NRSPP
NATIONAL ROAD SAFETY
PARTNERSHIP
PROGRAM

Discussion Paper:
Building Partnerships and Developing Networks

GIPPSLAND
Safe Freight Network

Introduction

Partnerships with industry members and the wider community offer a significant opportunity to improve the safety, productivity and well-being of the transport industry. The benefits of such partnerships include shared resources; access to broader networks; differing skill sets and a wealth of information and data; improved industry efficiency and improved quality of industry outcomes; and shared risk.

This discussion paper aims to provide organisations with a way to build partnerships and relationships with other sectors of their industry and other industries. It follows a series of theories of group development that need to be considered for a local network to be developed within your industry.

It has been developed in collaboration with the Gippsland Safe Freight Network. Safety forums such as this are a powerful and cost effective model that can be adapted to all industries. They are beneficial as they provide localised and more wide-reaching safety outcomes. This discussion paper will focus on Truck Safety Forums and, in particular, the Gippsland Safe Freight Network.

There are three main elements to this discussion paper: the theory and psychology behind small group development; how these practices have been used to develop and maintain effective heavy vehicle safety networks in practice; and a case study of the Gippsland Safe Freight Network and the partnership it built.

Key Outcomes:

- Improved safety for the industry involved in the partnership
- Improved safety for the surrounding community of the industry
- Engagement of key stakeholders and a sharing of knowledge, information and practices

The 4 stages of group or partnership development

Stage	Requirement Group Structure The pattern of interpersonal relationships, the way members act and relate to each other *Based on Literature*	Task Activity The interaction of group members based on the task at hand *Based on Literature*
Forming	Setting the stage through orientation, testing and dependence	The group establishes clear objectives for the team as a whole and for individual members
Storming	Intragroup conflict and tension based on resistance to group influence and task requirements	Process and structures of the group are established, trust is built and good relationships are formed between members through the resolution of conflicts
Norming	Openness to other group members, the development of in group cohesiveness with new standards evolving and new roles being adopted leading to the successful implementation of sustaining projects	An open exchange of relevant interpretation to the task occurs including intimate and personal opinions
Performing	Roles become more flexible and functional as structural issues have to be resolved for the structure to be supportive enough for the task to be performed successfully	The interpersonal nature of the group structure becomes the main tool used to perform the tasked activities. This is where the group's energy is channelled into the task and solutions begin to emerge

Forming

A pivotal part of the forming stage is identifying whom will be in the group and what roles they will undertake. This includes identifying a Chain of Responsibility for the group. In terms of Truck Safety Forums, chain of responsibility refers to the transport supply chain.

All parties in the road transport supply chain have specific obligations under the law to prevent a breach. It is called the Chain of Responsibility and it requires every responsible person in the supply chain to take positive steps to prevent mass, load restraint, dimension, and fatigue and speed offences.

The leader of the group or the manager of the partnership program plays the dominant role at this stage of forming the group. It is imperative in the forming stage not only to assign roles and responsibilities, workloads need to be assigned so everyone is aware of the tasks they need to complete. This means assigning the task for the group as a whole and for the individuals within the group.

Who are the parties in the supply chain?

Any person with an influence and/or control in the transport chain is a 'party' and includes but is not limited to:

- corporations, partnerships, unincorporated associations or other bodies corporate
- employers and company directors
- exporters/importers
- primary producers
- drivers (including a bus driver and an owner-driver)
- prime contractors of drivers
- the operator of a vehicle
- schedulers of goods or passengers for transport in or on a vehicle, and the scheduler of its driver
- consignors/consignees/receivers of the goods for transport
- loaders/unloaders of goods
- loading managers (the person who supervises loading/unloading, or manages the premises where this occurs).

Who's not identified but are parties to the supply chain?

- Police
- Transport safety services officers
- Road owners; local roads and state and national roads.

Storming

The storming phase is where many groups or partnerships can fail because the boundaries decided on in the forming stage are pushed. Storming often occurs when there is a conflict between the natural working styles of different members of the group. Often people work in many different ways, and have different forms of reasoning. These differences can cause unforeseen problems with the development of the group.

Another reason storming may occur is when one member of the group challenges the authority of the leader, leading to a conflict. This is why it is so important to define the chain of responsibility in the forming stage so that everyone is clear on who has authority. Members of the group may also challenge the workloads they have been assigned if they were not clearly informed during the forming stage.

