

# Evaluating Approaches to Regulating WHS in the Australian Road Freight Transport Industry

FINAL REPORT TO THE TRANSPORT EDUCATION, AUDIT  
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## EXECUTIVE SUMMARY

### Evaluating Approaches to Regulating Work Health and Safety in the Australian Road Freight Transport Industry

Work health and safety (WHS) is a significant issue for the heavy vehicle road transport industry. The sector has a history of the highest fatalities and serious injury rates of any industry in Australia and, despite continued improvement in WHS over recent years, trucks remain one of Australia's most dangerous workplaces. Regulation is an important tool in the national effort to ensure the health safety of truck drivers and of others affected by heavy vehicle transport operations.

This Report examines six key contemporary modes of WHS regulation in the Australian heavy vehicle road transport industry. This intricate mix of regulatory levers reflects both the complexity of the sector and the broad range of mechanisms available to regulators who seek to change attitudes and improve WHS practices. The primary objective of the research project was to identify and analyse the contribution these regulatory systems make to WHS in the heavy vehicle road transport industry.

Included in this Report is a comprehensive review of published research on: critical WHS risks in the industry; forms of regulation; and the particular mechanisms either operating, or the subject of policy consideration, in the Australian heavy vehicle road transport sector. Empirical data was gathered from surveys of 559 drivers of trucks with a mass of more 4.5 tonnes. This provided a rich source of information for analysing the perceptions and experiences of truck drivers in the industry.

#### **The report demonstrates the following:**

- ❖ Road crash fatalities represent a comparatively small subset of the hundreds of permanently disabling, and thousands of serious injuries sustained by truck drivers each year. A meaningful analysis of truck driver health and safety must look beyond fatal crashes to acknowledge and consider the many on- and off-road incidents that lead to life altering damage to workers.
- ❖ There is an urgent need to acknowledge the complexity of factors implicit in work-related injury and illness in the road transport sector, including the multi-factoral dynamics of causation both within organisations and across the supply chain.
- ❖ Despite significant advances in health and safety in this industry in recent decades, there are substantial segments of the workforce that remain considerably at risk of serious injury and illness linked to a range of features of the work and the labour market – including employment arrangements, remuneration systems, working hours, task variability, control and autonomy, access to training, and management policies and practices.
- ❖ Participants in the Chain of Responsibility (CoR), including truck drivers, continue to underestimate the risks of serious injury in this industry. Specific experiences of common accidents and injuries, however, appear to be a major factor associated with drivers' obtaining accurate perceptions of the risks faced.
- ❖ There is a range of mechanisms used to regulate WHS in this industry, including the variety of educational, administrative, accreditation and certification, reputational and other schemes which sit alongside industrial and WHS legislation enforced by the state. This provides a mix of mechanisms to encourage the compliance and deter the non-compliance of supply chain participants.
- ❖ However, existing models of regulation and enforcement are complex and overlapping and present an overwhelming regulatory burden for truck drivers. In addition, truck drivers bear the brunt of sanctions because of the difficulties of enforcing the more complex regulations

which apply to participants higher in the CoR. Rationalising this complex array of measures, particularly through consolidation of mechanisms at the mid-section of the enforcement pyramid would be beneficial, as would the resourcing of a more concerted effort to enforce WHS responsibilities on those at the apex of the CoR.

**This report raises several recommendations for policy consideration.**

- ❖ **Improve knowledge of WHS risk and injury causation through the CoR.** Immature perceptions concerning the reasons injuries occur are undermining attempts to make workplaces safer. Despite all the evidence on fatal and disabling injuries and illnesses in this industry, a sizeable portion of industry participants lack an adequate understanding of WHS risk identification and mitigation. Many also fail to appreciate the multi-factoral dynamics of causation both within organisations and across the supply chain. Moreover, some employers/employees and policymakers continue to reject available evidence and cling to voluntary regulation and administrative controls and simplistic views that essentially ‘blame the victims’.
- ❖ **Improve data collection to inform evidence-based policy.** To facilitate evidence-based policymaking on WHS in this industry, there is an urgent need for the longitudinal collection of comprehensive, consistent and more nuanced data on the WHS experiences of both employee and owner/contractor drivers, the incidence of injury and illness in the sector and the causative factors. Three elements that have traditionally been neglected are particularly important here. First, data is needed to address the existing lack of information about the injury experience of owner drivers and sub-contractors, two groups generally excluded from workers’ compensation datasets. Second, a more thorough and consistent/comparable collection of data across jurisdictions is urgently required. Third, comprehensive longitudinal data on prosecutions and other enforcement, including administrative arrangements and orders, is needed. Further, this data needs to be accessible to researchers and key data must be publicly available.
- ❖ **Address the complexity of WHS regulation in this industry.** The complexity of WHS regulation in this industry impedes understanding of rights and obligations and potentially muddies the waters in relation to compliance and enforcement. While well-resourced organisations can afford legal and administrative expertise, for smaller participants in the supply chain it can be difficult to stay well informed. For wilfully noncompliant and/or recalcitrant operators, the complexity is also used to excuse the neglect of WHS. A clearer picture of the demarcations between different mechanisms would facilitate comprehension and compliance, and the identification and monitoring of non-compliance.
- ❖ **Improve enforcement and accountability.** Regulation is only as valuable as its enforcement and the accountability of parties. Improving the willingness of CoR participants to comply with the regulations must be a policy priority. This Report addresses four areas for further policy development to improve enforcement and accountability. First, more consistent and regular enforcement of regulations on parties at all levels of the CoR is required. This also requires a review of resources currently available to enforcement agencies. Second, whistleblower and industrial protections must be made available to truck drivers to facilitate the reporting of regulatory breaches. Third, retention of a range of regulatory mechanisms and sanctions remains critical, including those schemes designed to change attitudes and behaviour through strategies other than legislation. Examples include *structural* regulation such as ‘point to point’ cameras, appropriately assured *certification* and *accreditation* systems, and *informational* mechanisms which provide adverse publicity to recalcitrant parties. Here, further consideration of regulatory schemes operating in other western countries, such as safe driver licensing systems and market-oriented star rating systems, is recommended. Fourth, policymakers need to continue to build the focus on regulatory

mechanisms that reach most effectively into the top layers of the CoR to influence the design of safe, healthy and productive work and thus provide the most just solutions.

