stakeholder network. The assessment below demonstrates MPI's approach to the enhancement of its road safety program model, including proactive consideration of the new Loss Prevention Strategy and Framework.

1. Demonstrated road safety leadership

One of the principles in the *Road Safety Programming Priority Setting and Program Development Framework* (the Framework) states that "we are driven to lead in road safety in Manitoba". MPI's road safety leadership role is evidenced in its vision articulated in the 2013 Annual Report:

> Manitoba Public Insurance will be a leader in automobile insurance and driver services; making roadways and communities safer by administering standards for drivers and vehicles, raising awareness of the inherent risk of driving and investing in innovative, lasting solutions.

In the 2012 and 2013 Annual Reports, Goal 7 states that "*Manitoba Public Insurance will lead driver and vehicle safety initiatives that reduce risk and protect Manitobans, their streets and their neighbourhoods".* One of the strategies identified to achieve this goal is to develop an evidence-based road safety strategy with an aim to reduce automobile accidents, using a multi-faceted approach; the outcome of which is in evidence today. In addition, on MPI's website, the page for Road Safety at Manitoba Public Insurance states that "Manitoba Public Insurance's goal is to lead initiatives on education to increase opportunities for drivers to enhance their driving skills and to increase public concern regarding risky driving behaviour". [28]

[28] http://www.mpi.mb.ca/en/Rd-Safety/Overview/Pages/safetyatmanitobapublicinsurance.aspx

MPI has identified a primary strategic goal for road safety which is to lead driver and vehicle safety initiatives that reduce risk and protect Manitobans. The corporation's road safety efforts are focused on:

- Establishing premiums that reflect individual driver risk through Driver Safety Rating (see previous section);
- Administering Driver Vehicle Administration regulatory programs intended to reduce road risk; and
- Subsidizing quality driver training for young new drivers through the High School Driver Education program.

With the establishment of the new Provincial Road Safety Committee, MPI's leadership role will become more formally solidified. In addition, the new Loss Prevention Strategy and Framework, which will incorporate road safety initiatives, appears to clarify MPI's leadership role within the provincial context by noting that although a loss prevention strategy will be led by Manitoba Public Insurance, it must be underscored with a governance structure that reflects shared responsibility within the road safety community in Manitoba. Thus, MPI's contributions will continue to evolve in the context of this shared leadership of the new Provincial Road Safety Committee and the Loss Prevention Strategy and Framework. In the transition, there is further opportunity to enhance Road Safety's collaborative relationship with driver licensing and vehicle registration functions in the context of the Loss Prevention Strategy and Framework and as recognized and highlighted in MPI annual reports.

Recommendation:

- Further clarify MPI's roles in road safety leadership within the corporation and provincially.

2. Appropriate organizational structure to support road safety priorities

One of the Road Safety Operational Plan 2014-2017 goals is to complete the implementation of the new road safety organization structure to align with priorities and resourcing needs. Organizational changes introduced in 2014 saw the road safety program delivery function integrated into the broader Community Relations portfolio to provide greater alignment of road safety programming with other community-based programs, and better leveraging of sponsorship opportunities to convey critical road safety messages to target audiences. The Road Safety Programming Department reshaped roles and responsibilities and hired staff to reflect the new road safety operational structure and focus on planning, prioritizing, research, analysis and evaluation.

The corporation makes a link between its leadership role with respect to driver and vehicle safety initiations (2013 Annual Report, Goal 7) and road safety. This includes ensuring that Manitoban drivers meet and continue to maintain established knowledge, skill and behaviour standards for driving. Further evidence of the priority placed on drivers and vehicles in a road safety context is provided in MPI's Road Safety Submission (June 16, 2014) to the Public Utilities Board. Within the corporation's legislated mandated under the *Manitoba Public Insurance Corporation Act* (MPI Act), it is stated that the

Corporation's road safety efforts continue to be focused first and foremost on administering regulatory safety programs under *The Drivers and Vehicles Act* such as the Driver Improvement and Control Program and the Medical Compliance and Assessments program. However, reference to driver licensing and vehicle registration functions are minimal, but fully within MPI's mandate and represent an opportunity to focus on driver licensing within the new loss prevention framework.