Trust and good relationships within the group are built at this stage through the resolution of the conflicts described.

In the case of a road safety partnership, decisions need to be made at this stage about the scope of issues that the partnership will tackle, ensuring all members have aligning opinions on these issues.

Norming

The norming stage is where all conflicts of the storming stage are resolved, and each member begins to appreciate the strengths and weaknesses of the other members. Members of the group will get to know each other better at this stage through socialising and providing constructive feedback on work already completed.

There is an open interpretation of the task at hand where all members of the group can share their opinions.

The norming stage is where the members of the group gain a stronger focus towards the goal of the group and the outcomes of the assigned tasks.

In the case of a road safety partnership, this is where group members will share their experiences and options on road safety issues to align the core goals of the road safety partnership's task.

Performing

When the group reaches the performing stage, the task at hand proceeds without friction between members. The structures and process set out in the forming stage support the achievement of the goal of the group.

The interpersonal nature of the group is the main tool used towards the success of the tasks undertaken. The different energy brought to the group from the different members is channelled together to form multi-disciplinary solutions to the issues being tackled.

Once a partnership, such as a truck safety forum, has reached the performing stage it will be able to work towards the goal of improving safety within the trucking industry.

In Practice: Developing and maintaining an effective Heavy Vehicle Safety Network

Introduction

Professional truck drivers clock up hundreds-of-thousands of kilometres and have a vast wealth of experience to draw on. Unfortunately, when it comes to safety, opportunities to share this knowledge have been very limited. The most successful and safe companies have also developed a safety culture. This isn't about more regulation, just more involvement in solutions by the very people that have the greatest stake in getting home safely – drivers.

Most workplaces have health and safety representatives but in general professional truck drivers are not captured in this process. Yet their work is universally recognised as the most dangerous profession in Australia. Truck drivers killed on Australian roads annually has stayed at about 200 per year for the past two decades, in contrast to the general trend in the road toll coming down.

The solution to reducing deaths and injuries in all other industries has been engaging the workforce in developing solutions. Volvo has said repeatedly that the majority of crashes are as a result of driver error. But what is also acknowledged is that drivers often underestimate their risks and as such place themselves in situations from which there is no return. Chain of Responsibility has been a significant contributor to bringing about a more professional and systematic way to manage risks and hopefully reduce the onus on the driver, but when the truck goes over or the crash happens it is the person at the wheel who lives with the consequences more than anyone else.

For this reason drivers are an essential element in developing safe systems – their experiences, both good and bad, can feed into the knowledge pool. They need to be aware of the risks they face so they can plan and mitigate them.

It is against this background that the first Safe Freight round table meeting occurred. After a series of major crashes and an increase in casualty crashes in a specific geographic area and across several transport types, the industry was invited to come around a table to discuss possible solutions and safer ways to do their business. This was formalised by follow-up round table meetings with a broad cross-section of stakeholders involved.

Since 2010, this model has proven extremely effective in providing accurate information about safer systems of operations as well as changing the culture of workplaces to ensure that safety becomes imbedded in the businesses. This came on the back of a low point in 2009, in which 2 in every 5 crashes was fatal, and the majority of casualty crashes in the area involved trucks. It can clearly be seen that the intervention of this model was required.

Using Community Development Principles (outlined later in the document) the first of several place-based networks were established. The makeup of the membership and their enthusiasm for the task indicated willingness by the industry to move their operations into a safer realm for all involved. Fatal crashes are now 1 in 10 and moving in the right direction. But with an average of 200 truck drivers still killed annually, there is a lot more work to do.

Context

Today, most state and territories base campaigns to reduce road deaths to zero on these four pillars:

- Safer Road Users
- Safer Roads
- Safer Vehicles
- Safer Speeds

In the freight industry this is complemented by ***Chain of Responsibility***, which underpins the operations of the heavy transport industry.

Each of these has very complex plans and legislative requirements under which transport businesses endeavour to operate.

While the intention is to increase safety, it is clear legislation without a commitment to a safety culture will result in little changing.

What we have experienced is that when like-minded individuals and organisations work together to improve the safety outcomes across an industry, the process of safety becomes infectious.

Formations

If we think of Truck Safety Networks as a bunch of people interested in truck safety and talking trucks sitting around a table and chatting, you've got 90% of what this is about.