- ❖ **Ensure drivers have appropriate levels of WHS and Driving skills.** Both formal driver training and formal WHS training of drivers are essential to improving driving skills, risk perception and hazard prevention. While informal forms of WHS training within organisations, including regular toolbox talks raise awareness, it is formal, external training in WHS and driving skills by competent providers that reduces hazardous incidents in this sector. We recommend that a review of the training and licencing of drivers be conducted, with consideration given to the implementation of compulsory training prior to occupational entry. The aging demographic profile of truck drivers makes this even more pressing, as the research data suggests inexperienced drivers often lack the essential level of training and skills needed to ensure their own safety and the safety of others with whom they interact.
- ❖ **Close the significant gaps in regulation.** The competitive nature and cost structures of this industry are such that, in the absence of regulation, positive safety outcomes for drivers are extremely unlikely even with the most enlightened employers. This means that gaps in regulation almost inevitably will lead to accidents, injuries and disease. The critical present gap requiring policy development is the lack of regulation which places responsibility on those higher in the CoR to ensure safe remuneration of truck drivers. With the RSRT's abolition, the first attempt to address this issue systematically ended. Nonetheless alternative mechanisms have also demonstrated substantial success in addressing certain types of dangerous driving. The NSW Roads and Maritime Services has pursued an integrated strategy in administering the HVNL which has included adoption of a Joint Taskforce approach to speed enforcement, Zero Tolerance on truck modifications, and installation of weighbridges to enforce mass limits on repeat offenders and point-to-point cameras and other screening mechanisms on the roads. Further, while currently, there are no WHS mechanisms in Australia's heavy vehicle road transport sector which advance or limit market opportunities to CoR participants based on their compliance histories, this strategy has been pursued elsewhere. The strategy has been highly successful in the United States, albeit that it concentrates only on restricting access to government contracts.
- ❖ **Address the segmentation in the safety experience of drivers.** Reaching the long tail of 'neglected drivers' identified in this Report must become an urgent policy focus. It is not sufficient for employers, contractors and client organisations to display WHS accreditation under law and codes of practices if, simultaneously, a substantial minority of their drivers are excluded from safe work systems and practices. For some truck drivers, particularly those for whom a clear WHS duty of care is immediately obvious and indisputable, such as full-time employees, safety has improved considerably in recent years as legislation and other regulatory mechanisms have commenced operation. For others, in particular owner drivers casual/contractor drivers and a small but significant portion of employee drivers, have profited far less from WHS regulatory initiatives. Less attention is paid to their safety by participants across the CoR, and accordingly they encounter significantly more risk at work. Policymakers must continue to build the focus on regulatory mechanisms that reach most effectively across the CoR to influence the design and delivery of safe, healthy and productive work for all drivers and thus provide the most just solutions.
- ❖ Currently, in the Australian heavy vehicle road transport road transport industry, the sanctions are very substantial for those at the bottom of the chain, but as the survey findings confirm, the level of dependence of these drivers on those higher in the chain significantly limits the deterrence effect. Policymakers need to continue to build the focus on regulatory mechanisms that reach most effectively into the top layers of the CoR to influence the design of safe, healthy and productive work and thus provide the most just solutions.

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## PART A. INTRODUCTION

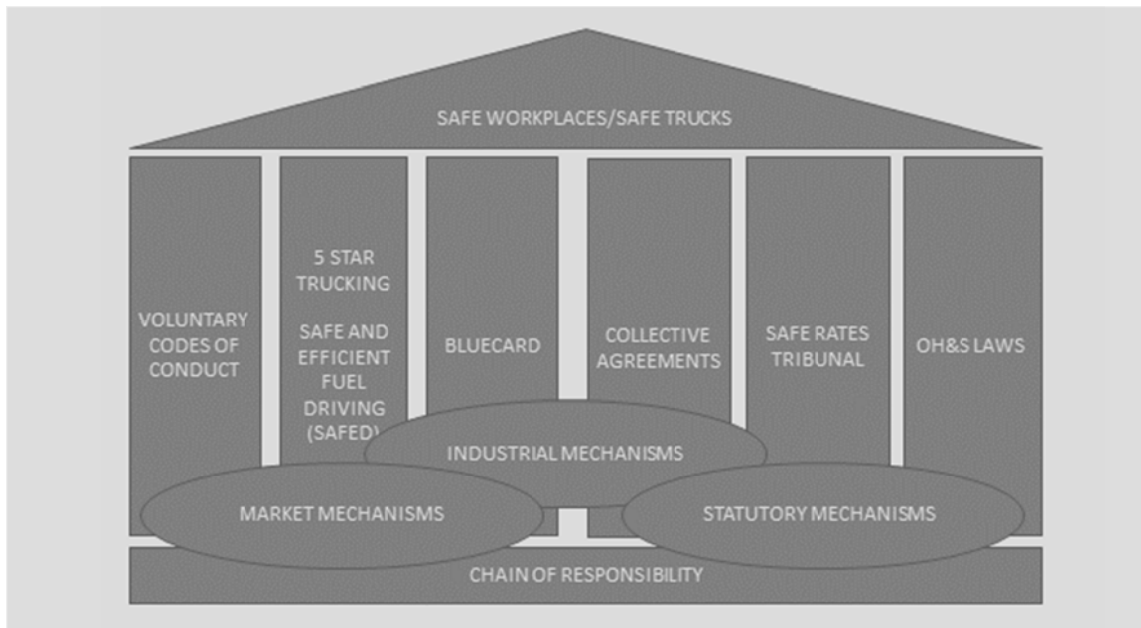
Within the Australian road transport industry, efforts to ensure safe and healthy workplaces comprise a complex mix of approaches. To varying degrees, these rely on market, industrial relations and statutory mechanisms to address workplace health and safety (WHS) risk. The different regulatory mechanisms are distinguished in terms of the choice of regulator, the target of regulation, the strategies and enforcement tools. The relative contribution each approach makes to improving WHS in practice, both individually and in combination, is unclear. While scholars located in the transport sector, the WHS field, and in the study of regulation have examined the impact of particular approaches, and regulation theorists have debated the relative efficacy of regulatory forms on the continuum between self-regulation and statutory regulation, there has been no research that comprehensively examines and compares their impact in addressing critical WHS risks for the industry. (Ayres and Braithwaite 1992; Johnstone and Sarre 2004; Saurwein 2011; Gunningham 2011a; Zanko and Dawson 2012; Safe Work Australia 2013a).

Workers' compensation statistics suggest that trucks are one of Australia's most dangerous workplaces. The transport and storage industry has the highest rate of fatalities per employee for any industry in Australia. However, while fatalities, through collisions and rollovers, are the public face of driving risks, truck drivers are far more likely to suffer severe or fatal injuries from falling or slipping off cabs, trailers and loading docks, being hit by moving and falling objects, and damage by air pollution. Injuries sustained in these ways are often associated with lengthy recoveries, if not lifelong musculoskeletal and other disorders, including psychological conditions associated with depression, sleep deprivation and addiction. Critically, many of those injuries are reasonably foreseeable and therefore preventable (Kemp, Kopp and Kemp 2013; Jensen and Dahl 2009; Shibuya, Cleal and Kines 2009).

While WHS mechanisms are unlikely to deliver zero risk, a realistic aim is to minimise material risks so far as reasonably practicable and maximise resistance to residual risk (Reason 1997; Hollnagel 2011). Improving health and safety regulation in the transport industry requires informed analysis of the efficacy of the different regulatory systems in operation, their relevance, limitations and strengths. This analysis must consider first, the critical risks involved in work as actually performed, not only operations as managers and rule-makers imagine them to be (Dekker, 2006; Borys, Else and Leggett 2009). Second, research on each approach to regulation is required to understand how they contribute to risk management and WHS, and the gaps, limits and unanticipated consequences of each.

This study builds on existing knowledge by critically examining six contemporary modes of WHS regulation in the transport industry. The particular focus of this report is on the heavy vehicle road transport sector. The specific modes examined include voluntary codes of conduct, accreditation and certification schemes (such as the 'five star trucking' rating system in Australia and SAFED in New Zealand), training certification systems (such as Bluecard), collective agreements, specialist remuneration tribunals, and state and federal WHS laws. Figure 1.1 maps these particular types of regulation – denoted in the diagram as pillars – on a continuum representing the three primary mechanisms which underpin WHS interventions: market, industrial and statutory mechanisms. In Figure 1.1, the pillars are represented by specific examples of forms of regulation, such as Bluecard representing training certification systems.





**Figure 1.1: A model of WHS regulatory mechanisms in the Australian heavy vehicle road transport industry**

To provide a basis for comparative analysis, the study began by identifying critical WHS risks in the heavy vehicle road transport industry. The project then examined the ways in which each form of regulation purports to address critical risks. Examination of the strengths and limitations of each regulatory approach considers not only costs and benefits in theory but also issues of operational efficacy such as compliance and enforcement. Notably, the concept of chain of responsibility (CoR) has emerged in recent years to represent the responsibilities which each stakeholder in the industry’s supply chain bears for WHS. The extent to which the different WHS mechanisms and pillars both regulate and reflect commitments to the CoR by stakeholders vary.