Currently, MPI has just approved a new Loss Prevention Strategy and Framework (May, 2015) which formalizes current loss prevention strategies, articulates how loss prevention is defined, and outlines the program elements contributing to loss prevention. The definition of loss prevention includes driver education, regulatory programs administered under the *Drivers and Vehicles Act,* and road safety programming, among other programming elements. The Loss Prevention Strategy and Framework speaks to opportunities within MPI's regulated programs administered under the DVA, to enhance driver and vehicle safety:

- Driver Improvement and Control Programs;
- Ignition Interlock Administration Programs;
- Medical Compliance and Assessment Programs;
- Vehicle Standards and Inspection Programs.

The section on Road Safety Programming (p.14) includes a statement that the Corporation's road safety efforts are first and foremost focused on administering driver and vehicle administrative regulatory programs intended to reduce road risk. Thus, there appears to be a recognition that driver licensing and vehicle registration may provide additional opportunities for road safety initiatives in the future.

Another structural consideration stemming from recent provincial decisions on road safety governance is the creation of a Provincial Road Safety Committee. This body will provide an opportunity for all stakeholders to engage collaboratively to enhance road safety and provide a parallel forum for road safety priorities and programming that also fall under the loss prevention umbrella as outlined in the new Loss Prevention Strategy and Framework document.

Within this governance structure, program owners are accountable for managing and reporting on outcomes related to their area of responsibility. However, the framework highlights the need for program owners to collaborate with various teams. The creation and implementation of these new governance elements will require MPI's road safety related program areas to ensure its processes are aligned with the new governance structure and processes as they evolve.

Recommendation:

- MPI should review departmental roles in relation to the Loss Prevention Strategy and Framework and the new Provincial Road Safety Committee including identifying additional opportunities to collaborate with internal partners on new and ongoing initiatives.

3. Road safety planning: flexible and includes targets where appropriate

MPI has developed a three year *Road Safety Operational Plan (2014-2017)* to contribute to its vision of making roadways and communities safer by enforcing standards for drivers and vehicles and raising awareness of the inherent risk of driving by investing in last solutions. To reduce risk on Manitoba roads, the corporation is committed to developing an evidence-based road safety strategy aimed at reducing automobile crashes using multi-faceted approaches. It has committed to partner with community groups to support initiatives that increase road safety awareness and education opportunities.

It is also committed to monitoring progress and measuring the effectiveness of individual programs, portfolios, and loss prevention expenditures overall. The Corporation recognizes the opportunity to use monitoring and evaluation to drive more decisions in the expansion or contraction of loss prevention and road safety activities. Recognition of measuring and monitoring is associated with the need to assess program effectiveness and make changes as needed. Thus, MPI's road safety planning approach, overseen by Road Safety, is intended to be flexible and reviewed according to specified criteria and aligned with corporate priorities. Decision making criteria, processes and timelines, such as annual review, provide direction for both staff and corporate partners and stakeholders to understand how policy and program changes are made and their contribution to road safety outcomes.

While MPI has taken an approach consistent with CCMTA's with respect to setting targets, its approach to monitoring and measuring necessitates the development of more specific measures and targets in appropriate circumstances. This is also consistent with the academic and practitioner focus on best practices with respect to target-setting given the challenges of measuring the contributions of certain interventions to road safety outcomes.

4. The need for sound data and research to support policy and program development and interventions (evidence base)

The need for good data and research is demonstrated throughout the suite of documents to support MPI's road safety model. To support the corporate strategy of developing an evidence-based approach to addressing road safety risk, the Road Safety Operational Plan 2014-2017, sets a goal of establishing and implementing a research and analytical framework to guide the development of evidence-based road safety priorities, portfolios and programs. The principles of transparent and unbiased activities and developing an evidence-based road safety strategy are articulated in the *Priority Setting and Program Development Framework.* This requires that the data used in measuring, monitoring and research is accurate, reliable and timely; it is reported in an unbiased format with recommendations to enable rational, sound decision making.

The *Priority Setting Methodology* expounds on the data-driven approach by outlining the methodology to identify and rank road safety issues by examining contributing factors by collision, injury, and cost categories. Reference is made to frequency analysis, collision cost analysis, a ranking methodology, and the use of indicators. However, little information is included about the use of cost-benefit or cost-effectiveness analysis – key tools in the decision making process for road safety initiatives which drives funding. The new Loss Prevention Strategy and Framework identifies ROI as a key factor in determining making decisions with respect to initiatives.

Recommendation:

- Consider incorporation of additional LPSF criteria and process in the *Priority Setting Methodology*.

