MONASH University

ACCIDENT RESEARCH CENTRE

# Development of a systems thinking investigation tool for light vehicle work-related incidents

REPORT PREPARED FOR WORKSAFE VICTORIA

**October 2021**

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# INTRODUCTION

Workers that drive light vehicles (e.g., passenger vehicles, utility vans) represent 30% of registered motor vehicles in Australia. Driving for these workers is often considered to be secondary to their primary job role (e.g., in-home nursing care, sales representatives; Newnam et al., 2012). Despite this, these workers have significant exposure to the inherent dangers of the road transport environment, with some workers reporting driving over 1,100 kilometres per week (NRSPP, 2015). In fact, it has been estimated that 33% of work fatalities occur while driving (Driscoll et al., 2005). Unlike the road freight transport industry, a Chain of Responsibility does not exist for managing the safety of individuals that operate a light vehicle. Thus, limited lessons have been learnt for preventing these incidents.

The lack of systematic and rigorous investigation of system and organisational-level circumstances of individual crash incidents involving light vehicles is an impediment to progressing the safety improvements needed to ensure worker and public safety on roads. We have learnt from other safety critical environments (e.g., healthcare; Newnam et al., 2020; 2021) that a systems thinking approach is required as a first step to better understand incidents, review and revise existing risk controls and to develop feasible and practicable control measures. The Monash University Accident Research Centre (MUARC) in collaboration with WorkSafe Victoria aimed to develop a prototype 'systems thinking' tool to review and revise control measures to prevent and manage light vehicle work-related driving incidents and near misses.

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**The end goals of the project were to:**

Provide a standardized process for reviewing and revising risk controls following the report of an incident or near miss involving a work-related light vehicle

Help WorkSafe Victoria to identify strategic interventions to drive systemic change required to prevent light vehicle work-related driving incidents and near misses

**The objectives of this proposed project were to:**

Develop a prototype 'systems thinking' tool for investigating light vehicle work-related incidents and near misses

Pilot the application of the tool for guiding a systems thinking investigation of light vehicle work-related driving incidents or near misses

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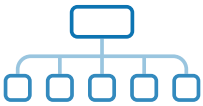
This report presents a brief summary of (i) the key findings of the stages of the project and (ii) the pilot application of the tool with three case studies involving light vehicle work-related vehicle incidents and near miss. A more detailed analysis of the findings will be presented in forthcoming peer review journal papers.

# **STAGE ONE:** DEVELOPMENT OF THE TOOL

The tool was developed through a co-design process with key representatives from MUARC, the Program Director of the National Road Safety Partnership Program (NRSPP) and WorkSafe Victoria. Three stages were involved in the development of the tool including:

A systematic review of the literature to identify factors associated with work-related driving crashes

A workshop with representatives from MUARC, WorkSafe Victoria, industry and the Program Director of the NRSPP



Development of a classification scheme that represented the factors contributing to crashes

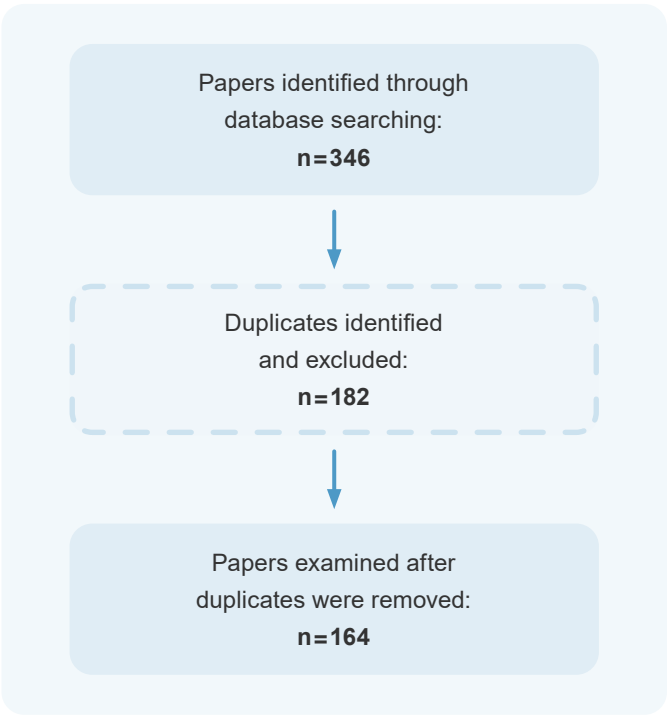



***Figure 1:*** *Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) flow chart of systematic search*

The framework underpinning the classification scheme was based on a systems thinking accident analysis method, Rasmussen's (1997) Accimap technique, as well as WorkSafe Victoria's guidance material on risk controls relevant to work-related driving. The project adopted key methodological and theoretical components of the successful 'Patient Handling Injury Review of Systems' (PHIRES) project to improve the efficiency of the prototype development stage. The following describes each of the stages involved in the development of the tool.

## SYSTEMATIC REVIEW

A systematic review of the literature was undertaken to identify factors contributing to work-related driving crashes. The systematic review search terms covered concepts ranging from, but not limited to 'workplace'; work-related'; 'safety'; 'risk'; 'crash'; 'accident'; 'ticket'; 'penalty'; 'risk factor'. The search was restricted to papers published from 2010 – present. Six databases were used to conduct the search (Medline, PubMed, AMED, Scopus, PsychINFO and Web of Science). Figure 1 illustrates the stages of the systematic review. Studies that identified the relationship between work-related driving crashes for both light and heavy vehicles were included to expand the scope of knowledge.

Each individual risk factor identified in the systematic review was mapped onto the relevant level of an adapted version of Rasmussen's risk management framework (Rasmussen, 1997). Figure 2 shows that the highest proportion of risk factors were identified at the Drivers and Other Road Users level (n=83, 47.7%). No risk factors were identified at the regulatory and government bodies levels of the framework.

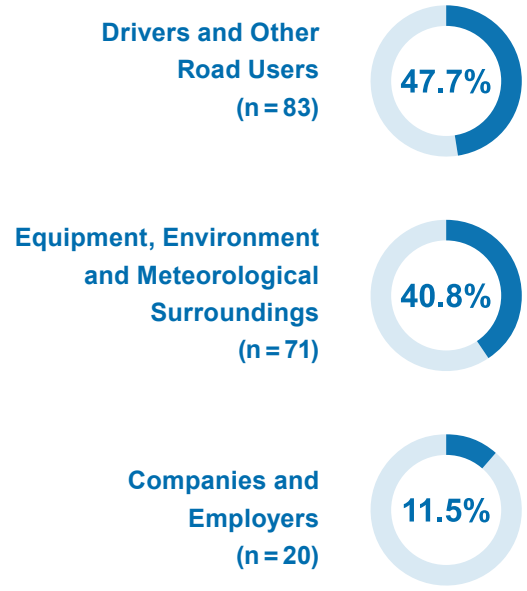



***Figure 2:*** *Percentage of risk factors identified by the systematic review at the 3 lower levels of an adapted version of Rasmussen's risk management framework*

A description of the risk factors identified at the three lower levels of a system are described, below.

TABLE 1: The risk factors identified at the Equipment, Environment and Meteorological Surroundings Level (n=71)

| Level of system | Risk factors | |
|---|---|---|
| **Equipment (16 articles)** | Warning signals (2 articles)<br>In-vehicle technology (1 article)<br>Vehicle specifications (2 articles)<br>Design of vehicle (2 articles) | Maintenance (1 article)<br>Road signage (4 articles)<br>Load/storage (3 articles)<br>Personal protective equipment (1 article) |
| **Environment (42 articles)** | Road surface conditions (6 articles)<br>Urban/rural (5 articles)<br>Road furniture (2 articles)<br>Time of day/week (8 articles) | Traffic congestion (2 articles)<br>Season of year (2 articles)<br>Road design (13 articles)<br>Speed limit (4 articles) |
| **Meteorological conditions (13 articles)** | Lighting (4 articles)<br>Weather conditions (8 articles)<br>Visibility (1 article) | |

TABLE 2: The risk factors identified at the Drivers and Other Road Users Level (n=83)

| Level of system | Risk factors | |
|---|---|---|
| **Work design (5 articles)** | Job demands (4 articles)<br>Safety culture (1 article) | |
| **Drivers (76 articles)** | Aggression (3 articles)<br>Inattention/distractions (3 articles)<br>Alcohol/drugs (5 articles)<br>Personality traits (2 articles)<br>Safety attitudes (2 articles)<br>Physical/medical condition (8 articles)<br>Driving behaviour (9 articles)<br>Experience/competence (6 articles) | Hazard perception skill (2 articles)<br>Seat belt (4 articles)<br>Drugs/medication (2 articles)<br>Risk perceptions (3 articles)<br>Fatigue / Sleepiness (10 articles)<br>Traffic violations (10 articles)<br>Speed (5 articles)<br>Sleep quality (2 articles) |
| **Other drivers (2 articles)** | Behaviour: general (2 articles) | |

TABLE 3: The risk factors identified at the Companies and Employers Level (n=20)

| Level of system | Risk factors |
|---|---|
| **Leadership (3 articles)** | Mental health/wellbeing/OHS (2 articles)<br>Safety culture (1 article) |
| **Work scheduling (17 articles)** | Rostering (7 articles)<br>Shift work (4 articles)<br>Breaks (4 articles)<br>Workload (2 articles) |

## WORKSHOPS WITH KEY STAKEHOLDERS

One workshop was undertaken with MUARC and WorkSafe Victoria representatives, the Program Director of the NRSPP and an organisation that operates a light vehicle fleet. The purpose of the workshop was to:

Identify and refine risk factors relevant to light vehicle work-related driving incidents and near misses, beyond those already identified in the systematic review.