The **Report** finds that while the current mix of market, industrial and statutory mechanisms has improved WHS for many heavy vehicle truck drivers, significant gaps and limitations remain in both approach and enforcement. To some extent this reflects the challenges of changing attitudes and behaviour in such a competitive industry. The industry’s segmented labour market (by employment arrangement and payment system) results in some drivers experiencing less WHS protection and more pressure to take risks than others. Enforcement and accountability of parties is growing but shortfalls remain. The complexity of the system impedes understanding of rights and obligations and also muddies the waters in relation to risk calculations concerning compliance. What this research reveals clearly is that different regulations address different risks in different ways. Consequently, no single regulatory mechanism can provide all the answers for the Australian road transport industry.

Nonetheless, the existing complex mix of regulatory mechanisms provides a range of compliance and deterrence measures which, together, mobilise various strategies to incentivise attitudinal and behavioural change in this competitive industry. In addition, the mix includes several forms of regulation with a potential to reach all levels of the CoR. The efficacy of the range of sanctions in deterring non-compliance may require more policy attention, but there is certainly a depth of administrative arrangements available by court order and through accreditation and other mechanisms to guide compliance and change.

# 1. BACKGROUND

## 1.1. Australian road freight transport industry

Australian road transportation services carry freight vast distances across a large country. This is a highly competitive industry, characterised by large numbers of operators, ranging in size from single owner drivers and small family businesses to national and multi-national companies. It is also an industry that continues to grow. Road freight volumes have been increasing annually, multiplying by 7.5 between 1971-72 (27.0 billion km) and 2012-13 (203.6 billion km) (BITRE 2014a: 1). The number of registered trucks in Australia has increased from 407,800 in 1972 to 576,400 in 2016 (ABS 2016). Articulated B-double and even B-triple trucks are increasingly used to transport growing volumes of freight; with a 51% increase in freight being transported by B-double between 2000-01 and 2012-13 (BITRE 2014b: 79). Since 2010, the number of articulated trucks on the road has increased 3% each year, compared to only 2.1% for passenger cars (ABS 2015).

Close to 90% of truck driving businesses are small operators with one or two trucks only, and these operators receive 75-85% of turnover in the industry (BITRE 2009: 9). Smaller operators largely comprise the estimated 35,000 owner drivers (Owner Driver, 2016) who do not benefit from legal protections attached to employees, such as workers' compensation, minimum hourly wages and leave provisions Rawling and Kaine 2012: 141). The industry has low entry barriers as there is minimal product differentiation and licensing, and low capital required to purchase a truck. The intensification of competition encourages cost minimisation; and, given labour constitutes a significant proportion of variable cost, this burden tends to fall disproportionately on workers – in this case, truck drivers (Rawling and Kaine 2012: 240). For example, an inquiry conducted for the Motor Accident Authority of NSW in 2001 concluded competitive pressures have resulted in an increasing disparity between rising costs and freight transport rates. Reducing profit margins are reflected in the income of truck drivers (Quinlan 2001: 36-37, 137).

Competitive pressures have been further exacerbated by the increasing outsourcing of freight transport to contractors and sub-contractors. Elaborate supply chains can include load owners such as suppliers (e.g. manufacturers) or customers (e.g. supermarket chains), receivers, dispatchers, consignors, brokers, freight forwarders, and any number of large fleets, small fleets and owner drivers (Baas, Charlton and Bastin 2000: 190-191; Quinlan 2001). Meanwhile powerful clients at the top of the supply chain have significant influence over rates paid. Examples include major supermarket chains such as the Coles-Woolworths duopoly where consolidation has facilitated increased bargaining power. In contrast, small freight transport providers at the bottom of the supply chain are left in an extremely weak position, with little or no power to negotiate rates paid or timeframes for delivery, particularly after other supply chain parties have taken their portion of profits (Rawling and Kaine 2012: 240). For some, delivery contracts are gained through downward auctions in which the work goes to the lowest bidder. Given research has repeatedly demonstrated the material influence of economic pressures on truck driver safety (Williamson, Feyer and Friswell 1996; Quinlan 2001; Belzer, Rodriguez and Sedo 2002; Mayhew and Quinlan 2006; Quinlan and Wright 2008; Rawling and Kaine 2012), it is not surprising that truck drivers may compromise their health and safety, and that of other road users, to meet the delivery requirements of powerful clients (Rawling and Kaine 2012: 240-241). What is perhaps most surprising is that it remains common among some stakeholder groups to 'blame the victim' for injuries and fatalities rather than to consider the structural features of the industry (Safe Work Australia 2011).

## 1.2. Regulating WHS in the Australian road freight transport industry

Health and safety has long been a significant issue for the Australian road freight transport industry and a matter of wider public concern. Revealing a continuing and historically high rate of serious injury, illness and fatalities, relative to other industries, the latest available national workers' compensation data (2013-14) indicates that the transport, postal and warehousing sector experiences the highest frequency (9.3 per million hours worked) and incidence (17.4 per million hours worked) of serious compensated injury and disease of any industry in Australia. Following closely were the Agriculture, Forestry and Fishing, and Construction sectors, both of which include many heavy-vehicle-related injuries and fatalities in their results (Safe Work Australia 2015a). These relatively high fatality and injury rates have led governments to target the road transport industry for attention (Safe Work Australia 2012: 17).

A patchwork of laws, standards, agreements and other mechanisms currently regulate WHS for truck drivers in Australia. Some are longstanding, others the result of more recent initiatives. For example, WHS Laws, industrial awards and agreements, and employer codes of conduct have long operated to regulate safety in this sector, with varying scope and efficacy. Forms of WHS training accreditation, such as Bluecard in Australia and SAFED in New Zealand, are more recent initiatives. In Australia, a 'five star' trucking rating system was considered but has not been adopted to-date. Figure 1.1 mapped the six forms of regulation which are the focus of this study.

### 1.2.1. Legislative amendments 2012

Three of the legislative regulations are relatively new, having been adopted in 2012, although one has since been abolished.

1. The National Heavy Vehicle Regulator (NHVR) was established in 2012 under the **Heavy Vehicle National Law 2012 (Qld)** (HVNL). This was the result of an agreement of members of the Council of Australian Governments in July 2009, to establish a single national system of laws for heavy vehicles over 4.5 gross tonnes. The HVNL prescribes required standards for heavy vehicles, driver behaviours, and obligations along the CoR. This legislation, initially enacted in Queensland, was subsequently adopted in the Australian Capital Territory, New South Wales, South Australia, Tasmania and Victoria in early 2014. State government agencies administer the law under service agreements. The Northern Territory and Western Australia have not enacted the HVNL.
2. The Commonwealth Government legislated the model **Work Health and Safety Act 2011** (WHS Act) to harmonise Occupational Health and Safety regulation across Australian jurisdictions. All jurisdictions except Victoria and Western Australia have enacted the legislation. The WHS Act imposes specific duties of care on people conducting business units, and other participants in the supply chain, with the intention that those with responsibility will establish safety management systems to prevent hazards in the workplace.
3. Finally, the **Road Safety Remuneration Act 2012 (Cth)** (RSR Act) was enacted to promote safety in the road transport industry primarily by addressing the relationship between remuneration and safety. The Federal Labor Government introduced this law in July 2012 after several inquiries, including one by the National Transport Commission in 2008 which reported the links between driver remuneration and safety outcomes for truck drivers and recommended a national scheme to set minimum safe rates for employee and owner drivers (Quinlan and Wright 2008). The Road Safety Remuneration Tribunal (RSRT) was established under the RSR

Act to establish minimum wages and conditions, approve collective agreements and other functions. In April 2016, the Federal Coalition Government abolished the RSRT.