5. Ongoing environmental monitoring (evidence base)

The *Priority Setting and Program Development Framework* guides the monitoring of emerging road safety issues and solutions to help establish program priorities and desired outcomes. One of its principles is the commitment to fostering and maintaining an environment that enhances innovation and creativity. To do this, MPI considers economic, environmental, social and political influences when developing recommendations for corporate action.

6. Sound decision making criteria to determine priorities

MPI's Road Safety Operational Plan 2014-2017 has an explicit corporate strategy that focuses on developing an evidence-based approach to planning. Two goals have been articulated in the plan which speaks to the organization's commitment to an evidence-based approach:

- Establish and implement a research and analytical framework to guide the development of evidence-based road safety priorities, portfolios and programs, and
- Establish and implement a road safety evaluation framework and measures to assess the efficacy of portfolios and programs.

MPI has developed a framework for priority validation and issue analysis for 2015/16. The *Priority Setting and Program Development Framework* (the Framework) provides a formal description of how MPI sets road safety priorities and systematically develops programs intended to contribute to the Corporation's strategy road safety goals. The Framework is integrated into the Road Safety strategic planning and program development cycle outlined in the Road Safety Operational Plan 2014-2017. It establishes that a ranking in the top five issues results in the Corporation devoting the most significant amount of resources in the coming year, to these issues. The Framework serves as a guide for Road Safety program developers and establishes standards and protocols for setting road safety priorities.

In addition, MPI has developed a *Road Safety Priority Validation Methodology* (December 2014) to outline the methodology identifying and ranking the road safety issues for the upcoming year. The methodology identifies three phases: analyze collision contributing factors, rank all issues based on logic model indicators, and detailed analysis of top ranking issues to validate recommendations for prioritization. The *Priority Validation and Issue Analysis for 2015/16* represent the first annual deliverable within the road safety planning cycle.

Road safety priority validation begins with analyzing contributing factors to crash causation on Manitoba roads. Road safety issues, presented as contributing factors in the Traffic Collision Statistics Report (TCSR) (2013), have been analyzed for frequency and their human toll over the past decade, with focus

on the last two years of data. Additional analysis of vulnerable road users (pedestrian, cycle, motorcycle) and failure to use occupant restraints is also complete. The second phase of priority analysis requires that issues be ranked on indicators established in a logic model. Finally, detailed analysis is conducted on top ranking issues to validate recommendations for prioritization. A final ranking of issues considers the critical collision statistics and other contextual considerations, including: national priority, public support, and whether it is considered an external stakeholder priority. A key challenge for decision makers in prioritizing according to a purely cost benefit approach is the need to consider public policy factors which are not easily monetized or measured. They are qualitatively assessed for decision making purposes and while some factors may be incorporated into cost-effectiveness analysis, others may not.

However, it will be as important to provide analysis of public policy factors for decision makers in the new context of the Loss Prevention Strategy and Framework, where the need to justify recommendations and needed courses of action will be done under the constraint of added competition for corporate dollars. Thus it will be even more important to strengthen and leverage internal partnerships with the driver licensing, vehicle registration and insurance operations.

7. Appropriate funding/resourcing to support priorities

In 2013/14, MPI invested $15.6 million in road safety programs and $16 million in 2012/13. MPI has expanded enhanced enforcement funding to include distracted driving, impaired driving, and speed in school zones, snowmobile safety, and winter roads. It has also expanded the scope and range of platforms for its communications and advertising including social media.

In 2013/14, eight police agencies and the RCMP participated in the Road Watch Program with total funding of $597,000 towards enhanced enforcement activities. Additional examples of recent efforts to strengthen the strategic partnership with law enforcement include:

- funding for automated licence plate readers for the three major police services for pilot testing of this technology,
- funding to smaller police agencies for the purchase of other enforcement-related equipment and technologies (speed readers and alcohol breath test devices)

Overall, the road safety planning documents speak little to the need for sustainable funding and the department's role in successfully securing funding to address its agreed-upon priorities. However, funding of priorities is addressed in the *Priority Setting and Program Development Framework* which states that

> a ranking in the "top five" (5) issues results in the Corporation devoting the most significant amount of resources in the coming year to these issues, with the top three (3) receiving the majority of resourcing. Lower ranking issues receive "low maintenance" budgets, reductions or elimination of budgets altogether. (p.12)

The funding link to MPI's priorities reflects and communicates a commitment about the importance of road safety to its partners, stakeholders and the public generally. Where this could be more evident in the *Priority Setting and Program Development Framework* is in the "Confirmation and Approval" section. As with all government organizations, priorities and issues shift and this has been recognized in the framework. It will become even more relevant as the new Provincial Road Safety Committee firms up its relationships and funding discussions occur. Sensitivity analysis can mitigate the impact of shifting priorities and external factors as well as budget changes and provide decision makers additional comfort knowing that programs and plans are flexible within the face of change.