It is a simple process designed to engage those people who can contribute and who are willing to learn from each other with the focus on the issue of safety.

So to form a network you need to have a look around and see who might be interested in talking about trucks:

"Everyone will have an opinion but not everyone will have a solution."

Knockers not welcome.

There are plenty of people out there who can tell you what is wrong with things, and this is okay, what we need though is people with experience that might have ideas about solutions.

To maximise opportunities for the group to remain relevant, we need to make sure it doesn't try to cover too large a geographic area – keep it local but have lots of groups that link.

Groups are divided along municipal boundaries in the Gippsland region, and this works well in Gippsland. Formations should be based around a local area and one that is central and accessible.

There are those with a direct interest in the industry (owners/drivers/receivers) and those who work directly to enforce laws and regulations (Police, Road Authorities and Local Governments). There are also equipment manufacturers (truck companies/accessory industry/maintenance). All formations should endeavour to have these people/groups represented. We also have people that know their own patch really well and this is why we need these people on board. They have the history and the knowledge.

All of these are significant parts of a formation:

- Fatigue management
- Vehicle conditions and equipment
- Roads condition and maintenance
- Speeds appropriate to conditions and loads
- Driver training and induction as a risk management tool

When done correctly, all of the above will have safer outcomes for drivers and other road users as well significantly contributing to a more productive and safer workforce.

Interestingly, discussion and work in relation to the Chain of Responsibility has seen significant changes in the way some companies operate, yet the road toll remains high. We have seen systems and laws change but most of these have been interpreted as being impediments to productivity and, as such, often receive a hostile response from drivers and industry.

There is no doubt networks work best when we keep it simple, the purpose is clear and the data we work with is sound. We also need diversity, that is, as many transport types sitting around a table as well as others we may not think have a role but are in fact crucial.

The first part of establishing a network is developing a contact list.

Essential people to have on the list

1) Local highway patrol police representative

Police are at the frontline and often are the only people who work with all industry types; their insight is invaluable in working through a process that will see safer outcomes. Police are often seen as being the enemy but the fact is they have significant pull power when it comes to getting others to come to the table.

They are also well aware of emerging issues but have no other point where they can hope to effect a change. On the side of the road, they are dealing one on one but at a round table meeting they can inform discussions with facts about what they are seeing on a daily basis.

2) Major industry groups

If you are aware of your local area ideally you'd want people from each industry type, for example:

- Livestock
- Mining
- General freight
- Log cartage
- Grain cartage
- Fertiliser
- Fuel

3) Local, State and Federal Government

Many of the issues you will discuss will cut across the three levels of Government and being able to have these people available to discuss options is extremely useful.

4) Road managers

Roads are categorised into the ownership of the roads and who manages them. Owners have plans for their roads and some will conflict directly with the needs of heavy freight. It is therefore logical to partner with the owners to ensure both your needs and the needs of the road owners are met before issues arise.

5) Road safety experts

With many States and regions taking an active interest in road safety, there will be people in your area who have been working in the road safety space. These people should be part of any round table as they may have access to resources for initiatives you may wish to apply or they may also be able to assist your group in dealing with specific problems as they are identified. The experts can be drawn from a private consultancy firm or from a government agency – the point is they can add enormous value to the meetings.

6) A facilitator

The need for a go-to person is essential. However it could be argued that such a person could be shared between several networks. It would be up to the local area to identify the person. The role is essentially to facilitate and organise meetings, set agendas and provide minutes and task sheets as determined by the membership.

7) Local Government

The importance and value of an effective and safe freight industry is a crucial part of the economy of any area. Therefore it is imperative for local governments to not only have a seat at the table but also to allocate time in support of the goals of the network: the safe and efficient movement of goods and services through a local government area.

Keep it casual: Road safety is about driver involvement and ownership of solutions.

In Practice: Developing and maintaining an effective Heavy Vehicle Safety Network

A model for local delivery and safer outcomes

The key features of the model developed in Gippsland is its portability and its extreme efficiency in achieving huge safety gains with minimal resources.

The key outcomes that industry identified were:

- Involvement of operators who normally sit outside the peak groups and whom make up a large proportion of rural transport, e.g. farm vehicles and not for hire private fleet operations (grain, quarry, milk/food and fertiliser)
- Strong links with stakeholders – the building and maintenance of strong relationships.