Contextualise the wording of the risk factors to ensure relevance to the work-related driving context.

The workshop generated significant discussion and resulted in several refinements to the list of risk factors identified in the systematic review.

## DEVELOPMENT OF THE CLASSIFICATION SCHEME

The risk factors identified in the systematic review and through consultation with key stakeholders in the workshop were consolidated and illustrated at each level of the adapted version of Rasmussen's risk management framework. The final product was a classification scheme of risk factors associated with light vehicle work-related driving incidents (see Appendix A).

# **STAGE TWO:** PILOT APPLICATION OF THE TOOL

Stage two involved piloting the application of the tool for guiding a systems thinking investigation of light vehicle work-related driving incidents and near misses. We recruited a private organisation to provide data to populate the case studies. MUARC and the NRSPP had an existing relationship with this organisation.

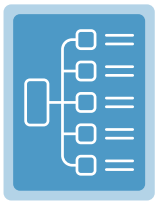
In this organisation, staff (i.e., Associates) are required to drive for work for multiple reasons including visiting customer premises, visiting various client locations and attending tradeshows or conferences. The nature and duration of driving varies dependent on the role of the Associate. For example, some Associates drive several hundred kilometres a week (e.g. field sales role) to only occasional driving (e.g. Associates undertaking incidental site visits). The overall responsibility to provide and manage safe workplaces whenever Associates use vehicles for work include vehicles owned, leased, or hired by the organisation as work vehicles.

The organisation has an ongoing partnership with leasing companies that provide a fleet of selected vehicles to ensure the Associates can undertake their scope of work. Field Sale Associates who drive to and from different locations for work purposes require a Tool of Trade Vehicle. All field sale Associates are based from their home, whereby their first and last trips are classified as work-related.

## CASE STUDIES

Two key modifications to the existing PHIRES tool were made to contextualise the tool for investigation of light vehicle work-related driving incidents and near misses. The two modifications involved:

The key stakeholder list at each level to align with names and relevant roles.



The classification scheme of risk factors associated with work-related driving incidents was used to guide the end-user in considering factors at each level of the system, relevant to the incident under investigation.

Pilot application of the tool was undertaken on three incidents, all of which were reported by Associates in the organisation. Three individuals that were involved in an incident (n=2) and reported a near miss (n=1) where interviewed about their experience and asked to provide details about the factors that contributed to the incident under investigation.

Figure 3 describes the six steps and associated data collection templates used in the investigations. Population of the tool was led by Associate Professor Sharon Newnam from MUARC and Jerome Carslake from the NRSPP, in partnership with the Associate and a member of the Risk Management and Safety team within the participating organisation.

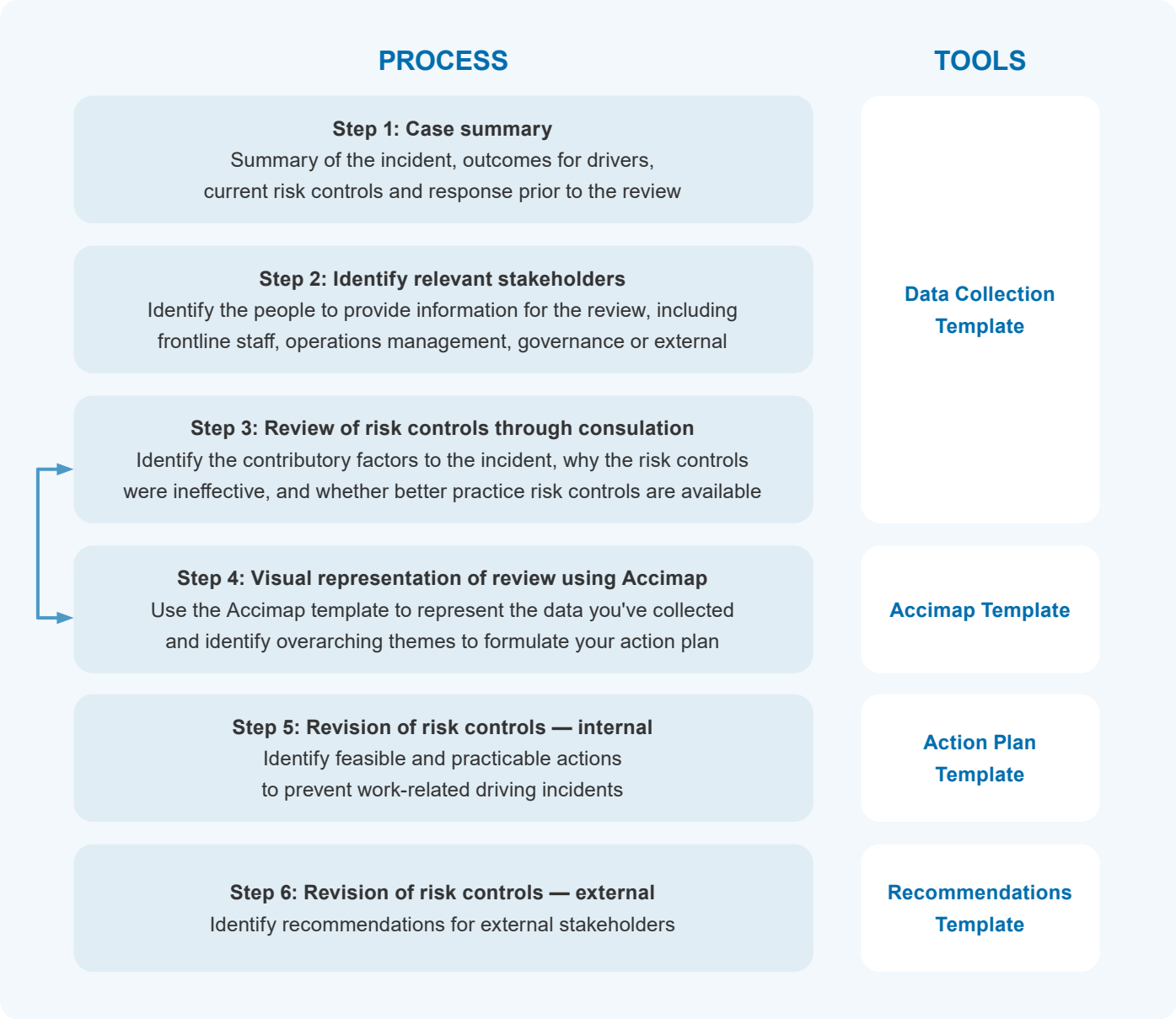



***Figure 3:*** *Overview of the work-related driving incident review process, including development of the Accimap (Step 4)*

## DESCRIPTION OF THE CASE STUDIES

Case Study One was a near miss incident. The Associate was driving from one store to another and was being vigilant in the safety checks. The Associate looked in the rear-view mirror and noticed that the driver was being inattentive and did not notice the Associate's vehicle was stopping. To avoid a rear-end crash, the Associate pulled into the left-hand lane, as no vehicles were identified.

Case Study Two involved a rear-end crash. There was no injury to the Associate but damage to the bumper of the vehicle. The Associate had entered a short (50m) straight street, stopped at a give-way sign to turn left onto a main road when the vehicle behind rear ended the Associate's vehicle. The Associate did not see the vehicle behind as they were concentrating on giving way to traffic travelling along the main street.

Case Study Three involved an incident that resulted in damage to the vehicle. No injury was sustained by the Associate. The load in the vehicle in front of the Associate's vehicle was not secured and came loose. A large tub dropped out the vehicle and went under the Associate's vehicle. The side bumper of the Associate's vehicle came loose as a consequence.

**Pilot application of the tool for each of these three case studies is presented in Appendix B-D.*

## OVERVIEW OF THE FINDINGS OF THE CASE STUDIES

Pilot application of the tool provided evidence that the tool helped guide a systems thinking investigation of incidents. This conclusion was evidenced by the:

1. Risk and protective factors were identified within and across levels of the system. Each of the case studies identified factors contributing to the incidents and near miss across all five levels of the system. There was also a significant number of factors identified at the higher levels of the system. These factors would not have been identified using a traditional (i.e., linear) approach to investigations.

2. The Accimap method (Step four) illustrated the complex network of factors that contributed to the incidents and near miss under investigation. That is, relationships were identified between factors within and across levels of the system for all three reports.

3. Actions were generated that promoted the review and revision to risk controls and identified a role and responsibility for key stakeholders, both internal to the organisation (e.g., developing the skills of all levels of leaders in being proactive in their communication to promote workplace road safety) and external (e.g., development of accreditation standards to be developed to help guide employers in managing the risk associated with vehicle as a workplace). Several actors across the system were also identified in the responsibilities of actions (WorkSafe Victoria, Road Regulators, NRSPP).

Two aspects of the pilot application highlighted the versatility of the tool. First, the tool was successfully piloted on a near miss and incidents involving property damage. Investigation of near misses is a new form of investigation using this systems thinking approach to investigation. Second, the tool was used to identify both risk and protective factors. That is, factors that contributed to the risk of the incident as well as factors that protected the Associates from injury were identified using the tool. This aspect of the investigation process allowed us to identify risk controls that were effective in preventing injury as well as those risk controls in need of revision and the need for the development of new risk controls.