### **1.2.2. Challenges for legislative regulation**

In Australia, the regulation of labour and WHS standards for truck drivers is complicated by three factors. First, the legislative powers of the Federal Government are limited by the Australian Constitution. Beyond this, efforts to seek national uniformity require the Federal Government to rely on state and territory jurisdictions to enact 'model' laws as consistently as possible. With WHS, this means the WHS rules and sanctions that currently apply to members of the heavy vehicle road transport supply chain are inconsistent and depend upon the jurisdiction in which the individual truck driver is operating. This not only impedes understanding of the rules but also leads to perverse outcomes. For instance, point-to-point speed cameras in NSW act as a brake on driving speeds until drivers reach the border with Victoria, whereupon there are no such cameras and therefore the calculated risk of sanction is low and drivers can 'catch up' on schedules as needed.

The second complication (Johnson 2012) is the segmentation of the workforce by employment arrangement and firm size. The truck driving workforce includes owner drivers, permanent employees and casual employees, subcontractors and labour hire drivers. Drivers in any of these categories may work for a single company or various companies. Employing companies vary from large organisations, such as Linfox and Toll, to small family-owned businesses. This workforce segmentation has implications for bargaining power, authority, control and working conditions.

Third, remuneration systems applying to truck drivers vary considerably and, as we discuss later, each imposes different pressures on working patterns which, in turn, affect compliance by 'employers' and 'drivers' with WHS regulations. For instance, truck drivers can variously be paid hourly rates, daily rates or weekly rates; the latter two with or without overtime payments. Alternatively, they may be paid flat rates for each load carried or a piece rate for each trip based on kilometres travelled or tonnage carried. Some drivers are paid on a combination of hourly and piece rates. While payment systems based on hourly rates provide an incentive to drive for longer periods than may be advisable, those based on piece rates provide an incentive to drive both faster and longer (Quinlan and Wright 2008).

Comparisons of regulatory systems between countries and their implications for safety are difficult to make because of legal, socio-political, cultural, economic and other differences. However, research has shown that truck driver safety in Australia compares poorly with the US and other western countries including Canada, France, Germany, New Zealand, Sweden and the United Kingdom (Mooren, Williamson, Friswell, Olivier, Grzebieta and Magableh 2014b: 328). This may signal the importance of regulatory systems to safety outcomes. Comparisons are drawn most commonly with the US. There are notable differences between the US and Australian regulatory systems (Mooren *et al.* 2014b: 328). For example, US drivers must be audited against safety specific criteria within 18 months of commencing work in the occupation, whereas no such system exists in Australia (Douglas and Swartz 2009: 280). Second, information about accreditation, safety ratings and compliance are publicly available in the US, unlike Australia where no such transparency exists (Mooren *et al.* 2014b: 328). Third, the regulation of working hours in the US is more stringent. Hours-of-service limits are 11 hours per 24 hour period in the US, which is lower than the limit of 12 hours per 24 hour period or 72 hours per 7 days in Australia.

## 2. RESEARCH METHOD

This study adopted a mixed-methods approach to collecting qualitative and quantitative data to explore perceptions and experiences of safety in the road freight transport industry. The four stages of research activity are described below.

**Stage 1: Literature review.** To inform stages two and three, the research team first conducted a comprehensive literature review of four bodies of research. These included: workplace health and safety; WHS in the heavy vehicle transport sector; regulation (theory and comparative analysis of regulatory modes); and research into the six regulatory pillars on which this project is based (see Figure 1.1). This provided a foundation to inform the research interviews and survey instrument(s).

**Stage 2: Interviews.** Interviews were conducted with 21 key stakeholders between September and November 2015 and in August 2016. The interviews were undertaken with officials in relevant government regulatory agencies (7), road transport companies and distribution centres (5), trade union officials (5), three employer association officials and one labour law scholar. Generally, the interviews were of one hour duration. Their purpose was to identify issues, perspectives, experiences and challenges which different stakeholders in the industry faced. Interviews explored the critical WHS risks in the industry, and the operation, experiences, effectiveness, and perceived impact of the various modes of regulation detailed in Figure 1. Interviews were transcribed verbatim. Members of the research team debriefed following interviews and identified both common and uncommon themes as they emerged. Along with the literature review, this information informed development of the survey instrument to seek insights from a wider range of respondents – including employees, owner drivers and sub-contractors – across the transport industry CoR.

**Stage 3: Surveys.** Through the interviews with key informants, as well as through the piloting phase, the research team identified topics and terminology and added or altered survey items accordingly. Following a review of extant data, the team excluded questions to which answers had already been published, and identified gaps in published data. Two National Transport Commission surveys conducted in 2012, to review the impact of several Commonwealth statutes on truck driver safety, had explored the management of driver fatigue and compliance with vehicle, mass, road and speed requirements; we have used some of this data in this report (NTC 2012a, 2012b). The survey instrument was developed and refined through a piloting process.

The survey was administered both as a structured interview in person and online using Qualtrics software. The survey took approximately 20-25 minutes to complete and questions addressed:

- (a) Demographics – age, geographical base, driving experience.
- (b) Characteristics of working arrangements – vehicle type, employment status, payment system, usual weekly working hours, payment for non-driving work, distances travelled, freight carried, regularity and consistency of particular features of the work.
- (c) Safety Issues – OHS training undertaken, injuries experienced, drivers' perceptions on a range of matters including frequent injuries, causes of injuries, safety management and regulatory compliance, loading dock safety, reporting various regulatory breaches, and sanctions incurred for regulatory breaches.

Face-to-face interviews were conducted with 160 drivers at six truck stops/service stations and two distribution centres in NSW in December 2015. These locations included:

1. Town truck stop, Tarcutta
2. Mobil Service Station, Tarcutta
3. BP service stations, Marulan – both southbound and northbound

4. Caltex M4 Twin Service Station (northbound), Eastern Creek, Sydney
5. Caltex Star Mart, Hume Highway, Yass
6. Woolworths Distribution Centre, Sargents Road, Minchinbury (survey conducted onsite)
7. Coles Distribution Centre, Eastern Creek (survey conducted on Ropes Road).

Interviewers were trained in administration of the survey and provided with scripts to provide uniformity in the way they posed questions to drivers. The interviewers worked in teams at truck stops. They adhered to the survey structure and interview script, recording responses on paper hard copies. The interviewers also recorded other qualitative data respondents offered. One of the principal investigators supervised the interviewers, maintaining an ongoing dialogue with them during the process and in the debriefing sessions that followed. This principal investigator then entered the results on Qualtrics.

The research team also took the opportunity to distribute paper-based materials to promote the survey and invite drivers to complete it online at locations frequented by drivers, and also to pass it to others not present at the time.

An email inviting drivers to complete the survey and 70 paper copies were also forwarded to by the Transport Workers Union to its members, and a further 150 paper surveys were distributed through the Victorian Transport Association. The online survey was open from the 17 December 2015 - 20 February 2016. With such a strong response rate, sending reminder emails was deemed unnecessary. To elicit more responses from owner drivers, advertisements were placed in the *Owner Driver* magazine and on the Owner Driver website for the month of August/September. These provided a link to an online version of the survey which was open from 1 August 2016 - 14 October 2016. A copy of the online survey instrument, which was also used in the face-to-face structured interview is in Appendix B.

In total, there were 626 responses. Of these 83 were hard copy and 543 completed online. Seventeen surveys were received from workers who did not drive a heavy vehicle in the road freight industry and a further 51 responses did not contain sufficient demographic information to enable analysis or were more than 50% incomplete and therefore unusable. These 68 were removed from the sample. The final sample of 559 survey responses comprised 118 (21%) owner drivers and 440 (79%) employee drivers

**Stage 4: Analysis.** The quantitative data were analysed using a combination of Qualtrics, Microsoft Excel and SPSS (version 10) software. A total of 298 respondents provided written comments at the conclusion of the survey. A thematic analysis of this data was also undertaken to code the results and a representative selection of the comments are reproduced in this report.