Approval of priorities informs how resource allocation decisions are made. New or ongoing approval of programs would include approval of necessary funding. Major new programs must go through enterprise wide business case development process. Existing programs are evaluated to inform decisions to maintain, expand, or reduce/eliminate funding. Thus, a more explicit reference to support for funding decisions in the above framework would help clarify the relationship between prioritizing and budgeting; confirm MPI's commitment to road safety funding; and close the loop in the road safety initiative development and implementation process.

Recommendations:

- Identify priority and funding shifts as a potential challenge in the *Priority Setting and Program Development Framework.*
- Consider clarifying reference to focusing resources. This wording does not convey priority setting as a tool for funding decisions. Rather, it suggests that funding may be first allocated and then decisions are made within that funding envelope.

8. Collaboration and coordination between and among key road safety partners and stakeholders

One of the three corporate strategies within the Road Safety Operational Plan 2014-2017 requires MPI to partner with community groups across Manitoba to support community-based initiatives that increase road safety awareness and education opportunities. MPI seeks to leverage external stakeholder relationships to capitalize on integrated approaches and maximize efficiencies to achieve its targets. To this end, it is planning to establish and implement an external stakeholder strategy to achieve road safety priorities. To support its focus on collaboration and coordination between and among key road safety partners and stakeholders, MPI has prepared a preliminary *Road Safety External Stakeholder Strategy* (September, 2014). The Road Safety Programming Department is leading the development of this strategy and works closely with other internal departments working with external stakeholders in road safety activities, particularly the Communications and Community Relations Department (CCR).

As described in the Road Safety External Stakeholder Strategy and flowing from the 2015/16 Road Safety Priority and Validation & Issue Analysis, stakeholder maps have been completed for the following road safety issues:

- Driver Impairment

    - Alcohol, Distracted Driving, Fatigue
- Vulnerability of Road Users
    - Cycling, Pedestrian Safety, Motorcycle Safety, Off Road Vehicles (off-road and all terrain vehicles)
- Speed
- Wildlife
- Poor Driver Action
- Occupant Protection
    - Seat Belt Usage and Child Car Seats and Restraints
- Vehicles

In addition, Road Safety Programming has completed a detailed stakeholder analysis for each issue area such as impaired driving, distracted driving, speeding and special risk drivers. It will assist in determining partnership, collaboration and consultation opportunities, and needs for ongoing and future road safety initiatives.

Seeking opportunities to partner with stakeholders to provide effective road safety programming is a principle stated in the *Road Safety Programming Priority Setting and Program Development Framework.* Collaboration is intended to contribute to establishing and validating key road safety priorities and programs to achieve stable, long-term change and mutual benefits. MPI has successfully established relationships and partnerships with many community groups, advocates, service delivery agencies, and all three levels of government to increase road safety awareness, education, and traffic law enforcement activities. The intent of the stakeholder strategy is to strengthen existing relations and establish new ones that serve to support road safety goals.

Recommendation:

- As noted above, MPI should explore and leverage collaborative opportunities with Driver Licensing, Vehicle Registration and Insurance consistent with its mandate.

9. Ongoing monitoring and evaluation of impacts and outcomes

According to its Road Safety Operational Plan 2014-2017, MPI's commitment to supporting an evidence-based approach to reducing road safety risk is supported by its goal to establish and implement a road safety evaluation framework and measures to assess the efficacy of portfolios and programs. To this end, MPI has developed the *Program & Portfolio Monitoring and Evaluation Framework* which includes principles, process and standards for program monitoring and evaluation activities for the department. This document is a guide for how performance measurement and program evaluation will be conducted.[29] The companion guide to the framework is the *Program Measurement and Evaluation Plan,* which provides a complete inventory of the indicators that will be used to measure, monitor and evaluate programs. It identifies the programs within each portfolio that are to be measured and evaluated, and the methods and indicators that are to be used for each program. Road Safety used the

[29] This document was initially prepared for the fiscal year 2014-15 but is expected to be updated as a living document for measurement and evaluation purposes.