Into the future the industry is continuing to develop safer vehicles and undertake ongoing induction and training of drivers, with ongoing discussions with VicRoads and local governments about road infrastructure in the region.

Background

Gippsland occupies about one-third of Victoria. It has a large section of coastline to the south of the Strzelecki Ranges as well as to the east of the State. From Melbourne it takes about 4 hours of driving through Gippsland to reach Bairnsdale, and you would still only be only halfway through the region.

To the north are the Australian Alps and to the south are Australian natural icons such as Wilson's Promontory and the Ninety Mile Beach. There is an extensive lakes network, known as the Gippsland Lakes, and these extend for nearly one-third of the length of the region. There are seven local Governments in Gippsland.

Gippsland has an extremely diverse economy. It is literally the powerhouse of Victoria, harnessing vast quantities of brown coal, which is burnt in three of the largest power stations in the country. This is done in what is known as the industrial heartland of Gippsland, the Latrobe Valley. The region is also rich in produce from the vast array of market gardens, on the rich fertile river flats of the Macalister irrigation district through to the ever-green grazing lands of South Gippsland. It provides huge quantities of Australia's dairy needs and the dairy export market. There is a paper industry that produces paper for Australia and the world as well as hardwood timber and fishing industries.

What can be surmised from all of this activity is the important part the heavy vehicle industry plays in ensuring everything from logs in the High Country to dairy pick-ups on farms through to providing transport for all this produce out of the area. The transport sector moves cattle, bulk liquids, and general cartage. There is nowhere else in Australia where such a large variety of heavy freight road transport exists in such a compact area.

With all this activity comes the inevitable interaction with car drivers and here is the problem. Gippsland is also a tourist destination and a destination of choice for many retirees. This has brought some major challenges when it comes to competition for space on the road network.

The Gippsland Road Network

There is one freeway in Gippsland and it runs for less than one-quarter of the length of the region. This extends from Dandenong in the west to Morwell in the east. Beyond Morwell, the divided carriageway runs a further 10km past Traralgon before it becomes a dual carriageway all the way to the Victorian border.

The terrain ranges from long flat areas through to mountain passes and numerous roads that are narrow and follow hills and mountains in all directions. Most of the State road network has no sealed shoulders. Roads have been divided into A and B class routes with many of the B class routes supporting huge volumes of freight traffic.

A history of above state average crashes

Given the quantity and quality of the Gippsland State road network and the extensive local road network that supports heavy transport, it came as no surprise that Gippsland also had among the highest number of crashes involving heavy vehicles. Rollover crashes were quite common, with South Gippsland averaging one rollover every three weeks.

With one in five casualty crashes involving a truck, the Gippsland Region had become a very dangerous place to be a truck driver. Analysis of the problem revealed some interesting causes and prompted a region wide response that began in both the east and south.

The first part of this response was a willingness by all sectors of the industry (as discussed previously this is an extremely diverse group) to come together to deal with the issue.

In East Gippsland, this was led by the VicRoads Transport Safety Services section and in South Gippsland by the Shire of South Gippsland. This loose association of interested parties came together with Victoria Police Highway Patrol and local and State Governments to establish a dialogue around safety.

The group was determined to ensure that any response to the problem must be evidence based. Unfortunately there was no local research to quantify the problem, although both police and VicRoads kept extensive records. With the support of the TAC, the group was able to combine data from the two sources and analyse some of the findings. Common threads began to emerge: truck rollovers, visibility of trucks to older drivers, and driving practices of older drivers.

The types of crashes seemed to be in two categories: single vehicle crashes were nearly always rollovers, and collisions between trucks and cars nearly always involved older drivers.

Effective intervention strategies using existing management practices were quickly developed through the truck safety forums.

Talk, talk and more talk....

There needed to be a lot more discussion; each industry type began to look at what physical factors made their vehicles unstable and why some tipped and other didn't. A more pressing and urgent response was to let drivers know about the risks.

There is little doubt that a person who is aware of the risks is more likely to manage that risk better.

Through the collaboration of all industry sectors including police, VicRoads, major and smaller fleet owners and drivers, a body of knowledge was being developed.

Each company already had effective communication systems with their drivers, so when drivers and operators were given an opportunity to get together to look at the causes of their rollover problems, a series of forums across the region was extremely well supported. In fact, with some companies, the rollover training has now been integrated into their driver induction programs.