## **2.1. Organisation of Report**

The organisation of the remainder of this Report is as follows. There are two Parts. Part B provides a literature review in three sections: Section 3 explores the scholarly literature on truck drivers and WHS; Section 4 looks at theories of regulation which form a conceptual framework for the research; and Section 5 examines the forms of WHS regulation on which this project focuses. Part C outlines and analyses the research findings. Section 6 presents an analysis of the survey data, summarising quantitative results and reproducing various quotations to the voice of heavy vehicle drivers. Section 7 draws on insights from the reported experience of drivers to outline conclusions concerning the efficacy of the regulatory mix and specific issues and challenges that the research findings illuminated.

## PART B. LITERATURE REVIEW

The purpose of this review is threefold. The first is to identify the key WHS risks in the heavy vehicle road transport industry. Second, this review considers the conceptual literature on the regulatory mechanisms which have been established to address the identified risks, and their strengths and limitations. Third, we examine the major mechanisms or pillars of regulation operating in the industry in contemporary Australia (as was depicted in Figure 1.1), and several others which have operated in the past or been the subject of policy discussion.

### 3. WORK HEALTH AND SAFETY (WHS)

#### 3.1. Ensuring health and safety at work

The capacity to deliver safe and healthy work has improved considerably over the past century. An ever-increasing body of evidence on the technical, personal (cultural) and organisational (governance) factors implicated in damage to people at work (Figure 3.1) has meant many types of injury and illness can no longer simply be accepted as ‘acts of God’. Instead, the cause-and-effect relationships that exist between work-related hazards, on the one hand, and physiological and psychosocial injury, on the other, are often well understood. Commonly occurring injuries and illnesses are readily foreseeable, and therefore preventable.



Figure 3.1: Classification of WHS controls

##### 3.1.1. Understanding work as done

Identifying those WHS hazards that have the potential to result in serious harm or permanent damage to workers requires a realistic understanding of work as it is actually performed, as opposed to imagining work as it could, or should, be done (Dekker 2006, Borys Else and Leggett 2009). This underscores the importance of consulting with workers, and others, to understand the degree of alignment between task requirements and available resources, to identify those WHS hazards that need to be eliminated or controlled, and to explore the various other factors that directly or indirectly impact the ability to perform work safely. Indeed, current WHS legislation includes provisions mandating consultation on WHS matters, not only with employees but with affected workers up and down the supply chain.

##### 3.1.2. Training: risk awareness and risk management

Furthermore, requirements for WHS training are borne from a need to ensure workers can identify hazardous tasks and environments and have adequate knowledge about appropriate responses to those risks. Hopkins (2005) argues that the rationale for encouraging risk-awareness among employees stems, at least in part, “from the impossibility of devising a set of safety rules which adequately covers every situation” (p16). In routine circumstances, rules-based approaches can

communicate expectations for safe work methods and behaviours. However, training must enable workers first, to *understand* why each rule is necessary and how it fosters improved WHS and, second, to *identify threats* to WHS which arise in non-routine situations and know how to respond.

### 3.1.3. Identifying WHS risk factors

Importantly, many case studies have demonstrated clearly the multi-causal nature of injury and illness and the confluence of technical, cultural and organisational factors that typically precede a damaging event (Hopkins 2000; McDonald 1985). This means the immediate mechanism of injury (often loosely described as the ‘cause’ of an injury or illness) may have resulted from, or been exacerbated by, any number of other important events or risk factors across the organisation and beyond. Identifying as many of the ‘essential and contributing risk factors’ (McDonald, 1985) implicated in occupational injury or illness as possible provides multiple opportunities for effective WHS intervention and hazard control.

### 3.1.4. WHS interventions

When WHS risks are identified, the legally mandated risk framework, hierarchy of controls’ (HoC) (Figure 3.2), provides a useful guide to prioritising WHS risk management options vis-à-vis their relative effectiveness and reliability.

This approach aims to maximise health and safety outcomes for workers and also serves to deliver reductions in WHS failure costs and increase productivity for business.

The application of safe design principles is an essential consideration when eliminating hazards or minimising associated risk. Not only applicable to plant, equipment, sites and structures, the relevance of safe design principles to the design of work itself is increasingly recognised as critically important.

Data on work-related fatalities and workers’ compensation claims for serious, non-fatal injury and illness indicate the level of WHS risk in the industry and point to the types of injuries, illnesses and incidents which workers sustain in and around trucks.

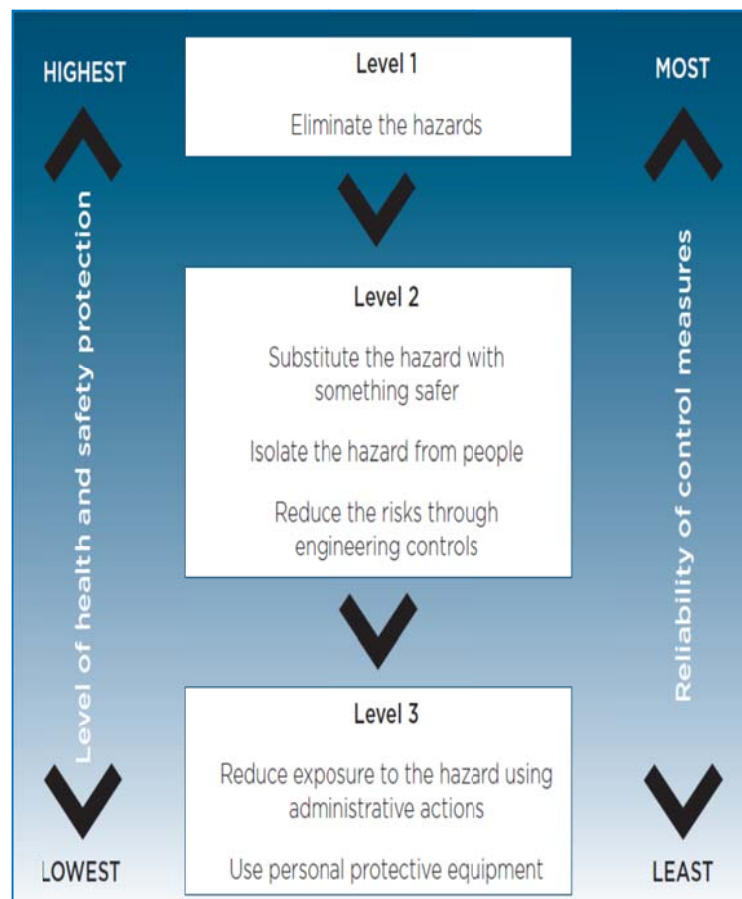


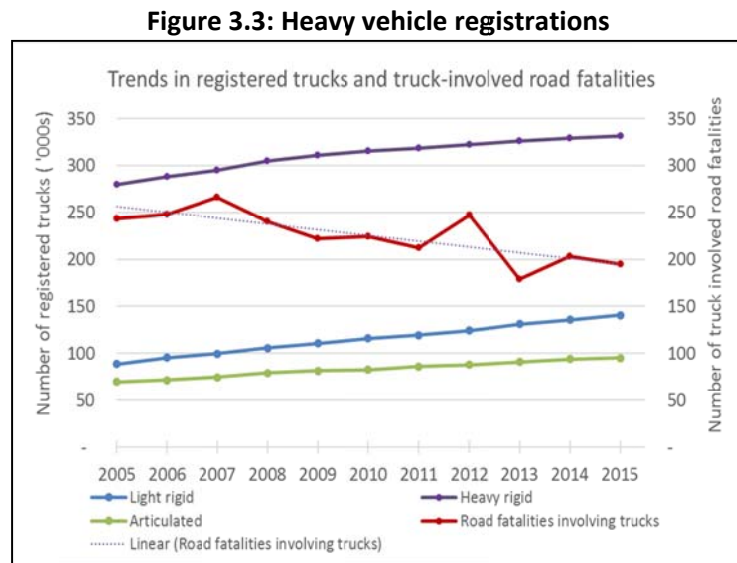
Figure 3.2: WHS hierarchy of controls



### 3.2. WHS in the Australian road freight transport industry

Historical, and continuing, patterns of death and serious damage to road transport sector workers demonstrate the significant issue WHS has long presented for the industry. Much of the public attention has, however, focused narrowly on road crash fatalities. National data reveals that, despite increasing numbers of heavy vehicle registrations, the number of road users losing their lives in crashes involving heavy vehicles has generally declined around 20% over the last decade (See Figure 3.3).