ICBC Road Safety Monitoring and Evaluation Framework (2013) in the development of its framework and evaluation plan, incorporating comparable indicators where appropriate.

Monitoring and measuring success is captured as a principle within the *Road Safety Programming Priority Setting and Program Development Framework*. This framework is a guide to monitoring emerging road safety issues and establishing corporate priorities. Road safety program activities are monitored and evaluated to measure their effectiveness against established performance indicators and outcomes.

When monitoring and evaluating programming, Road Safety looks not just at whether individual MPI programs are meeting their objectives, but whether the objectives as a whole for that portfolio (as determined by the Priority Setting and Program Development Framework) are being addressed. If not, reasons are identified and intervention measures formulated. Thus, assessment of each portfolio (e.g., vulnerable road users, occupant restraints, speeding and distracted driving) will take a three-tier approach examining the program, portfolio and strategic level.

The table below provides a high level of assessment of each Canadian jurisdiction against the road safety program model criteria and is based on limited available information. Costing detail is extremely difficult to obtain and would take further discussions with jurisdictions to determine the exact factors and programs and initiatives, operational and administrative elements to be included in the costing model. However, attempts have been made to explore the costing of road safety initiatives and the potential future development of model costing.

Jurisdictional Road Safety Models
Summary Comparison

Assessment Factor	Man	B.C.	Ab	Sask	Ont	Que	Yuk	Nun	NS	PEI	Nfld *	Nt*	NB
road safety planning	Yes - MPI	Yes – Road Safety BC	Yes- Office of Traffic Safety	Yes	No	IP	No	No	IP	Yes	No	No	No
the need for sound data and research to support policy and program development and	Yes	Yes	Yes	Yes	yes	UK	No	No	IP	UK	No	No	No

interventions													
ongoing monitoring and evaluation of impacts and outcomes	Yes	Yes	yes	yes	yes	UK	No	No	No	yes	No	No	No
ongoing environmental monitoring	Yes	**yes**	yes	yes	yes	UK	No	No	partial	UK	No	No	No
decision making criteria to determine priorities	Yes	Yes	yes	yes	partial	UK	No	No	No	UK	No	No	No
appropriate funding to support priorities	Yes (commitment in LPSF*)	Yes	yes	uk	partially	UK	UK	No	UK	UK	No	No	No
demonstrated road safety leadership	Yes	Yes	yes	partial	partial	partial	partial	UK	yes	yes	No	No	No
appropriate organizational structure to support road safety priorities	Yes	Yes	yes	partial	yes	IP	no	No	yes	yes	No	No	No
collaboration and coordination between and among key road safety partners and stakeholders	Yes	Yes	yes	yes	yes	yes	partial	No	yes	yes	No	No	No

IP = in progress

UK = unknown

* Loss Prevention Strategy and Framework

Assessment of MPI Road Safety Model Elements

Overall, MPI's road safety model has evolved to a sophisticated and comprehensive level in terms of key elements required of a good road safety framework. From an holistic perspective, documentation of the processes and criteria for decision making, planning, research, and monitoring, are underpinned by a data-driven and evidence-based approach and appears to exceed most Canadian jurisdictions. The current framework and its continuing enhancement will serve MPI well in re-shaping governance and program relationships including its participation in the new Provincial Road Safety Committee.

MPI has demonstrated substantial consistency with the assessment criteria outlined above and recommendations have been made throughout the assessment. The recommendations below are intended to enhance and polish its model. They are also intended to provide guidance in terms of consistency both across the road safety model (structurally) , and with respect to process and assessment criteria (functionally), recognizing that relevant work is continuing as MPI and the province maintain a high priority on road and community safety.

Road Safety Operational Plan

Recommendations:

- *Review KPIs for departmental goals as they appear to be more outcome-related than an indicator of progress and thus may be confused with the goals.*
- *Clarify what you are looking for with respect to your goals – do you need to say anything further or do you need to specify a deliverable versus an indicator of progress.*

Road Safety Programming, Priority Setting and Program Development Framework (December 2014)
The Priority Setting and Program Development Framework (Framework) provides a formalized description of how Manitoba Public Insurance sets road safety priorities and systematically develops programs intended to contribute to the Corporation's strategic road safety goals and objectives. It establishes standards and protocols for setting road safety priorities.