Running in parallel was the issue of crashes between cars and trucks. Again research was used to get to the hub of the issue. It was clear that two responses where needed. The first was how older drivers view trucks and the physical appearance of a truck to an older driver. This led to a highly effective three month trial where truck companies encouraged their drivers to turn on their headlights. Using internal communication channels, companies were able to educate drivers on some of the issues older drivers face, particularly in relation to seeing objects as they age combined with the ability to judge the speed of oncoming vehicles.

The light up campaign also had an extensive public information and communication package supported by VicRoads, including signage, billboards, TV and variable message sign (VMS) boards. The trial was extremely successful with all fleet operators across the State who had been involved ordering new fleet be fitted with daytime running lights and many retro-fitting daytime running lights to their existing fleet.

For those owner operators who are not part of large fleet operations, VicRoads Transport Safety Services officers and helpers talked to drivers directly. This happens regularly through truck safety days and roadside stops.

It also meant that drivers from outside the region got a better appreciation of the dangers they faced when they came into the Gippsland Region.

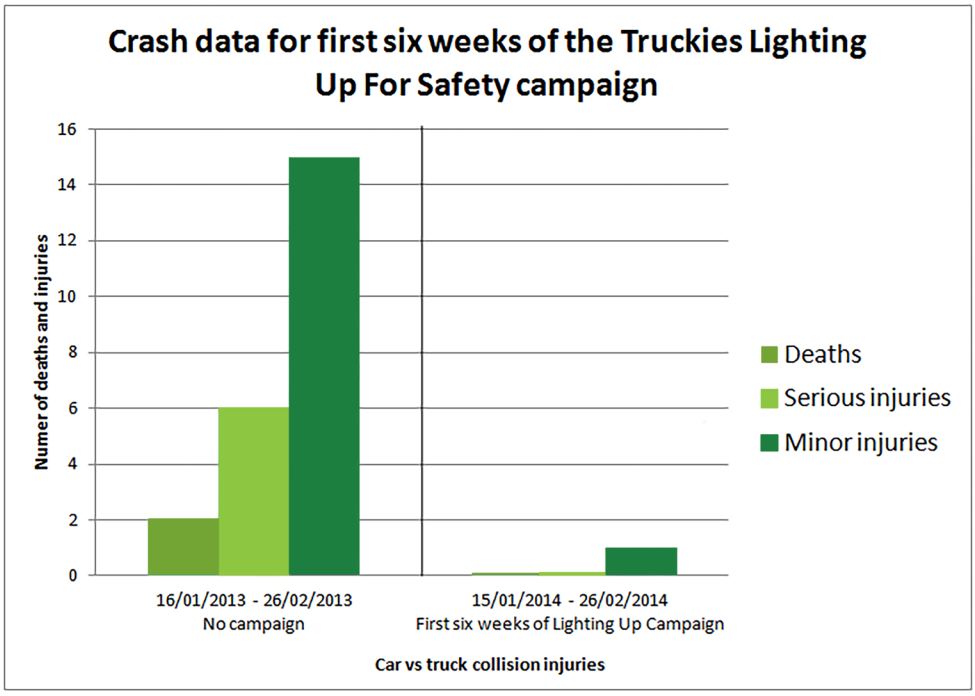
The combination of rollover training and Chain of Responsibility improvements, as well as work on making trucks more visible, seemed to work.

Though the aim was to further reduce the risk of crashes, this would need to involve taking what had been learned out into the broader community. The headlights on campaign was only the first in a series of steps designed to inform the public about the importance of visibility and some of the perception issues. What was needed was a targeted campaign for the very people that were having the greatest challenges on our roads…older drivers.

Some of the outcomes

After the initial trial period of the headlights on campaign, a direct comparison was made against crashes from the previous year. A report was prepared by Vic Roads and demonstrated a remarkable decrease in casualty crashes between cars and trucks, with no fatal or serious injury crashes recorded during the trial.

Truck rollovers have also reduced from one every three weeks to around three a year.



Role of truck safety days

Truck safety days have provided a number of opportunities for the heavy vehicle industry. While they showcase some of the latest technology, they are particularly useful for owner operators and driver groups who are isolated and not part of big peak organisations. They also provide a rare opportunity to discuss concerns with the people who administer the systems.

Truck safety days ensure information is available to all interested people as well as bringing together all the major people involved in the freight task, including the highest level of Victoria Police's heavy vehicle task force members, VicRoads TSS officers and manufacturers of safety equipment.