Nevertheless, the incidence of road deaths involving a heavy vehicle has remained proportionately steady as a proportion of all road-user deaths, suggesting a general improvement in road safety (See Table 3.1).



(Source: Australian Bureau of Statistics (ABS 2016))

**Table 3.1: Occupational fatalities**

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Heavy vehicle fatalities	243	248	266	240	222	224	212	247	179	203	195
All road fatalities	1627	1598	1603	1437	1491	1352	1277	1300	1187	1150	1205
% involving HVs	15 %	16 %	17 %	17 %	15 %	17 %	17 %	19 %	15 %	18 %	16 %

(Source: Australian Road Deaths Database 2016, [https://bitre.gov.au/statistics/safety/fatal\\_road\\_crash\\_database.aspx](https://bitre.gov.au/statistics/safety/fatal_road_crash_database.aspx))

#### 3.2.1. Road freight transport worker fatalities

Workers' compensation data reveals that fatalities resulting from work in and around trucks accounted for 30% of all work-related fatalities in Australia between 2003 and 2012 (Safe Work Australia 2014a: 3, 5). The latest available national workers' compensation data (2013-14 year) reveals the transport, postal and warehousing sector had experienced the highest frequency (9.3 per million hours worked) and incidence (17.4 per million hours worked) rates of serious compensated injury and disease of any industry in Australia. Following closely were Agriculture, Forestry and Fishing, and the Construction sectors, both of which include heavy vehicle related injuries and fatalities (Safe Work Australia 2015a). Analysis of data by industry reveals that, over the past decade, the incidence of compensated fatalities for road freight transport workers (RFTWs) has been significantly higher than for Australian workers aggregated across all industries (Safe Work Australia 2016).

**Table 3.2: Incidence of fatal occupational injury**

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Number fatalities - RFTW	47	37	47	58	50	51	31	25	45	34	36
Incidence rate - RFTW	31.97	27.3	32.0	38.0	29.1	29.9	19.6	15.6	29.0	20.7	21.0
Incidence rate - all industries	2.9	2.6	2.8	2.9	2.6	2.4	2.0	1.9	2.0	1.7	1.6

(Source: Safe Work Australia 2013a, pp. 7, 13.)

RFTW relative to all industries	11x	11x	11x	13x	11x	12x	10x	8x	15x	12x	13x
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The comparative analysis presented in Table 3.2 reveals that, on average, there were approximately 11.6 times more fatalities in the road freight transport industry than in all other Australian industries (Safe Work Australia, 2013a: 1). In 2013-14, the fatality rate of 21 deaths per 100,000 workers was dramatically (13.1 times) higher than the overall Australian rate of 1.6 deaths per 100,000 workers (Safe Work Australia 2013a: 2, 4).

In the decade to 2013, less than three quarters of truck-related fatalities occurred because of a crash on a public road (72%). The remainder occurred at work sites, rather than out on the road, and, of the 787 workers who had lost their lives in and around trucks over that ten-year period, 506 were truck drivers. (Safe Work Australia 2014a: 3, 5, 6). This is usefully illustrated in Safe Work Australia's infographic (reproduced in Figure 3.2 below) and underscores the need to recognise that the risk of fatal injury in the road freight transport sector extends beyond a risk of on-road crashes.

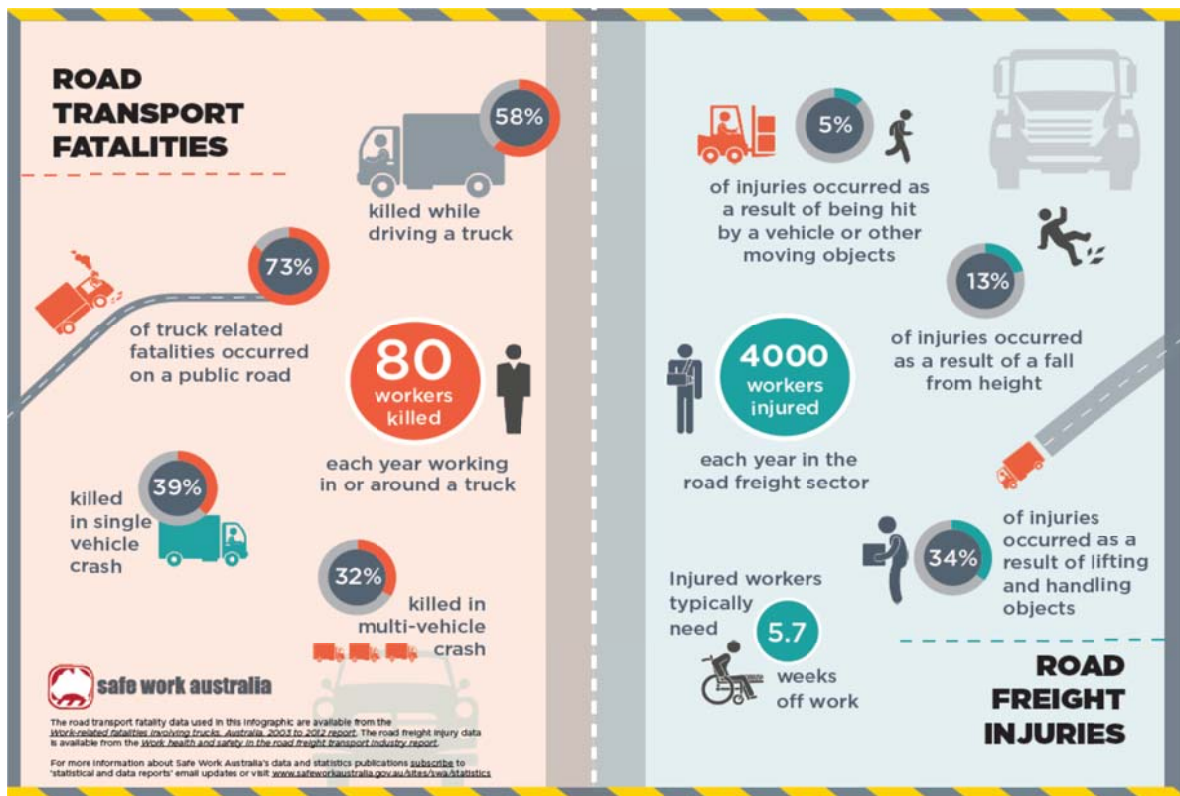


Figure 3.4: Safe Work Australia Infographic - 2014

### Compensation claims for non-fatal injury and illness

As noted in Section 1, understanding the diversity of serious risks to truck drivers' health and safety requires consideration of evidence relating to both fatal and non-fatal injury and illness. Despite published data on compensated injury and illness claims in the transport industry, there is limited information available about those incidents resulting in permanent disability or high consequence<sup>1</sup> temporary damage to workers. This data would be invaluable in providing greater insight into critical hazards and prioritising future WHS interventions. Instead, most workers' compensation data

<sup>1</sup> Claims involving injuries and illnesses that take 60 days or more to recovery are typically 'high consequence' in terms of human impairment and financial/social costs.

available at an industry level tends to aggregate together all compensated non-fatal injury and illness involving one week lost time or more. Collectively, these are identified as ‘serious’ claims. Data on serious claims for road freight transport workers is summarised in Tables 3.3 and 3.4. Table 3.3 focuses on the incidence of non-fatal injury and illness and reveals that the average incidence of claims is, again, significantly higher for road freight transport workers than for Australian workers across all industries. Not only are road freight transport workers experiencing almost three times the rate of claims (per 100,000 workers), they also experience double the frequency of claims; that is, twice as many claims for serious injury per million hours worked.