Page7 provides an example where sole leadership is assumed or at least could be presumed as such. With the establishment the new Road Safety Committee and MPI's co-chair role with MIT, as well as the emerging Loss Prevention Strategy and Framework, there is an opportunity to clarify MPI's roles to bring clarity and consistency in how the corporation views its roles with respect to road safety, government partners and external stakeholders.

Recommendations:

- *Clarify the decision-making process following the prioritization process including funding and resourcing decisions.*

Program Ideation & Issue Analysis (2015/16)

This document flows from the *Priority Setting and Program Development Framework,* completed in December 2014, which guides the ongoing development of evidence-based road safety priorities, portfolios and programs for MPI. The *Program Ideation & Issue Analysis (2015/2016)* contains ideas and suggestions for use by leadership, decision makers, and departments responsible for the delivery of road safety programming to guide the design, approvals, and implementation of new programs, redesign of existing initiatives, and allocation of resources dedicated to programming. However, it is not clear how this document is to be used for the intended audiences and the information and structure of the document does not appear to address their separate needs. Quick wins are recommended for enhancing existing programs and proposing new program development ideas for the following fiscal year, as well as ideas that will be studied for future development and decision making.

Recommendation:

- *If this document is intended for use by leadership, decision makers and departments responsible for the delivery of road safety programming, it should describe how and what elements are relevant to which parties. This could be done structurally (different sections for each audience) or by highlighting information relevant to the intended audience.*

Road Safety Priority Validation Methodology (Dec 2014)

The purpose of this document is to outline the methodology identifying and ranking the road safety issues for the upcoming year by Road Safety staff. It provides recommendations for top road safety priorities for MPI, each year, based on a defined methodology that includes:

- Analyzing contributing factors causing collisions on Manitoba roadways
- Ranking all issues based on indicators established in the logic model, and
- Providing detailed analysis of top ranking issues to validate recommendations for prioritization.

The methodology is articulated for each phase of the analysis so that there is transparency in the process and staff are able to provide decision makers with clear rationale for recommendations based on the criteria outlined. It will be important for staff to review and assess their methodology in its early days of implementation to validate its relevance and effectiveness in determining road safety priorities.

Road Safety Program & Portfolio Monitoring & Evaluation Framework (Dec 2014)

The *Program / Portfolio Monitoring and Evaluation Framework* (Framework) provides a formalized description of how the Manitoba Public Insurance (MPI) assesses the implementation and delivery of new and existing program interventions that are intended to contribute to strategic road safety goals and objectives of the Corporation. The Framework was developed in response to a MPI road safety review in 2013/14 that recommended a more strategic approach to road safety activities. While this document presents a sound approach to monitoring and evaluation, a number of recommendations are suggested to strengthen the framework.

Recommendation:

- *Consider including behavioural change in the intended outcomes for road safety education*. *This would provide a more concrete basis for measuring success.*

This is consistent with other documents which reference behavioural change (e.g., *Priority Setting & Program Development Framework*, p.6). Behavioural change may be measured and provides a concrete link (as compared to perceptions) to desired safety outcomes.

- *Consider including the concept of cost-effective assessment in determining program enhancements (p.9)*

There is little room for flexibility to accommodate shifting priorities or issues or new programs or initiatives being implemented. Is there a need to reiterate here that new initiatives will have a built-in element of evaluation?

- *Reconsider the goal of portfolio programming to be evaluated on an episodic, rotational basis.*
- *Articulate MPI's ongoing commitment to funding monitoring and evaluation.*

Expert opinion can be integrated into an element of the literature search or as a means of providing advice and input on other independent sources of data. It is not a reliable source of data for the purposes for which it is to be used and undermines an evidence-based approach to decision-making.

Road Safety Department, Organization Roles and Responsibilities

There appears to be a lack of clarity with respect to the department's and the Road Safety Operational Plan's link with driver licensing, vehicle registration and insurance. Drivers licensing is a key operational area related to road safety and insurance/vehicle registration provides an additional breadth of stakeholder and public contact. While there is recognition that Community Relations Specialists are the face of Road Safety in Manitoba, there is little recognition of the other public touch-points through insurance or driver licensing. This suggests there is an opportunity to enhance the "face of road safety" by strengthening internal links and collaboration with insurance, vehicle registration and driver licensing within MPI.