# CONCLUSION

This report presents the findings from the development and pilot application of a tool to investigate light vehicle work-related driving incidents and near misses. The tool was developed using an evidence-based approach for identifying risk factors contributing to work-related driving incidents and refined through consultation with the NRSPP, WorkSafe Victoria and a participating organisation that operates a light vehicle fleet. The data collected through the development stage (i.e., systematic review, workshop) were used to develop a classification scheme for risk factors associated with light vehicle work-related driving incidents. The classification scheme was subsequently used to help guide the investigation of risk factors as well as those factors that protected the worker from sustaining injury. The latter outcome was a novel application of the tool that highlights its versatility in mitigating against risks.

Pilot application of the tool illustrated that the tool helped guide a systems thinking approach to the investigation of light vehicle work-related driving incidents and a near miss. This conclusion was evidenced by the (i) factors identified within and across all levels of the system, (ii) complex network of relationships identified between factors and (iii) actions generated that identified the review and revision of risk controls and development of new risk mitigation strategies for internal (i.e., organisation) and external stakeholders. The end-goal of this project is to help WorkSafe Victoria and organisations operating light vehicle fleets identify strategic interventions to drive systemic change to prevent incidents.

# REFERENCES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# **APPENDIX A:** CLASSIFICATION SCHEME OF RISK FACTORS

## GOVERNMENT, REGULATORS AND EXTERNAL INFLUENCES

**Government & Regulations**
- Accreditation standards
- Funding and priorities
- Guidance material
- Legislation/regulation
- Political influence
- Communication
- Auditing
- Safety strategies

**Unions / Employer Associations / Peak Bodies**
- Support for OHS
- Political Agenda

**Suppliers**
- Expense/availability of equipment
- Equipment standards
- Training specialisation
- Maintenance schedules

**External Influencers**
- Reporting from media
- Social media
- Community attitudes
- Enforcement activities
- Social networks

## GOVERNANCE AND ADMINISTRATION

**Management Systems**
- Approval and change management
- Consultation
- Human resources
- Policies and procedures
- Risk management
- Safety monitoring
- In-vehicle technologies
- Incident reporting system
- Security systems
- Committees
- Recruitment protocols

**Resources**
- Funding
- Costs
- Time allocation to training
- Awareness campaigns
- Employment arrangements
- Mentoring
- Shared learnings

**Leadership**
- Safety culture
- Reporting culture
- Senior management commitment
- Communication
- KPIs
- Organisational change
- Priorities
- Strategies: safety/health/wellbeing

## OPERATIONS MANAGEMENT

**Supervisors**
- Communication
- Support from supervisors
- Co-operation between work areas
- Quality of supervision
- Priorities of supervisor

**Work Scheduling**
- Rostering
- Contingency planning
- Shift work
- Breaks
- Workload
- Time Pressure
- Time allocation for administration

**Work Systems**
- Budgets
- Equipment maintenance
- Equipment selection
- Skill-based training
- Education & development
- Role expectations
- Data analysis & feedback

## DRIVERS AND OTHER ROAD USERS

**Work Design**
- Job control
- Job demands
- Role conflict
- Work schedule leading up to incident

**Drivers**
- Aggression
- Inattention/distraction
- Alcohol/drugs
- Sleepiness
- Physical/medical condition
- Driving behaviour: general
- Seat belt
- Drugs/medication
- Mobile phone use
- Driving history
- Speed
- Sleep quality

**Other Drivers/Riders**
- Behaviour: general
- Decisions & actions
- Communication

## EQUIPMENT AND SURROUNDINGS

**Equipment**
- In-vehicle technology
- GPS systems
- Mobile phone
- Design
- Vehicle modifications
- Maintenance
- Fit for purpose
- Load/Storage
- PPE
- Vehicle specifications

**Environment**
- Urban/regional
- Weather conditions
- Lighting
- Visibility
- Time of day/week
- Traffic congestion
- Road design
- Road surface conditions
- Road furniture
- Warning signals
- Road signage
- Posted speed limit
- Incident response/ breakdowns
- Animals

## Further information

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# Work-related Driving Incident Review Toolkit

| CASE SUMMARY | |
|---|---|
| **The Incident**<br>Describe the flow of events on the day of the incident and any relevant events leading up to the incident (i.e., location/time/date of incident) | The near miss incident occurred at 10:30am. The Associate was driving from one store to another and was being very vigilant in her safety checks. The surrounding traffic was breaking and the Associate looked in the rear view mirror and noticed that the driver in the vehicle behind her was being inattentive and did not appear to notice the Associate's vehicle was stopping. To avoid a rear-end crash, the Asscoiate pulled into the left hand hand lane as no vehicles were identified in that lane. |
| **Outcomes for staff**<br>Injuries or harm to staff as a result of the incident | The Associate was shaken by the event as she anticipated being hit has she not been able to pull into the left hand lane. |
| **Outcomes for others**<br>Injuries or harm to other (other road users) as a result of the incident | The other vehicle had to break harshly (described as a screeching holt) in the lane position that the Associate had previously occupied. |
| **Outcomes for assets**<br>Damage to vehicle and surrounding environment | N/A |
| **Risk controls**<br>List all the risk control measures in place for driving at the time of the incident | The risk controls in place to avoid this incident included (i) mandatory driver training (skid pan and education), (ii) online driver training (education and hazard identification), (iii) 5-Star ANCAP vehicles (including blind spot warning system, brake assist, ESC), (iv) regular maintenance of vehicle, (v) workplace road safety is integrated within OHS and management practices, (vi) valid driver's licence |
| **Response**<br>Describe the response to the incident prior to the review | Reported to line manager and the Associate completed an incident report. |

| **CONSULTATION**<br>Identify the staff that need to be consulted during this review | | | |
|---|---|---|---|
| **Frontline staff:**<br>□ Driver<br>□ Co-worker / colleague<br>□ Administration staff<br>□ Security staff<br>□ Other_____ | **Operations management**<br>□ Supervising staff member / Team leader<br>□ Director / Manager/ head of unit<br>□ Education & Training<br>□ HSR / OH&S Team<br>□ Rostering / staff deployment officer?<br>□ Fleet manager<br>□ Equipment Manager<br>□ Facilities Manager<br>□ IT support services<br>□ Committees (specify)_____<br>□ Other_____ | **Governance and administration**<br>□ CEO<br>□ Executive Team<br>□ Chief Operating Officer<br>□ Human Resources<br>□ Health & Wellbeing Officer<br>□ Governance Committees<br>□ Legal Officer<br>□ Capital and infrastructure<br>□ Other_____ | **External influences**<br>□ Government<br>□ Regulators (e.g. WSV, TAC)<br>□ Unions/Employer Associations<br>□ Fleet maintenance suppliers<br>□ Training specialisation suppliers<br>□ Emergency Management Response (e.g. Ambulance)<br>□ Consultants/Contractors (specify)_____<br>□ Workplace road safety experts (Researchers from MUARC & NRSPP) |

GREEN HIGHLIGHTING: PROTECTIVE FACTOR THAT ASSISTED IN AVOIDING A CRASH

YELLOW HIGHLIGHTING: RISK FACTOR THAT CONTRIBUTED TO THE INCIDENT

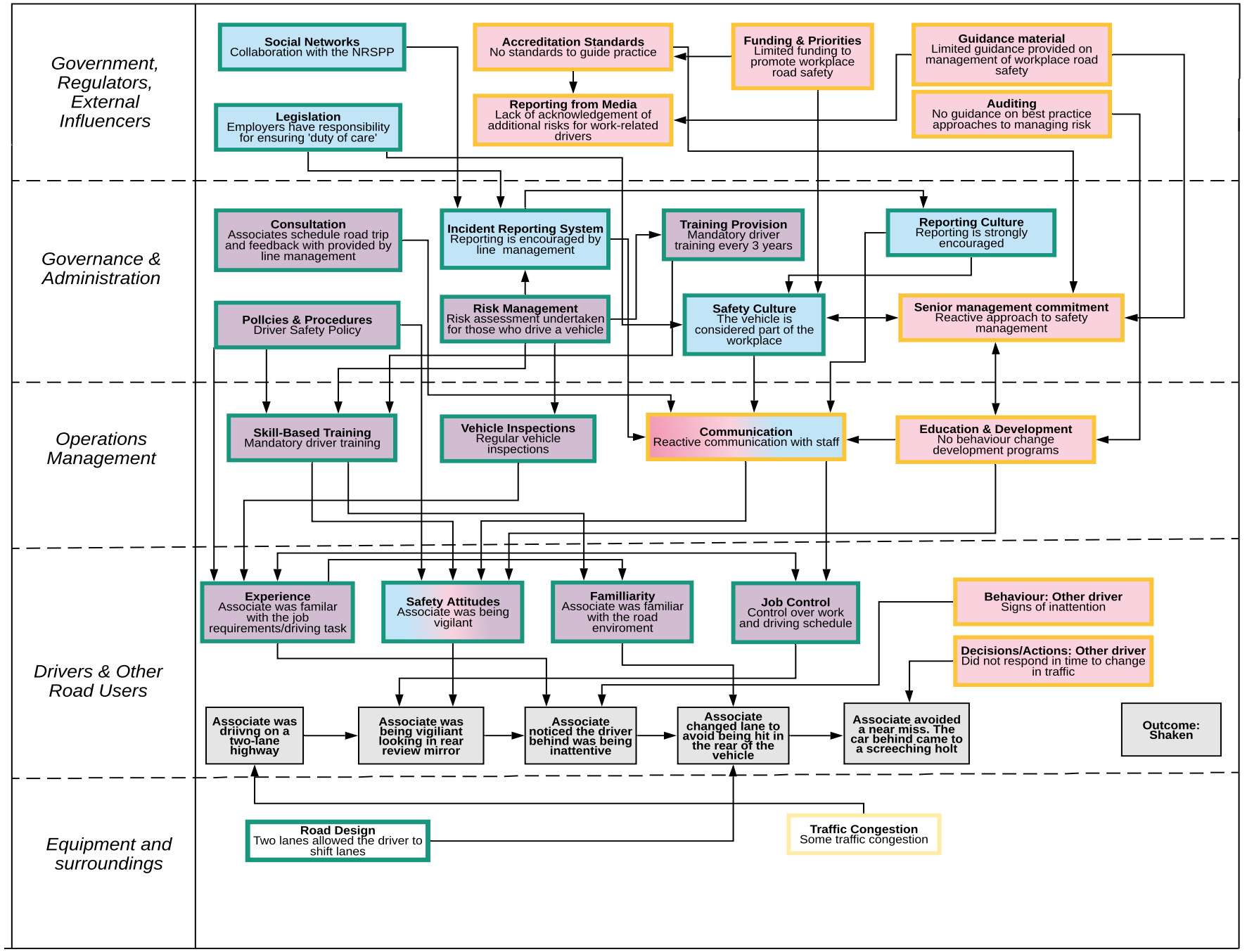
| **REVIEW OF RISK CONTROLS THROUGH CONSULTATION: Look "up and out" not "down and in"** | | |
|---|---|---|
| **Contributory factors to WRD incident** | **Why were risk controls ineffective?**<br>**(See Data Collection Guide for example questions)** | **Are better practice risk controls available?**<br>**Document suggestions from staff to improve the effectiveness of risk controls** |
| **Equipment and surroundings level** | | |
| **Equipment**<br>□ In-vehicle technology<br>□ GPS systems<br>□ Mobile phone<br>□ Design<br>□ Vehicle modifications<br>□ Fit for purpose<br>□ Maintenance<br>□ Load/Storage<br>□ Vehicle specifications<br>□ PPE | | |
| **Environment**<br>□ Urban/Regional | | |