The most important aspect to these days has been the willingness of industry to share knowledge when it comes to safety. For example, one company developed safer systems for log restraint and proudly demonstrated in free workshops how the systems work. Another had looked at how the centre of gravity on trailers could be reduced and developed new designs for logging cartage trailers and brought them out fully loaded. Others lowered the centre of gravity on cattle truck trailers. This has been developed as a direct result of open discussions through the network established in Gippsland.

Another important aspect to the days has been driver fatigue management and how work diaries are used to monitor drivers. The systems around work diaries are very complex and safety days have enabled drivers to discuss the requirements of work diaries with the people charged with enforcing the requirements.

In relation to enforcement, the tools used by the enforcement agencies were also on display and again provided the opportunity for drivers and operators to ask questions about them and their use.

Significant industry investment in quest for safer outcomes for all road users

A major outcome of the development of local round table safety networks has been the enormous focus and investment by individuals and companies on developing safer systems for their drivers. The relationships formed with Victoria Police and VicRoads Transport Safety Services officers as well as Local Governments have seen enormous goodwill developed. Local initiatives have been extremely effective in supporting other road users, such as near-miss reporting systems, which support drivers by improving capturing of their on-road experiences. This has meant line-of-sight issues now have a way of getting quick action and issues of near misses with other drivers also have a direct line with VicPol for immediate action. This is separate to daily operational issues when two different transport types work in the same space; this has seen protocols developed between industries to ensure safer outcomes for other drivers as well as vehicle operators.

Some of the initiatives and spin-offs:

- Improvements in safety and compliance with a wider range of operators, particularly those who operate outside the areas normally covered by industry peak groups, such as farm trucks and private fleets not for hire.
- Support for new drivers and learners through supporting driver education initiatives and forums.
- Older drivers' forums supported by truck drivers, with formal links to the presenters of these programs to ensure the involvement of the heavy vehicle industry.
- Safety Days that are open to the general public so they gain confidence and understanding of the safe systems approach used by the industry.
- Truckies light-up-for-safety, which has grown to a program of national significance.
- In vehicle camera systems that were first explored by the network's partners and went on to win a National Industry Safety Award for innovation in road safety.

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2. Road / vehicle incident checklist: Potential Road / Vehicle Incident Contributory Factors

Driver	Verified?		
Things to consider	**Y**	**N**	**Notes**
Driver characteristics / fitness capability assessment • Age, sex, height, weight • Body fat • Experience, prior driving record and violation record • Training • Hearing, vision and force/reach abilities • Physical disabilities • Familiarity with traffic regulations			Only obtain when there is no conflict with applicable legal, data protection and/or regulatory requirements.
Was the driver fatigued? • Hours of service • Itinerary • Rest periods • Sleep deprivation, sleep apnoea • Boredom, vigilance, attention • Manually intensive work conducted	☐	☐	
Was the driver stressed? • Experience • Knowledge • Risk evaluation, training • Personal, psychological	☐	☐	
Any indications of exposure to drugs and alcohol? • Time of consumption, time since consumption • Type of drug • Amount consumed • Amount measured in body fluids and when was it measured • Effects on performance and behaviour	☐	☐	
Is there a failure to detect? • Stimulus level – is it detectable? • Alertness, workload? • Movement • Salience of stimulus?	☐	☐	
Is there a failure to perceive? • Recognition • Ambiguity • Interpretation • Comprehension • Exposure, learning	☐	☐	
Is there evidence of decision error? • Evaluation of information • Evaluation of alternative responses • Costs/effectiveness, effort • Determination of response	☐	☐	
Is the response correct and in time? • Slow, stop, accelerate, reverse • Turn, swerve • Walk, run, look, listen • Modulate control, turn on or off	☐	☐	
Are expectations challenged? • Familiarity • Exposure • Mental model • Assumption, publicity • Training • Maturity, risk level acceptance • Behaviour of others	☐	☐	