Recommendation:

- *Explore opportunities to enhance the relationship with other corporate, public touch-points, e.g., driver licensing and vehicle registration, given the different target populations, issues and interests, and scope of educational reach through these operational areas***.**

Funding Road Safety

Financing of road safety efforts follows the complexity of road safety governance and outcomes themselves. There is no one size of budget or resourcing that fits any one solution in any one jurisdiction – context is everything – including political and public support. Budgets for road safety policies worldwide are not infinite. Funding decisions require a critical review of the road safety environment, the basic approach to road safety, road safety activities, availability and affordability of tools, and legal, social and political culture.

The criteria used in many countries when deciding on policies and budgets include cost-effectiveness, impact on road safety outcomes, suitability, and public legitimacy. As a source of information and a means of supporting political decision-makers in their choice of appropriate tools for the improvement of road safety levels in their countries, analytical instruments that assess the efficiency of such tools are required. The initial selection and ranking of projects are often facilitated by the application of cost-benefit and cost-effectiveness analyses (CBA and CEA), which examine the profitability as well as the relative expedience of these investments. Criteria are needed to establish clear guidelines for funding decisions given limited resources and competing priorities. By using these road safety-related assessment tools in the preparation and facilitation of the decision-making processes, analysts and decision-makers may find that road safety initiatives not only save lives but also dollars which can then be re-allocated back into government initiatives to support public policy priorities. The new Loss Prevention Strategy and Framework, together with the Road Safety Operational Plan 2014-2017 and its associated road safety framework elements, provides a stronger link between the corporate strategy, road safety goals and loss prevention principles, and clear guidance under which Road Safety Programming is able to innovate and successfully implement.

If, for example, MPI's insurance plan is designed to ensure that there is an 85% return on premiums to policy holders in the form of claim payments or benefits, one criteria for road safety funding decisions could be the financial benefits of interventions as they contribute to the 85% rate of return. However, as noted in many MPI documents and reiterated in this report, road safety is a complex, multi-disciplinary and multi-faceted arena whereby strict costs-benefit decisions are not possible nor do they represent the broader public policy context in which government operates. Thus, funding decisions will always include some element of judgement with respect to the best return on investment not only from a financial perspective, but social, economic, political and public policy perspective. This perspective is captured in the new Loss Prevention Strategy and Framework where it is noted that when working with non-discretionary (regulatory) services," it is not always possible to calculate the financial ROI for Loss Prevention Initiatives". [30]

The use of performance measurement efforts will then help to drive future decision making and investment in loss prevention, including road safety activities). The Loss Prevention Strategy and Framework is intended to support MPI's ability to prove to the public that investment in loss prevention, including road safety, works to reduce the number and costs of claims. While progress is more easily

[30] IBM, May 12, 2015, *Loss Prevention Strategy and Framework Presentation,* slide 11.,

measured on a problem with a single cause and one solution, that is not the reality of loss prevention and more specifically, road safety. A multitude of problems, contributing factors and integration of solutions must be taken into consideration in deciding where corporate dollars will be spent. Some initiatives on their own may not be directly measurable, particularly when part of a larger suite of programming that is designed to address a problem from several different angles or over a long period of time – as is the case with road safety efforts intended to change road user behaviour. Thus, the framework seeks to examine measures both in isolation and collectively. The goal is to be able to invest in loss prevention (including road safety) and achieve a favourable return on the investment (i.e. achieve greater savings than is expended on loss prevention). Decisions about programs and their effectiveness will be informed by empirical evidence from a variety of sources, detailed analysis of loss prevention problems, and measurement of progress made and evaluation is embedded in the decision-making process. Evaluations must be conducted and the evidence and information from them must be used.

The new Loss Prevention Strategy and Framework solidifies the Corporation's commitment to good policy and practice principles around research, evaluation, transparency, and an evidence-based approach to planning, prioritizing and decision making.

Conclusion

This review has been undertaken to determine if MPI's safety program is well aligned with the Corporate Strategic Plan, current road safety best practices, and evidence-based strategies as well as to advise on the appropriate size of a road safety budget for Manitoba Public Insurance and if the current budget is being optimally used. The material provided for this review, including a high-level comparison with other Canadian jurisdictions and international literature, reflects a significant commitment to road safety by the government and MPI. The principles, guidelines, policy and procedures captured in documentation are extensive, thorough, and reflected in the road safety research and literature on best practices. Their aggregation and support by corporate Executive to date, is not found in any other Canadian jurisdiction. While elements of this work are found internationally, collectively they form a superior program model, which when fully integrated and refined, should be shared as an ideal, recognizing that the model will continue to evolve, be flexible and transparent.