| | | |
|---|---|---|
| □ Weather Conditions<br>□ Lighting<br>□ Visibility<br>□ Time of day/week<br>□ Traffic congestion<br>□ Road design<br>□ Road surface conditions<br>□ Road furniture<br>□ Warning signals<br>□ Road signage<br>□ Posted speed limit<br>□ Incident response /breakdowns<br>□ Animals<br>□ Other_____ | ROAD DESIGN: There were two-lanes which allowed the Associate to shift lanes to avoid being hit.<br><br>TRAFFIC CONGESTION: There was some traffic congestion. | |
| **Drivers & Other Road Users level** | | |
| **Work Design**<br>□ Job control<br>□ Job demands<br>□ Role conflict<br>□ Role clarity<br>□ Lone worker<br>□ Work schedule leading up to incident<br>□ Familiarity with the vehicle | Job controls: The Associates have control over their work schedules as they can determine how many clients they visit in a day. | |
| **Drivers**<br>□ Aggression<br>□ Inattention/distraction<br>□ Alcohol/drugs<br>□ Personality traits<br>□ Safety attitudes<br>□ Fatigue / sleepiness<br>□ Sleep quality<br>□ Physical/medical condition<br>□ Drugs/medications<br>□ Driving behaviour: general<br>□ Experience / competence<br>□ Hazard perception skill<br>□ Seatbelt<br>□ Mobile phone use<br>□ Risk perceptions<br>□ Incident history<br>□ Speed<br>□ Knowledge<br>□ Unfamiliarity with area | Safety attitudes: The Associate was being vigiliant at the time of the incident and identified the behaviour of the other driver and avoided being hit.<br><br>Experience: The Associate was familiar with the job role requirments including the task the driving a vehicle for work purposes.<br><br>Familiarity: The Associate was familiar with the road environment. | |

| | | |
|---|---|---|
| **Other Drivers/Riders**<br>□ Behaviour: general<br>□ Communication<br>□ Decisions & actions<br>□ Type of vehicle<br>□ Type of road user | Behaviour: The Associate noticed that the other driver was showing signs of inattention.<br><br>Decision & Actions: The other driver did not respond in time to avoid potential rear end incident has the Associate not have moved over. The Associate moved out of the lane to avoid being hit. | |
| **Operations Management level** | | |
| **Supervisors**<br>□ Communication<br>□ Support from Supervisors<br>□ Co-operation between work areas<br>□ Quality of supervision<br>□ Priorities of supervisor | Communication: Safety is a part of professional development activities in the organisation. However, workplace road safety is often communicated using reactive messaging, such as reports of incidents. | There is opportunitity to develop the skills of supervisors in being proactive in their communication to promote workplace road safety. |
| **Work scheduling**<br>□ Rostering<br>□ Contingency planning<br>□ Time Pressure<br>□ Breaks<br>□ Workload<br>□ Time allocation for administration<br>□ Shift work | | |
| **Work systems**<br>□ Budgets<br>□ Equipment maintenance<br>□ Vehicle inspections<br>□ Equipment selection<br>□ Skills-based training<br>□ Education & development<br>□ Role expectations<br>□ Data analysis & feedback | Vehicle inspections: Vehicle inspections are regularly conducted by Associates. Line managers are also involved in inspections of vehicles (types, lights).<br><br>Skill-based training; Associates are required to undertake mandatory driver training every three years.<br><br>Education & development: Education on road safety is offered; however, there are currently no behaviour change development programs to promote change. | There is opportunity to further promote the important of vehicle inspection practices. Pre-start checks (to familiarise with vehicle features) are incorporated into workplace practice and that this practice is supported at management level and enforced by workgroup supervisors (or similar).<br>. |
| **Governance & Administration Level** | | |
| **Management systems**<br>□ Approval and change management<br>□ Consultation<br>□ Human resources<br>□ Policies and procedures<br>□ Risk management<br>□ Safety monitoring<br>□ In vehicle technologies<br>□ Incident reporting system<br>□ Security systems<br>□ Committees | Consultation: The Associates schedule their road trips and feedback is provided from line management if expectations have been met.<br><br>Policies & procedures: There is a Driver Safety policy. However, there is opportunity to define expectations of line management in proactively managing the safety of Associates who drive a vehicle.<br><br>Incident reporting system: Reporting is encouraged by line management.<br><br>Risk management: There is a risk assessment specific for those who drive a vehicle for work purposes. | There is opportunity to further develop policies and procedures. Clarity is needed in defining the roles and responsibilities of management in the behavioural management (i.e., proactive management) of workplace road safety.<br><br>There is an opportunity to use incident reporting data to proactively manage the safety of Associates who drive a vehicle.<br><br>There is an opportunity to review and revise the risk assessment framework for the management of workplace road safety to ensure it is fit for purpose and identifies all relevant risks and evidence based risk controls. |

| | | |
|---|---|---|
| □ Recruitment protocols | | |
| **Resources**<br>□ Funding<br>□ Costs<br>□ Time allocation to training<br>□ Awareness Campaigns<br>□ Employment arrangements<br>□ Mentoring<br>□ Shared learnings | Training: There is mandatory driver training every three years. | |
| **Leadership**<br>□ Safety Culture<br>□ Reporting Culture<br>□ Senior management commitment<br>□ Communication<br>□ KPIs<br>□ Organisational change<br>□ Priorities<br>□ Strategies: safety/health/wellbeing | Safety culture: There is a developing safety culture to acknowledge and promote workplace road safety (e.g., campaign on driver safety).<br><br>Reporting culture: Reporting is strongly encouraged.<br><br>Senior management commitment: Reactive approach to the management of safety for use of vehicle. | There is opportunity to further promote the safety culture for workplace road safety through identifying roles for leadership.<br><br>There is opportunitity to develop the skills of leaders in being proactive in their communication to promote workplace road safety. |
| **Government, Regulators and External Influences level** | | |
| **Government and regulators**<br>□ Accreditation standards<br>□ Funding and priorities<br>□ Guidance material<br>□ Legislation/regulation<br>□ Political influence<br>□ Communication<br>□ Auditing<br>□ Safety strategies | Accreditation standards: There are currently no standards provided in the management of workers who drive a vehicle for work purposes, beyond 'duty of care'.<br><br>Funding and priorities There is limited funding provided to promote workplace road safety.<br><br>Guidance material: There is currently limited guidance provided by regulators in the management of workplace road safety beyond the management of the individual driver.<br><br>Legislation: Employers are responsible for ensuring duty of care for those who drive a vehicle for work purposes.<br><br>Auditing: There is currently no direction for best practice approaches to manage the risk associated with vehicle use in the workplace. | Clarity is needed by workplace government and regulators on managing the risks associated with driving a vehicle, beyond the level of the individual driver.<br><br>Auditing of evidenced-based practices in managing the risk of using a vehicle for work purposes is required. |
| **Suppliers**<br>□ Expense/availability of equipment<br>□ Equipment standards<br>□ Training specialisation<br>□ Maintenance schedules | | |

| | | |
|---|---|---|
| □ Consultants<br>□ Auditors | | |
| **Unions and employer associations**<br>□ Support for OHS<br>□ Political agenda | | |
| **External Influencers**<br>□ Reporting from media<br>□ Social media<br>□ Community attitudes<br>□ Enforcement activities<br>□ Social networks | Social networks: Evidence based promotion of best practice provided by the NRSPP is helpful in managing risk.<br><br>Reporting from media: There is a lack of acknowledgement of the risks associated with driving for work purposes (e.g., additional pressures on workers). | There is an opportunity for the media to understand the system of factors contributing to vehicle incidents, beyond individual driver factors. |