**Table 3.3: Fatal versus non-fatal occupational injury – road freight transport workers**

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Non-fatal injury – RFTW<sup>^</sup></b>	<b>4,150</b>	<b>4,230</b>	<b>4,300</b>	<b>4,215</b>	<b>4,320</b>	<b>3,965</b>	<b>3,790</b>	<b>3,785</b>	<b>3,845</b>	<b>4,005</b>	<b>3,650</b>
<b>Incidence rate - RFTW</b>	<b>32.8</b>	<b>37.1</b>	<b>37.8</b>	<b>35.5</b>	<b>32.6</b>	<b>32.7</b>	<b>31.1</b>	<b>30.2</b>	<b>33.6</b>	<b>31.5</b>	<b>28.7</b>
Incidence rate - all industries	16.3	17.5	16.6	14.6	14.3	13.5	12.4	12.2	12.1	11.0	9.8
<b>Frequency rate – RFTW</b>	<b>14.6</b>	<b>16.1</b>	<b>17.1</b>	<b>16.1</b>	<b>14.9</b>	<b>15.2</b>	<b>14.2</b>	<b>14.6</b>	<b>15.2</b>	<b>14.5</b>	<b>13.1</b>
Frequency rate – all industries		10.2	9.7	9.4	8.5	8.1	7.5	7.4	7.2	6.6	5.9

<sup>^</sup> **Compensated non-fatal injury** and illness involving at least a five day absence from work  
 Incidence refers to the rate of claims per 1,000 employees, while frequency refers to the rate of claims per 1,000,000 hours worked.

(Source: Safe Work Australia 2013a, pp. 7, 13)

Table 3.4 details the types of incidents which most commonly lead to injuries for truck drivers. Clearly, these incidents not only include events occurring within trucks, such as road crashes, but also outside trucks, such as slips, trips or falls while moving in or out of the cabin, or moving around the truck.

**Table 3.4: Workers’ compensation claims - most common non-fatal injuries (2006/07 - 2010/11)**

<b>Non-fatal, serious injury workers’ compensation claim type</b>	<b>Percentage of claims</b>
<b>Injury</b>	<b>78%</b>
Sprains and strains of joints and adjacent muscles	45%
Fractures	13%
Contusions with intact skin surface and crushing injury excluding those with fracture	8%
Open wound not involving amputation	6%
Other	6%
<b>Disease</b>	<b>22%</b>
Disorders of spinal vertebrae and intervertebral discs	6%
Disorders of muscles, tendons and soft tissues	6%
Hernia	3%
Other	7%

(Safe Work Australia, 2013b: 16)

As summarised in Table 3.5, approximately 60% of claims for the 2007 to 2011 period related to either muscular stress (34%) or falls (25%). Indeed, the data suggests a majority of non-fatal injuries to drivers occur in and around trucks, such as while loading or unloading freight, or conducting maintenance on the vehicle, rather than when these workers are driving (Spielholz, Cullen, Smith, Howard, Silverstein and Bonauto 2008; Robb and Mansfield 2007). This finding is consistent with data on fatal injuries to truck drivers; of those 224 truck drivers who lost their lives at work sites between 2003 and 2012, 53.5% died whilst loading or unloading a vehicle, while a further 25% died while undertaking onsite vehicle repairs and maintenance tasks (Safe Work Australia 2014a: 6). The

focus of hazard and risk identification therefore needs to consider the broader context of the workplace and examine both driving and non-driving duties of a heavy vehicle truck driver.

**Table 3.5: Workers’ compensation claims-most common mechanisms of injury (2006/07-2010/11)**

Non-fatal, serious injury workers’ compensation claim type	Percentage of claims
Muscular stress - while lifting, carrying, or putting down objects	19%
Muscular stress - other	15%
Falls - from a height	13%
Falls -on the same level	12%
Hit by falling or moving objects	10%
Vehicle incidents	8%
Trapped between moving and stationary objects or hitting stationary objects	6%
Other	17%

(Safe Work Australia, 2013b: 17)

### 3.2.2. Severity of non-fatal injury and illness

The significant cost that non-fatal serious injuries and illnesses present for the industry is summarised in Table 3.6. Trends in median weeks lost per claim and median claim cost from 2004 to 2013 are contrasted against ‘all industries’, revealing road freight transport workers sustain compensated injury absences of longer duration and higher median claim costs than those in other industries.

**Table 3.6: Cost of serious injury claims for road freight transport workers**

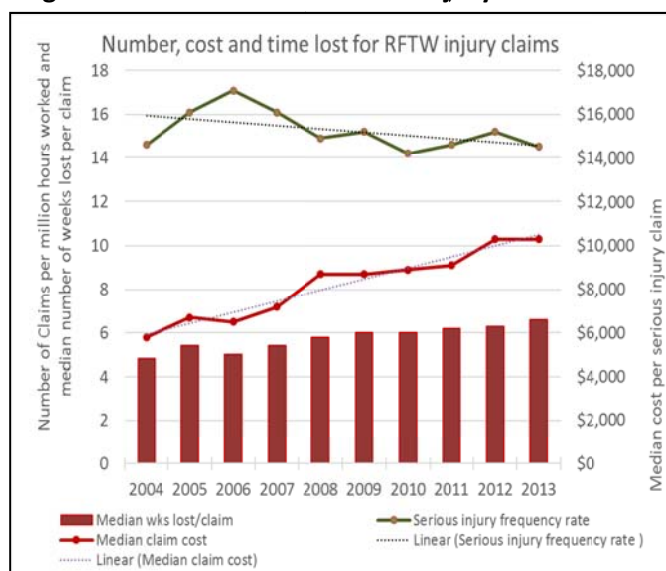
Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Median wks lost/claim - RFTW	4.8	5.4	5.0	5.4	5.8	6.0	6.0	6.2	6.3	6.6
Median wks lost/claim – All	3.7	3.6	4.0	4.0	4.2	5.0	5.1	5.5	5.6	5.4
Median claim cost - RFTW	\$5,800	6,700	6,500	7,200	8,700	8,700	8,900	9,100	10,300	10,300
Median claim cost – All	\$5,500	5,800	6,200	6,700	7,200	8,000	8,300	9,000	9,400	8,900

(Source: Safe Work Australia 2013a,b; 2016b)

Contrasting the median claim cost data against trends in injury frequency reveals that, although injury rates are trending down, the median claim cost is continuing to rise sharply (see Figure 3.3).

This suggests that efforts toward work-related injury and illness prevention are likely to be targeting those hazards associated with high frequency but low consequence incidents, rather than addressing the risks that result in more significant consequence damage to workers in the road transport industry. These trends serve to reinforce the importance of the sector’s inclusion as a ‘priority industry’ in the *Australian Work Health and Safety Strategy 2012-22*.