With respect to the appropriate size of a road safety budget and whether the current budget is being optimally used, a number of conclusions can be drawn. First, the appropriate size of a road safety budget is not subject to simple formula. In any jurisdiction the complexities of government structures; the nature of road safety issues and relative priorities; political and public will; and, competition for available resources, will drive budget decisions including the optimal use of funds. Second, to achieve these outcomes, MPI has developed a framework for road safety prioritizing and decision making that is based on research, data, and evaluative evidence to support sound and reasonable decisions on the allocation of funding. Finally, the road safety framework also recognizes that evidence changes and thus priorities will shift; necessitating an ongoing consideration of priorities and funding needs.

In sum, the work to date and the commitment to continually enhance elements of the road safety framework to focus resources on priorities that will contribute to MPI's goals and optimize funding, has been considerable and substantive. While there is no uniform or simple formula for determining how much funding should be spent on road safety initiatives in any one jurisdiction or organization, MPI has chosen a model intended to optimize its funding, or provide a return on investment that will contribute to achieving its goals. In linking the elements of its road safety framework including priority setting and program development, priority validation and issue analysis, and, monitoring and evaluation, allocation of funding to support the programs is a creditable and supportable approach to successful road safety programming.

Appendix I: Summary of Recommendations for Road Safety Model Assessment

Demonstrated road safety leadership

Recommendation:

- Further clarify MPI's roles in road safety leadership within the corporation and provincially.

Appropriate organizational structure to support road safety priorities

Recommendation:

- MPI should review departmental roles in relation to the Loss Prevention Strategy and Framework (LPSF) and the new Provincial Road Safety Committee including identifying additional opportunities to collaborate with internal partners on new and ongoing initiatives.

The need for sound data and research to support policy and program development and interventions

Recommendation:

- Consider incorporation of additional LPSF criteria and process in the *Priority Setting Methodology*.

Appropriate funding/resourcing to support priorities

Recommendations:

- Identify priority and funding shifts as a potential challenge in the *Priority Setting and Program Development Framework.*
- Consider clarifying reference to focusing resources. This wording does not convey priority setting as a tool for funding decisions. Rather, it suggests that funding may be first allocated and then decisions are made within that funding envelope.

Collaboration and coordination between and among key road safety partners and stakeholders

Recommendation:

- As noted above, MPI should explore and leverage collaborative opportunities with Driver Licensing, Vehicle Registration and Insurance consistent with its mandate.

Appendix II: Summary of Recommendations for Road Safety Model Element Assessment

Road Safety Operational Plan

Recommendations:

- *Review KPIs for departmental goals as they appear to be more outcome-related than an indicator of progress and thus may be confused with the goals.*
- *Clarify what you are looking for with respect to your goals – do you need to say anything further or do you need to specify a deliverable versus an indicator of progress.*

Road Safety Programming, Priority Setting and Program Development Framework

Recommendations:

- *Clarify the decision-making process following the prioritization process including funding and resourcing decisions.*

Program Ideation & Issue Analysis (2015/16)

Recommendation:

- *If this document is intended for use by leadership, decision makers and departments responsible for the delivery of road safety programming, it should describe how and what elements are relevant to which parties. This could be done structurally (different sections for each audience) or by highlighting information relevant to the intended audience.*

Road Safety Program & Portfolio Monitoring & Evaluation Framework

Recommendations:

- *Consider including behavioural change in the intended outcomes for road safety education. This would provide a more concrete basis for measuring success.*
- *Consider including the concept of cost-effective assessment in determining program enhancements (p.9)*
- *Reconsider the goal of portfolio programming to be evaluated on an episodic, rotational basis.*
- *Articulate MPI's ongoing commitment to funding monitoring and evaluation.*

Road Safety Department, Organization Roles and Responsibilities

Recommendation:

- *Explore opportunities to enhance the relationship with other corporate, public touch-points, e.g., driver licensing and vehicle registration, given the different target populations, issues and interests, and scope of educational reach through these operational areas***.**

Appendix III: References

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