Government, Regulators, External Influencers
Governance & Administration
Operations Management
Drivers & Other Road Users
Equipment and surroundings
Social Networks
Collaboration with the NRSPP
Accreditation Standards
No standards to guide practice
Funding & Priorities
Limited funding to promote workplace road safety
Guidance material
Limited guidance provided on management of workplace road safety
Legislation
Employers have responsibility for ensuring 'duty of care'
Reporting from Media
Lack of acknowledgement of additional risks for work-related drivers
Auditing
No guidance on best practice approaches to managing risk
Consultation
Associates schedule road trip and feedback with provided by line management
Incident Reporting System
Reporting is encouraged by line management
Training Provision
Mandatory driver training every 3 years
Reporting Culture
Reporting is strongly encouraged
Pollcies & Procedures
Driver Safety Policy
Risk Management
Risk assessment undertaken for those who drive a vehicle
Safety Culture
The vehicle is considered part of the workplace
Senior management commitment
Reactive approach to safety management
Skill-Based Training
Mandatory driver training
Vehicle Inspections
Regular vehicle inspections
Communication
Reactive communication with staff
Education & Development
No behaviour change development programs
Experience
Associate was familar with the job requirements/driving task
Safety Attitudes
Associate was being vigilant
Familliarity
Associate was familiar with the road enviroment
Job Control
Control over work and driving schedule
Behaviour: Other driver
Signs of inattention
Decisions/Actions: Other driver
Did not respond in time to change in traffic
Associate was driivng on a two-lane highway
Associate was being vigiliant looking in rear review mirror
Associate noticed the driver behind was being inattentive
Associate changed lane to avoid being hit in the rear of the vehicle
Associate avoided a near miss. The car behind came to a screeching holt
Outcome: Shaken
Road Design
Two lanes allowed the driver to shift lanes
Traffic Congestion
Some traffic congestion
Key issues identified
Reactive risk management
Reporting culture
Current risk controls
Green outline: Protective factor
Yellow outline: Risk factor

| REVISION OF RISK CONTROLS: ACTION PLAN<br>Identify feasible and practicable actions to address the issues you've identified in the Accimap. | | | | |
|---|---|---|---|---|
| Don't rely on people doing "the right thing". A review that just results in more training, supervision or minor changes to equipment or procedures will not prevent future incidents. | | | | |
| Effective actions involve improving consultation up and down the levels of the system | | | | |
| Effective actions involve reducing exposure and pressures on staff through work planning. | | | | |
| **#Accimap issue** | **Specific action required** | **Person responsible for action** | **Evaluation of success** | **Close off date** |
| Reactive risk management | Develop the skills of all levels of leaders in being proactive in their communication to promote workplace road safety. | Safety Advisor<br>Sales Directors | Develop & implement training | July, 2022 |
| Reactive risk management | Promote the workplace road safety culture through identifying roles and responsibilities for leaders in the management of drivers. | Joshua D'Alessi | Review and revise risk management framework | July, 2022 |
| Current risk controls | Promote pre-start vehicle checks and ensure it is supported/enforced by line management. | Safety Advisor<br>Field Sales Line Managers | Review and revise risk management framework | Oct, 2021 |
| Current risk controls | Revise Safe Driving Policy to ensure clarity in defining the roles and responsibiiities of management in the behavioural management of drivers. | Safety Advisor<br>P & O (HR) Corrdinators | Review and revise risk management framework | Oct, 2021 |
| Current risk controls | Revise risk management to identify all relevant risks and evidence based risk controls. | Safety Advisor | Review and revise risk management framework | Oct, 2021 |
| Reporting culture | Use incident reporting data to proactively manage the safety of Associates who drive a vehicle. | Safety Advisor<br>Field Sales Line Managers | Integrate reporting into weekly toolbox talks | July, 2022 |

| | REVISION OF RISK CONTROLS: RECOMMENDATIONS FOR EXTERNAL PARTIES<br>Document any suggestions for preventing WRD incidents that are beyond the control of your organisation. The research team will aggregate these suggestions and hold a workshop with the relevant people. | |
|---|---|---|
| **#Accimap issue** | **Specific action required** | **Parties responsible for action** |
| Reactive risk management | Accreditation standards to be developed to help guide employers in managing the risk associated with vehicle as a workplace. | WorkSafe Victoria & SafeWork Australia |
| Reactive risk management | Guidance material is needed to educate employers in managing the system of risks associated with using a vehicle in the workplace. | WorkSafe Victoria & SafeWork Australia |
| Reactive risk management | Identify evidence-based 'best practice' in managing the risk associated with vehicle as a workplace. | WorkSafe Victoria & SafeWork Australia |
| Reporting culture | Create a learning culture through collaboration with key stakeholders including the National Road Safety Partnership Program (NRSPP). | NRSPP & other key stakeholders including industry and government agencies |

# Work-related Driving Incident Review Toolkit

| CASE SUMMARY | |
|---|---|
| **The Incident**<br>Describe the flow of events on the day of the incident and any relevant events leading up to the incident (i.e., location/time/date of incident) | It was a normal day of driving for the Associate. The Associate had picked her daughter up from childcare and was going home via the usual driving route. The Associate had entered a short (50m) straight street and stopped at a give way sign to turn left onto a main road when the vehicle behind the Associate rear-ended her vehicle. The Associate did not see the vehicle behind as they were concentrating on giving way to traffic travelling along the main street. |
| **Outcomes for staff**<br>Injuries or harm to staff as a result of the incident | The Associate and her daughter experienced a minor jolt but no physical injury. Both passengers were shocked and unsettled by the incident. |
| **Outcomes for others**<br>Injuries or harm to other (other road users) as a result of the incident | No injury to the other road user |
| **Outcomes for assets**<br>Damage to vehicle and surrounding environment | Damage to the tow bar of the Associate's vehicle |
| **Risk controls**<br>List all the risk control measures in place for driving at the time of the incident | The risk controls in place to avoid this incident included (i) mandatory driver training (skid pan and education), (ii) online driver training (education and hazard identification), (iii) 5-Star ANCAP vehicles (including blind spot warning system, brake assist, ESC), (iv) regular maintenance of vehicle, (v) workplace road safety is integrated within OHS and management practices, (vi) valid driver's licence. |
| **Response**<br>Describe the response to the incident prior to the review | The Associate exchanged licence details with the other driver. Following this exchange, the Associate rang her line manager. The line manager followed up on the health and wellbeing of the Assoicate and then addressed the administrative issues (damage to vehicle & reporting of incident). The line manager also followed up with the Associate the following day after the incident to ensure they were okay. |

| CONSULTATION<br>Identify the staff that need to be consulted during this review | | | |
|---|---|---|---|
| **Frontline staff:**<br>□ Driver<br>□ Co-worker / colleague<br>□ Administration staff<br>□ Security staff<br>□ Other_____ | **Operations management**<br>□ Supervising staff member / Team leader<br>□ Director / Manager/ head of unit<br>□ Education & Training<br>□ HSR / OH&S Team<br>□ Rostering / staff deployment officer?<br>□ Fleet manager<br>□ Equipment Manager<br>□ Facilities Manager<br>□ IT support services<br>□ Committees (specify)_____<br>□ Other_____ | **Governance and administration**<br>□ CEO<br>□ Executive Team<br>□ Chief Operating Officer<br>□ Human Resources<br>□ Health & Wellbeing Officer<br>□ Governance Committees<br>□ Legal Officer<br>□ Capital and infrastructure<br>□ Other_____ | **External influences**<br>□ Government<br>□ Regulators (e.g. WSV, TAC)<br>□ Unions/Employer Associations<br>□ Fleet maintenance suppliers<br>□ Training specialisation suppliers<br>□ Emergency Management Response (e.g. Ambulance)<br>□ Consultants/Contractors (specify)_____<br>□ Workplace road safety experts (Researchers from MUARC & NRSPP) |