Vehicle	Verified?		
Things to consider	**Y**	**N**	**Notes**
Factors related to the vehicle or vehicles driven present? • Controls, displays • Road noise, heater/air-conditioning blower • Radio, cell phone, map displays, conversation, children, other passengers • Temperature, fogged windows • Insulation from outside warning-sound sources • Isolation from road and other external conditions • Ride conditions, vehicle loading • Driver's seated position • Accessibility of controls/displays	☐	☐	
Audibility factors relevant to the incident? • Are audible warnings suitable, can they be heard? • Horns, bells, emergency vehicle sirens • Are competing or background sounds, masking? • Any hearing loss apparent?	☐	☐	
Did the mechanics of the vehicle contribute? • Condition of windows, headlamps, other lamps, reflective devices • Brake system: total or partial loss, wear • Antilock brakes, air brake system lag • Tire condition, inflation • Steering system condition, free play, power-assist failure • Control force requirements • Vehicle safety inspection and maintenance	☐	☐	
Did load carriage contribute to the incident? • Cargo secured? • Did passenger numbers exceed the number allowed by the manufacturer or as set by law, whichever number is lower?	☐	☐	
Did the incident result in a vehicle rollover? • Hydrocarbon cargo involved? • Heavy vehicle rollover? • Light vehicle rollover? • Public road (if no this would result in off road)? • Was there any likelihood of any other road users and/or pedestrians to be involved/in the close area? • Did the vehicle rolled over to the passenger side? • Was speed contributing to the vehicle rollover? • What was the speed of the vehicle at the time of rollover? • Was there any recordable injury? • Was there any violation of company policy, e.g. mobile phone, seatbelts and alcohol & drugs? • In case of a Heavy Vehicle rollover, is the vehicle installed with Roll Stability Control System?	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Please provide details:

Road	Verified?		
Things to consider	**Y**	**N**	**Notes**
Did line of sight factors contribute to the incident? • Are there obstructions external to the vehicle? • Buildings, trees, vegetation, signs, other vehicles • Are there obstructions internal to the vehicle and vehicle structure? • Does road alignment hinder line of sight?	☐	☐	
Did visibility factors contribute to the incident? • Are levels of illumination sufficient? • Street lighting, vehicle lighting, sun, moon • Visual adaptation time sufficient? • Is there a glare issue? Low sun, oncoming vehicles, reflections • Is there background contrast? • Is conspicuity sufficient? (Vehicle displayed suitable lighting for the conditions)	☐	☐	
Did the external environment contribute to the incident? • Consider the driving environment • Rain, fog, snow, heat, cold, clear, dry wet • Available friction • Road characteristics (e.g. put holes) • Speed limit • Traffic density • Traffic controls, signs, railroad crossing • Road delineation • Law enforcement, automated enforcement • Weather - Rain, fog, snow, heat, cold, clear, dry wet	☐	☐	
Were signs and signal factors relevant to the incident? • Examine relevant signs and signals at the road side • Guide signs, regulatory signs, warning signs • Sign location, illumination, reflectorization, cleanliness • Traffic signals, railroad crossing signals • Pedestrian signals • Construction zone signs • Advance warning signs • Warrants for signs and signals	☐	☐	
Were roadway markings relevant to the incident? • Examine the markings on the road itself • Edge line delineation, centre line markings • No-passing zones • Construction zone markings • De-lineators • Channelization devices, barricades • Stop line, railroad crossing marking, turn lane	☐	☐	

APPENDIX 3: RESOURCES

A3.1 What to do immediately after a crash occurs list of steps

1. Stop Immediately
   a. Ensure your vehicle is stopped in a safe location and switch off the engine
   b. If possible, use your indicator lights, hazard lights or headlights to warn other drivers and light up the scene if it's dark
   c. If your car is unable to be driven check your surroundings and ensure it is safe to exit the vehicle
   d. Once outside of the vehicle scan the area for dangers (i.e. fires, fuel, other vehicles, etc.)
   e. Give immediate assistance to anyone who is injured
2. Call an Ambulance
   a. Call an ambulance if here are serious injuries
3. *Do **not** make any admission of liability or responsibility.*
4. Call the Police
   a. The police need to be notified in the following situations
      ii. A person has been killed or injured
      iii. The other party involved in the accident fails to stop and give their details
      iv. A vehicle has to be towed
      v. The other driver appears to be under the influence of alcohol or drugs
      vi. Damage to property (if the owner of this property is not present at the scene)
      vii. Take the name and number of any policeman who may attend, and the police incident number if given. You are not obliged to make any statement to the Police at this time.
5. Remove Hazards
   a. Review any local hazards created by the accident and take action to minimise the hazard, if it is safe to do so.
6. Exchange Details
   a. Exchange the following details with all parties involved
      i. Date, time and location
      ii. Name and residential address (of the third party).
      iii. Licence and registration details
      iv. Make and model of cars involved in the incident
      v. Insurance policy details, if know and applicable
7. Analyse the scene
   a. Take note of the time and precise location of the accident, making a rough sketch, if possible, of the accident on a sheet of paper.
   b. Take note of any damage to the organisation's vehicle and any other vehicle or property.
   c. Take photographs of the accident scene (road conditions, skid marks, the approach to the accident, etc.), without endangering yourself or others, and ensure all third party vehicle's damage and Registration numbers are clearly visible along with that of your organisation's vehicle - at the scene, road markings, junction layout etc.
   d. Take note any other persons involved (how many passengers carried in third party vehicle(s))
   e. Note any injuries to any person involved in the accident
   f. Take down the details of any witnesses present
8. If your car is not drivable and is causing an obstruction
   a. Contact your employers or your accident management company to make arrangements for it to be removed. The police will arrange to do this if asked but will only remove it to a location of their choice.
9. Report the accident immediately upon return.