GREEN HIGHLIGHTING: PROTECTIVE FACTOR THAT ASSISTED IN AVOIDING A CRASH

YELLOW HIGHLIGHTING: RISK FACTOR THAT CONTRIBUTED TO THE INCIDENT

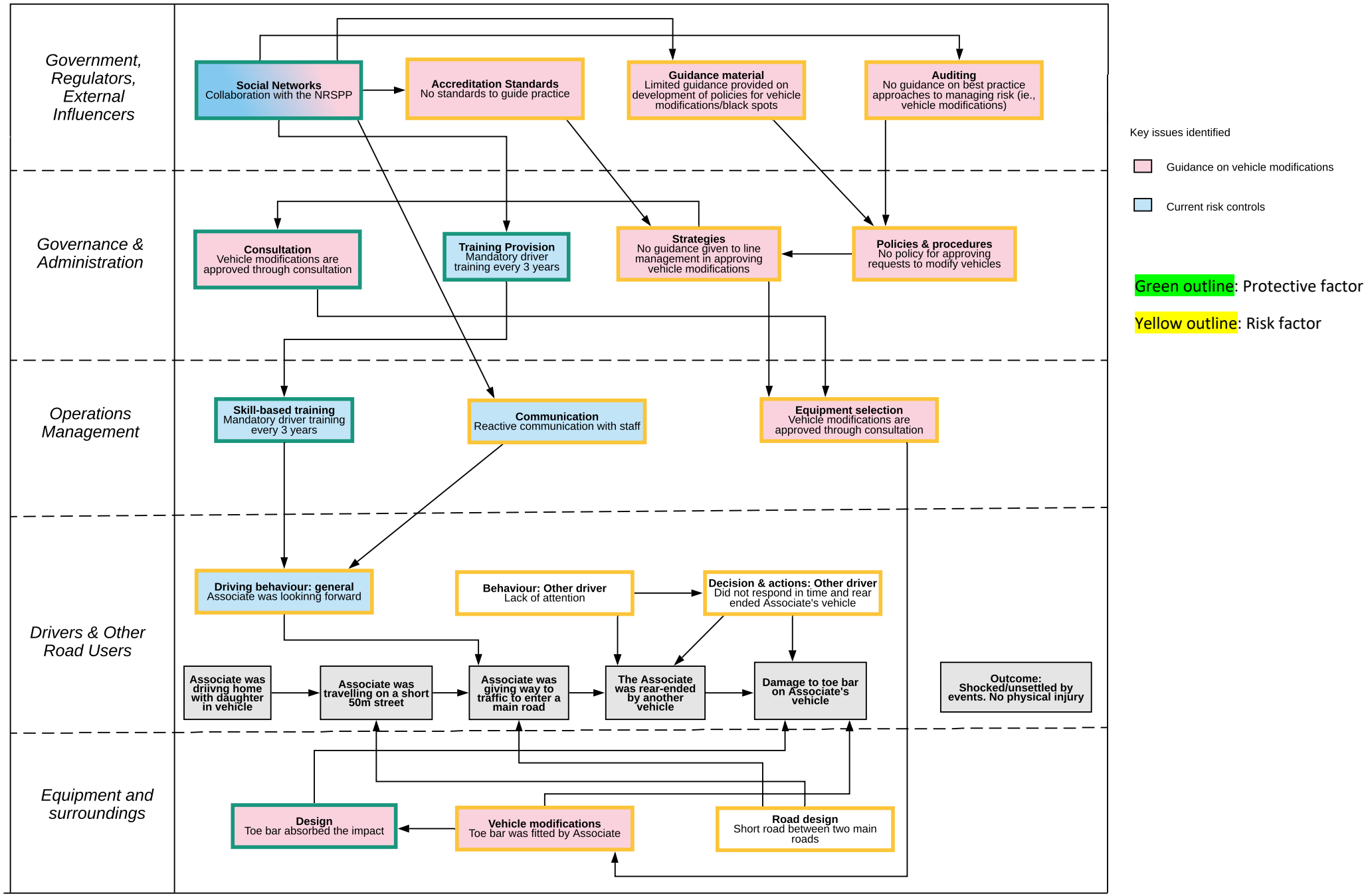
| REVIEW OF RISK CONTROLS THROUGH CONSULTATION: Look "up and out" not "down and in" | | |
|---|---|---|
| **Contributory factors to WRD incident** | **Why were risk controls ineffective?**<br>**(See Data Collection Guide for example questions)** | **Are better practice risk controls available?**<br>**Document suggestions from staff to improve the effectiveness of risk controls** |
| **Equipment and surroundings level** | | |
| **Equipment**<br>□ In-vehicle technology<br>□ GPS systems<br>□ Mobile phone<br>□ Design<br>□ Vehicle modifications<br>□ Fit for purpose<br>□ Maintenance<br>□ Load/Storage<br>□ Vehicle specifications<br>□ PPE | Design of the vehicle: Tow bar was fitted and absorbed the impact of the crash.<br><br>Vehicle modifications: Tow bar was fitted to the car by the Associate. The modification was pre-approved by management. | There is consultation with line management and Associates in modifying vehicles. However, there is currently no policy to guide these decisions. |
| **Environment**<br>□ Urban/Regional<br>□ Weather Conditions<br>□ Lighting | Road design: The road was short (50m) and between two main roads. This design may have contributed to the other road user not changing their speed limit or lack of attention in entering a second main road. | |

| | | |
|---|---|---|
| □ Visibility<br>□ Time of day/week<br>□ Traffic congestion<br>□ Road design<br>□ Road surface conditions<br>□ Road furniture<br>□ Warning signals<br>□ Road signage<br>□ Posted speed limit<br>□ Incident response /breakdowns<br>□ Animals<br>□ Other_____ | | |
| **Drivers & Other Road Users level** | | |
| **Work Design**<br>□ Job control<br>□ Job demands<br>□ Role conflict<br>□ Role clarity<br>□ Lone worker<br>□ Work schedule leading up to incident<br>□ Familiarity with the vehicle | | |
| **Drivers**<br>□ Aggression<br>□ Inattention/distraction<br>□ Alcohol/drugs<br>□ Personality traits<br>□ Safety attitudes<br>□ Fatigue / sleepiness<br>□ Sleep quality<br>□ Physical/medical condition<br>□ Drugs/medications<br>□ Driving behaviour: general<br>□ Experience / competence<br>□ Hazard perception skill<br>□ Seatbelt<br>□ Mobile phone use<br>□ Risk perceptions<br>□ Incident history<br>□ Speed<br>□ Knowledge<br>□ Unfamiliarity with area | Driving behaviour: The Associate was looking forward and giving way to traffic on the main road. No attention was given to checking vehicles coming from behind. | |
| **Other Drivers/Riders**<br>□ Behaviour: general<br>□ Communication | Behavior: Lack of attention of the other road user. | |

| | | |
|---|---|---|
| □ Decisions & actions<br>□ Type of vehicle<br>□ Type of road user | Decisions and Actions: The other road user did not respond in a sufficient period of time. | |
| **Operations Management level** | | |
| **Supervisors**<br>□ Communication<br>□ Support from Supervisors<br>□ Co-operation between work areas<br>□ Quality of supervision<br>□ Priorities of supervisor | Communication: The Associate said there are regular safety audits and vehicle inspections. There is limited discussion around general workplace road safety and the need to be attentive and aware of the road transport environment | There is opportunitity to develop the skills of supervisors in being proactive in their communication to promote workplace road safety |
| **Work scheduling**<br>□ Rostering<br>□ Contingency planning<br>□ Time Pressure<br>□ Breaks<br>□ Workload<br>□ Time allocation for administration<br>□ Shift work | | |
| **Work systems**<br>□ Budgets<br>□ Equipment maintenance<br>□ Equipment selection<br>□ Skills-based training<br>□ Education & development<br>□ Role expectations<br>□ Data analysis & feedback | Skill based training: Associates are required to undertake mandatory driver training every three years<br><br>Equipment selection: Associates consult with line management to approve modifications to vehicles | There is an opportunity to develop a policy to guide decisions on approving modifications to vehicles. |
| **Governance & Administration Level** | | |
| **Management systems**<br>□ Approval and change management<br>□ Consultation<br>□ Human resources<br>□ Policies and procedures<br>□ Risk management<br>□ Safety monitoring<br>□ In vehicle technologies<br>□ Incident reporting system<br>□ Security systems<br>□ Committees<br>□ Recruitment protocols | Consultation: Associates consult with line management in approving modifications to vehicles.<br><br>Policies & procedures: There is currently no policy for approving requests to modify vehicles. | There is an opportunity to develop a policy to guide decisions on approving modifications to vehicles. |
| **Resources**<br>□ Funding<br>□ Costs<br>□ Time allocation to training | Time allocation to training: Mandatory training every three years. | |

| | | |
|---|---|---|
| □ Awareness Campaigns<br>□ Employment arrangements<br>□ Mentoring<br>□ Shared learnings | | |
| **Leadership**<br>□ Safety Culture<br>□ Reporting Culture<br>□ Senior management commitment<br>□ Communication<br>□ KPIs<br>□ Organisational change<br>□ Priorities<br>□ Strategies: safety/health/wellbeing | Strategies: There is currently no guidance given to line management in the modification of vehicles. | |
| **Government, Regulators and External Influences level** | | |
| **Government and regulators**<br>□ Accreditation standards<br>□ Funding and priorities<br>□ Guidance material<br>□ Legislation/regulation<br>□ Political influence<br>□ Communication<br>□ Auditing<br>□ Safety strategies | Accreditation standards: There are currently no standards provided in the management of workers who drive a vehicle for work purposes, beyond 'duty of care'.<br><br>Auditing: There is currently no direction for best practice approaches to manage the risk associated with vehicle use in the workplace (including decisions regarding vehicle modifications).<br><br>Guidance material: No guidance material for the development of policies for vehicle modifications and identifying black spots. | Evidence-based approach to guiding decisions on vehicle modifications<br><br>Guidance material and education for employers on using black spot program to safety manage risk for work-related drivers |
| **Suppliers**<br>□ Expense/availability of equipment<br>□ Equipment standards<br>□ Training specialisation<br>□ Maintenance schedules<br>□ Consultants<br>□ Auditors | | |
| **Unions and employer associations**<br>□ Support for OHS<br>□ Political agenda | | |
| **External Influencers**<br>□ Reporting from media<br>□ Social media<br>□ Community attitudes<br>□ Enforcement activities | Social networks: Evidence based promotion of best practice provided by the NRSPP is helpful in managing risk. | |

| | | |
|---|---|---|
| □ Social networks | | |




Work-related Driving Incident Toolkit

| REVISION OF RISK CONTROLS: ACTION PLAN<br>Identify feasible and practicable actions to address the issues you've identified in the Accimap. | | | | |
|---|---|---|---|---|
| Don't rely on people doing "the right thing". A review that just results in more training, supervision or minor changes to equipment or procedures will not prevent future incidents. | | | | |
| Effective actions involve improving consultation up and down the levels of the system | | | | |
| Effective actions involve reducing exposure and pressures on staff through work planning. | | | | |
| **#Accimap issue** | **Specific action required** | **Person responsible for action** | **Evaluation of success** | **Close off date** |
| Guidance on vehicle modifications | There is an opportunity to develop a policy to guide decisions on approving modifications to vehicles. | Safety Advisor | Review and revise risk management framework | July, 2022 |
| Current risk controls | There is opportunitity to develop the skills of supervisors in being proactive in their communication to further promote workplace road safety | Safety Advisor<br>Sales Directors | Develop & implement training | July, 2022 |

| | REVISION OF RISK CONTROLS: RECOMMENDATIONS FOR EXTERNAL PARTIES<br>Document any suggestions for preventing WRD incidents that are beyond the control of your organisation. The research team will aggregate these suggestions and hold a workshop with the relevant people. | |
|---|---|---|
| **#Accimap issue** | **Specific action required** | **Parties responsible for action** |
| Guidance on vehicle modifications | Development of evidence-based guidance material to guide policy development on vehicle modifications | Road transport authorities and workplace regulators |
| Guidance on vehicle modifications | Accreditation standards to be developed to help guide employers in managing the risk associated with vehicle as a workplace (i.e., vehicle modifications & black spot programs) | Road transport authorities and workplace regulators |
| Current risk controls | Create a learning culture through collaboration with key stakeholders including the National Road Safety Partnership Program (NRSPP) | NRSPP & other key stakeholders including industry and government agencies |

# Work-related Driving Incident Review Toolkit

| CASE SUMMARY | |
|---|---|
| **The Incident**<br>Describe the flow of events on the day of the incident and any relevant events leading up to the incident (i.e., location/time/date of incident) | The Associate was starting work for the day and travelling from their home in a regional area to the city. It was 7am and there was significant traffic congestion. Visibility was poor due to sun glare. The Associate was travelling on a 100km/h zoned dual lane road. The load in the vehicle in the other lane and in front of the Associate was not secured and came loose. A large tub dropped out of the vehicle and went under the Associate's vehicle. The Associate did not swerve. The side bumper came loose as a consequence. There was some resistance from other traffic to allow the Associate to exit the lane. |
| **Outcomes for staff**<br>Injuries or harm to staff as a result of the incident | No harm to the Associate. |
| **Outcomes for others**<br>Injuries or harm to other (other road users) as a result of the incident | No harm to other drivers. The other driver involved in the incident did not respond to the incident and continued driving. |
| **Outcomes for assets**<br>Damage to vehicle and surrounding environment | Left side bumper came loose. |
| **Risk controls**<br>List all the risk control measures in place for driving at the time of the incident | The risk controls in place to avoid this incident included (i) mandatory driver training (skid pan and education), (ii) online driver training (education and hazard identification), (iii) 5-Star ANCAP vehicles (including blind spot warning system, brake assist, ESC), (iv) regular maintenance of vehicle, (v) workplace road safety is integrated within OHS and management practices, (vi) valid driver's licence, (vii) dash cam installed by the Associate |
| **Response**<br>Describe the response to the incident prior to the review | The Associate exited the traffic environment. The vehicle was taken to the panel beater for repair. The Associate notified her line manager. |

| CONSULTATION<br>Identify the staff that need to be consulted during this review | | | |
|---|---|---|---|
| **Frontline staff:**<br>□ Driver<br>□ Co-worker / colleague<br>□ Administration staff<br>□ Security staff<br>□ Other_____ | **Operations management**<br>□ Supervising staff member / Team leader<br>□ Director / Manager/ head of unit<br>□ Education & Training<br>□ HSR / OH&S Team<br>□ Rostering / staff deployment officer?<br>□ Fleet manager<br>□ Equipment Manager<br>□ Facilities Manager<br>□ IT support services<br>□ Committees (specify)_____<br>□ Other_____ | **Governance and administration**<br>□ CEO<br>□ Executive Team<br>□ Chief Operating Officer<br>□ Human Resources<br>□ Health & Wellbeing Officer<br>□ Governance Committees<br>□ Legal Officer<br>□ Capital and infrastructure<br>□ Other_____ | **External influences**<br>□ Government<br>□ Regulators (e.g. WSV, TAC)<br>□ Unions/Employer Associations<br>□ Fleet maintenance suppliers<br>□ Training specialisation suppliers<br>□ Emergency Management Response (e.g. Ambulance)<br>□ Consultants/Contractors (specify)_____<br>□ Workplace road safety experts (Researchers from MUARC & NRSPP) |

GREEN HIGHLIGHTING: PROTECTIVE FACTOR THAT ASSISTED IN AVOIDING A CRASH

YELLOW HIGHLIGHTING: RISK FACTOR THAT CONTRIBUTED TO THE INCIDENT

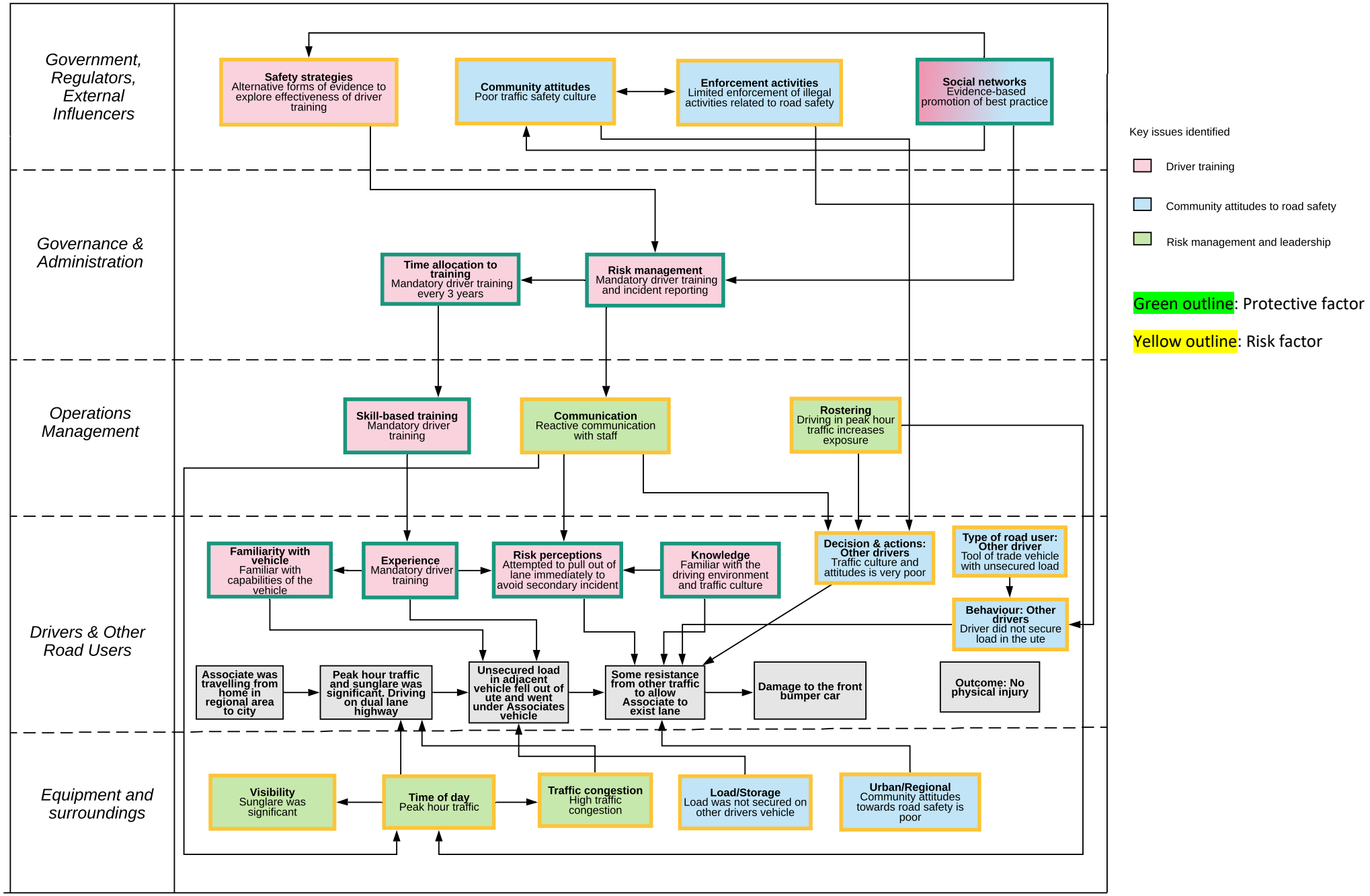
| REVIEW OF RISK CONTROLS THROUGH CONSULTATION: Look "up and out" not "down and in" | | |
|---|---|---|
| **Contributory factors to WRD incident** | **Why were risk controls ineffective?**<br>**(See Data Collection Guide for example questions)** | **Are better practice risk controls available?**<br>**Document suggestions from staff to improve the effectiveness of risk controls** |
| **Equipment and surroundings level** | | |
| **Equipment**<br>□ In-vehicle technology<br>□ GPS systems<br>□ Mobile phone<br>□ Design<br>□ Vehicle modifications<br>□ Fit for purpose<br>□ Maintenance<br>□ Load/Storage<br>□ Vehicle specifications<br>□ PPE | Load was not secured on other vehicle (trade vehicle). | Load must be secured on all vehicles. |
| **Environment**<br>□ Urban/Regional<br>□ Weather Conditions<br>□ Lighting | Urban/regional: Attitudes of the community towards traffic safety is poor.<br><br>Traffic congestion: There was high traffic congestion at the time of the incident. | |