Information adapted from:

- Credit to Driving for Better Business
- Credit to Sanofi
- Credit to RMS

A3.2 Standard questions for drivers or involved occupants

Before asking these sorts of questions it is important to ensure that you make the driver feel comfortable, and make them feel as though their job is not threatened. If an employee feels as though their job, and thus their livelihood, may be threatened they may not be forthcoming with the information that you will need i order to ensure an incident like this doesn't occur again.

1. To place the driver/vehicle occupants at the scene of the incident
    - Were you the driver of an XXX bound motor vehicle, registration ABC-123, when it was involved in a collision with (motor vehicle/pedestrian/tree/pole, etc.) at the intersection of Smith and Jones Street, XXXXX about XXXXhrs on XXXday the XXth XXXXX 20XX?
    - Can you tell me your version of events?
    - Are you familiar with the area that this collision occurred? (i.e. Have you driven on this route before?)
    - Can you describe the area to me (road surface, number of lanes, separation of opposing traffic flow, street signage, traffic control lights, street lighting, gradient, speed limit, traffic conditions, weather conditions, lighting at the time, etc.)?
2. Specific questions for the driver:
    - When did you obtain your class C, JHR, HC, MC (delete as applicable) licence?
    - How long have you been driving this vehicle or these types of vehicles?
    - Roughly, how many kilometers a year would you average driving this vehicle or this type of vehicle?
    - What was your view of the road like immediately prior to the collision?
    - Would you say that your attention was solely on the driving task, or do you think you may have been distracted?
    - Did anything distract you from your driving in any way immediately prior (two way use, AM/FM radio use, mobile phone use, controls such as climate control, etc.)? Do you believe it was another work task that was distracting you?
    - Was the view in your external and/or internal mirrors obstructed at all prior to the collision? And if so, was it obstructed by work equipment?
    - Were you wearing a seatbelt?
    - Were you feeling tired or fatigued?
    - Do you feel as though you have had enough sleep in the last 24 hours (in the event of a heavy vehicle you need to include work and rest for the previous 7 days)
    - Have you recently consumed any alcohol or non-prescription drugs? If you have been taking prescription medication, were you informed that you shouldn't be driving?
    - In your opinion, what do you think caused this collision?
    - When did you realise the collision was going to occur? Do you think you had any reaction time?
    - Did you take an evasive action? If not, did you resist serving for safety reasons?
3. Specific questions regarding the vehicle:
    - Did you complete a prestart checklist at the beginning of your shift?
    - Did you identify any faults with the vehicle (if so what reporting procedure was followed)?
    - How familiar are you with the operating controls of the vehicle you were driving (describe gearbox, steering, brake systems)?
    - Do you believe any mechanical defect or fault contributed in any way to this collision (if so, will need to drill down on this view)?
    - Was your windscreen clean? And if not, do you feel that this contributed to a lack of visual clarity?
    - Was your windscreen fogged?
    - Did you have a clear view of the roadway ahead through your windscreen immediately prior to the collision?
    - Were your external mirrors correctly aligned properly for your seating position?

A3.3 Driver checklist and vehicle incident investigation handbooks

Vehicle Incident Investigation Handbook

Vehicle Incident Reporting Booklet and Form

Vehicle Accident Investigation Reference Booklet