| | | |
|---|---|---|
| □ Visibility<br>□ Time of day/week<br>□ Traffic congestion<br>□ Road design<br>□ Road surface conditions<br>□ Road furniture<br>□ Warning signals<br>□ Road signage<br>□ Posted speed limit<br>□ Incident response /breakdowns<br>□ Animals<br>□ Other_____ | Visibility: Sun glare was significant which affected the visibility of all drivers on the road at the time of the incident.<br><br>Time of day: The incident occurred at 7am which was peak hour. | |
| **Drivers & Other Road Users level** | | |
| **Work Design**<br>□ Job control<br>□ Job demands<br>□ Role conflict<br>□ Role clarity<br>□ Lone worker<br>□ Work schedule leading up to incident<br>□ Familiarity with the vehicle | The Associate understood the limitations of her own vehicle (braking capabilities). | |
| **Drivers**<br>□ Aggression<br>□ Inattention/distraction<br>□ Alcohol/drugs<br>□ Personality traits<br>□ Safety attitudes<br>□ Fatigue / sleepiness<br>□ Sleep quality<br>□ Physical/medical condition<br>□ Drugs/medications<br>□ Driving behaviour: general<br>□ Experience / competence<br>□ Hazard perception skill<br>□ Seatbelt<br>□ Mobile phone use<br>□ Risk perceptions<br>□ Incident history<br>□ Speed<br>□ Knowledge<br>□ Unfamiliarity with area | Experience: The Associate had undertaken mandatory driver training.<br><br>Risk perceptions: The Associate attempted to pull out of the lane to avoid her bumper bar going under the car which would have caused further damage to her car and others in the road environment.<br><br>Familiarity: The Associate was familiar with the driving environment and general attitudes of other drivers. | |
| **Other Drivers/Riders**<br>□ Behaviour: general<br>□ Communication | Behaviour: The traffic culture and attitudes of motorists is very poor in the area with drivers seen to be primarily focused on themselves going from A to B as fast as possible. | Local awareness and education campaign to other drivers to the share the responsibility and give way to broken (hazard light) vehicles. |

| | | |
|---|---|---|
| □ Decisions & actions<br>□ Type of vehicle<br>□ Type of road user | Decisions & actions: The other driver did not appropriately secure the load on their vehicle.<br><br>Type of road user: Trades-person with an unsecured load. | |
| **Operations Management level** | | |
| **Supervisors**<br>□ Communication<br>□ Support from Supervisors<br>□ Co-operation between work areas<br>□ Quality of supervision<br>□ Priorities of supervisor | Communication: Safety is a part of professional development activities in the organisation. However, workplace road safety is often communicated using reactive messaging, such as reports of incidents. | There is opportunitity to develop the skills of supervisors in being proactive in their communication to promote workplace road safety – regional road safety and risks associated with driving in peak traffic and time of day. |
| **Work scheduling**<br>□ Rostering<br>□ Contingency planning<br>□ Time Pressure<br>□ Breaks<br>□ Workload<br>□ Time allocation for administration<br>□ Shift work | Rostering: There is an increase in exposure to risk when driving in peak hour traffic. | Alternative driving schedule to avoid peak hours of traffic. |
| **Work systems**<br>□ Budgets<br>□ Equipment maintenance<br>□ Equipment selection<br>□ Skills-based training<br>□ Education & development<br>□ Role expectations<br>□ Data analysis & feedback | Skill-based training; Associates are required to undertake mandatory driver training every three years. | |
| **Governance & Administration Level** | | |
| **Management systems**<br>□ Approval and change management<br>□ Consultation<br>□ Human resources<br>□ Policies and procedures<br>□ Risk management<br>□ Safety monitoring<br>□ In vehicle technologies<br>□ Incident reporting system<br>□ Security systems<br>□ Committees<br>□ Recruitment protocols | Risk management: Mandatory driver training and reporting of all incidents are components of the agency's risk management framework. | |
| **Resources** | Training: Mandatory driver training every three years | |

| | | |
|---|---|---|
| □ Funding<br>□ Costs<br>□ Time allocation to training<br>□ Awareness Campaigns<br>□ Employment arrangements<br>□ Mentoring<br>□ Shared learnings | | |
| **Leadership**<br>□ Safety Culture<br>□ Reporting Culture<br>□ Senior management commitment<br>□ Communication<br>□ KPIs<br>□ Organisational change<br>□ Priorities<br>□ Strategies: safety/health/wellbeing | | |
| **Government, Regulators and External Influences level** | | |
| **Government and regulators**<br>□ Accreditation standards<br>□ Funding and priorities<br>□ Guidance material<br>□ Legislation/regulation<br>□ Political influence<br>□ Communication<br>□ Auditing<br>□ Safety strategies | Safety strategies: Anecdotal evidence to support driver training but limited empirical support. Alternative forms of evidence to support driver training. | Alternative forms of evidence are needed to explore the effectiveness of driver training programs. |
| **Suppliers**<br>□ Expense/availability of equipment<br>□ Equipment standards<br>□ Training specialisation<br>□ Maintenance schedules<br>□ Consultants<br>□ Auditors | | |
| **Unions and employer associations**<br>□ Support for OHS<br>□ Political agenda | | |
| **External Influencers**<br>□ Reporting from media<br>□ Social media<br>□ Community attitudes<br>□ Enforcement activities | Enforcement activities: There is limited enforcement of illegal activities from Police in the community.<br><br>Community attitudes: Community attitudes towards road safety are poor. | Opportunity to develop target safety messages towards the community.<br><br>More positive behaviours of law enforcement including enforcement of securing loads.<br><br>Opportunity for the development of fact sheets regarding sun glare and driving. |

| | | |
|---|---|---|
| □ Social networks | Social networks: Evidence based promotion of best practice provided by the NRSPP is helpful in managing risk. | |


Government, Regulators, External Influencers
Governance & Administration
Operations Management
Drivers & Other Road Users
Equipment and surroundings
Safety strategies
Alternative forms of evidence to explore effectiveness of driver training
Community attitudes
Poor traffic safety culture
Enforcement activities
Limited enforcement of illegal activities related to road safety
Social networks
Evidence-based promotion of best practice
Time allocation to training
Mandatory driver training every 3 years
Risk management
Mandatory driver training and incident reporting
Skill-based training
Mandatory driver training
Communication
Reactive communication with staff
Rostering
Driving in peak hour traffic increases exposure
Familiarity with vehicle
Familiar with capabilities of the vehicle
Experience
Mandatory driver training
Risk perceptions
Attempted to pull out of lane immediately to avoid secondary incident
Knowledge
Familiar with the driving environment and traffic culture
Decision & actions: Other drivers
Traffic culture and attitudes is very poor
Type of road user: Other driver
Tool of trade vehicle with unsecured load
Behaviour: Other drivers
Driver did not secure load in the ute
Associate was travelling from home in regional area to city
Peak hour traffic and sunglare was significant. Driving on dual lane highway
Unsecured load in adjacent vehicle fell out of ute and went under Associates vehicle
Some resistance from other traffic to allow Associate to exist lane
Damage to the front bumper car
Outcome: No physical injury
Visibility
Sunglare was significant
Time of day
Peak hour traffic
Traffic congestion
High traffic congestion
Load/Storage
Load was not secured on other drivers vehicle
Urban/Regional
Community attitudes towards road safety is poor
Key issues identified
Driver training
Community attitudes to road safety
Risk management and leadership
Green outline: Protective factor
Yellow outline: Risk factor

| REVISION OF RISK CONTROLS: ACTION PLAN<br>Identify feasible and practicable actions to address the issues you've identified in the Accimap. | | | | |
|---|---|---|---|---|
| Don't rely on people doing "the right thing". A review that just results in more training, supervision or minor changes to equipment or procedures will not prevent future incidents. | | | | |
| Effective actions involve improving consultation up and down the levels of the system | | | | |
| Effective actions involve reducing exposure and pressures on staff through work planning. | | | | |
| **#Accimap issue** | **Specific action required** | **Person responsible for action** | **Evaluation of success** | **Close off date** |
| Risk management & leadership | Develop the skills of supervisors in being proactive in their communication to promote workplace road safety specific to issues including regional road safety (safety attitudes) and risks associated with driving in peak traffic and time of day. | Safety Advisor<br>Sales Directors | Develop & implement training | July, 2022 |
| Risk management & leadership | Consult with Associates on alternative times of days to travel to avoid peak hour and sun glare. | Safety Advisor<br>Sales Directors | Modification of work hours | Feb, 2022 |

| | REVISION OF RISK CONTROLS: RECOMMENDATIONS FOR EXTERNAL PARTIES<br>Document any suggestions for preventing WRD incidents that are beyond the control of your organisation. The research team will aggregate these suggestions and hold a workshop with the relevant people. | |
|---|---|---|
| **#Accimap issue** | **Specific action required** | **Parties responsible for action** |
| Community attitudes to road safety | More positive behaviours of law enforcement including enforcement of securing loads. | Road transport authorities and workplace regulators |
| Community attitudes to road safety | Opportunity to develop targeted safety messages to improve the community's attitudes towards traffic safety. | Road transport authorities and workplace regulators |
| Community attitudes to road safety | Opportunity for the development of fact sheets regarding sun glare and driving. | NRSPP & other key stakeholders including industry and government agencies |
| Community attitudes to road safety | Local awarenss and education campaign to other drivers to the share the responsibility and give way to broken (hazard light) vehicles. | Road transport authorities and workplace regulators |
| Driver training | Seek alternative methods of identifying effectiveness of driver training programs. | Research institutions & regulators |