**Figure 3.5: Median cost of RFTW injury claim**



However, despite the published data on compensated injury and illness claims in the transport industry, there is limited access to detailed data showing the causal factors associated most frequently with high cost claims, i.e. with claims relating to fatal, permanent and high consequence<sup>2</sup> temporary damage to workers. These may, or may not, be consistent with the factors associated with fatal or, conversely, minor to moderate injury occurrences.

This is illustrated, for example, by compensation claims data for injuries resulting from the two primary mechanisms of injury, namely ‘falls from height’ and ‘muscular stress’. Road freight transport industry claims data (2013-2014) revealed that ‘falls from the truck or trailer’ was the most frequent breakdown agency across all categories of severity, accounting for 75% of injuries in each category. However, the agency associated with the next 10% in each category varied, as shown in Figure 3.5. Findings such as this have important implications for injury prevention.

**Table 3.7: Top 2 breakdown agencies for ‘falls from height’, by severity**

	Temporary		Permanent
	<60 days absence	>60 days absence	Partial or total disability
<b>Falls from truck or trailer</b>	75%	75%	85%
<b>Traffic and ground surfaces</b>	-	10%	-
<b>Steps and stairways</b>	10%		-

(Source: Safe Work Australia, data request 2015)

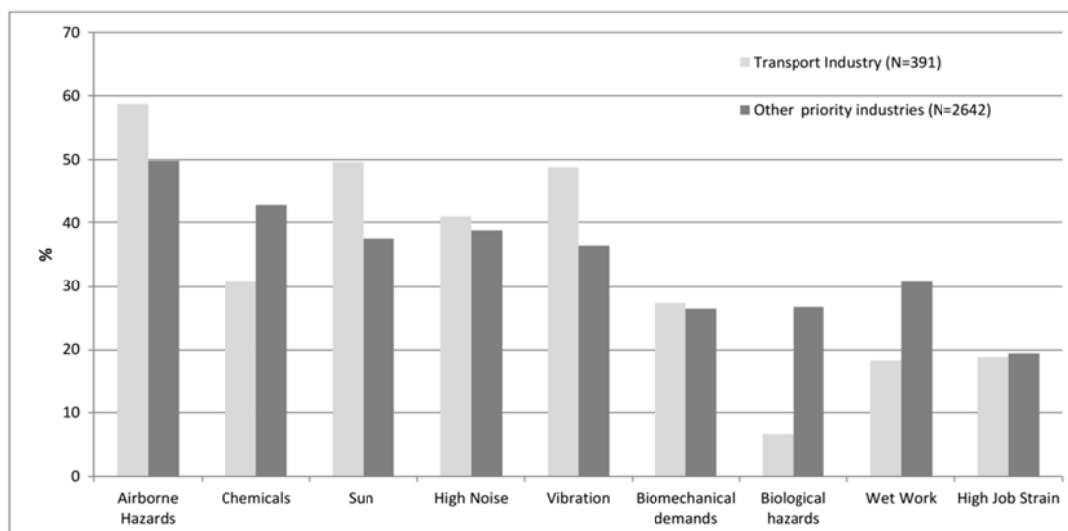
Similarly, while the most frequent breakdown agency, ‘muscular stress – other than lifting, carrying, putting down objects’, is consistent across severity categories, the second most frequent breakdown agency varies across categories of severity.

Evidence demonstrates that fatalities and high consequence injuries occur *within* trucks as a result of many factors, including drowning, exposure to environmental heat, collisions with moving vehicles, stationary vehicles, other stationary objects, and rollovers. Furthermore, injuries and illnesses are also associated with sitting and driving for extended periods, vibrations and noise exposure, uncomfortable seating positions, lack of task variation, long term exposure to diesel fumes, monotony, occupational violence, isolation, and stress (Mayhew and Quinlan 2006: 216, 221; Jensen and Dahl 2009: 365; Edwards *et al.* 2014: 342).

In addition, fatalities and injuries result from factors *outside* trucks such as assault, being hit by falling/moving objects or vehicles, being trapped between stationary and moving objects, falling from a height, and being hit by the driver’s own vehicle. Evidence also suggests truck drivers have experienced harmful contacts with chemicals and other dangerous substances, electricity, hot objects; an explosion, or being caught in a bushfire (Safe Work Australia 2013a: Table 2). Despite this, transport industry workers are less likely than other categories of workers to be provided with controls for risks to health (Safe Work Australia 2015a: v1).

<sup>2</sup> Claims involving injuries and illnesses that take 60 days or more to recovery are typically ‘high consequence’ in terms of human impairment and financial/social costs.

**Figure 3.6: Hazardous exposures, compared with workers from other priority industries**



(Source: Safe Work Australia 2013b, )

There has been less acknowledgement in the literature that heavy vehicle drivers have other occupational health and safety risks, in addition to the risks of crashes, injuries or fatality (Mooren, Grzebieta, Williamson, Olivier and Friswell 2014a: 80). Table 3.8 documents these other main risks. However, common health issues for truck drivers also include obesity, heart disease, intestinal problems, arthritis and rheumatism, lung diseases, diabetes, epilepsy, vision or hearing impairment, effects and interactions of prescribed and non-prescribed drugs, sleep disorders, stress and mental health problems (Krueger, Belzer, Alvarez, Knipling, Husting, Brewster and Siebert 2007; Edwards, Davey and Armstrong 2014: 340). Truck drivers are also more likely to report being exposed to disease causing hazards such as airborne hazards (fumes, dust and gases), sun and vibration than workers in other industries (See Figure 3.6).

**Table 3.8: Examples of truck driver injuries and illnesses identified in prior research**

<b>INJURIES</b>	
<b>Musculoskeletal e.g. low-back, knee and shoulder disorders</b>	(Jensen and Dahl 2009: 366) (Mayhew and Quinlan 2006: 216)
<b>Physical exhaustion, burnout and emotional exhaustion</b>	Crum and Morrow 2002 (Kemp, Kopp and Kemp 2013: 213-4)
<b>Hearing loss</b>	(Mayhew and Quinlan 2006: 216) (Krueger <i>et al.</i> , 2007)
<b>ILLNESSES</b>	
<b>Stomach, lung and prostate cancer</b>	(Edwards <i>et al.</i> 2014: 342)
<b>Obesity and life-style diseases, e.g. diabetes</b>	(Edwards <i>et al.</i> 2014: 342) (Jensen and Dahl 2009: 366) (Krueger <i>et al.</i> 2007)
<b>Respiratory diseases, bronchitis, emphysema and asthma</b>	(Edwards <i>et al.</i> 2014: 342) (Jensen and Dahl 2009: 366)
<b>Stroke and cardiovascular diseases</b>	(Edwards <i>et al.</i> , 2014: 342) (Jensen and Dahl 2009: 366) (Mayhew and Quinlan 2006: 216) (Krueger <i>et al.</i> 2007)
<b>Depression and adjustment disorders</b>	(Kemp <i>et al.</i> 2013: 213-214) (Krueger <i>et al.</i> 2007)
<b>Sleep disorders such as insomnia and restless leg syndrome</b>	(Kemp <i>et al.</i> 2013: 213-214) (Krueger <i>et al.</i> 2007)

### 3.3. Risk factors in the road transport industry

WHS risk factors fall into four main categories: immediate factors, workplace factors, governance factors and external factors. Some WHS risk factors are essential to the causal chain of events that precipitates a given incident, others are not essential but contribute to the likelihood that an injury or illness will occur. A vast body of scholarly research on WHS in the road transport industry has identified various risk factors associated with the incidence of work-related injury and illness. As illustrated in Figure 3.3, these include factors over which significant influence is exerted: by workers (immediate factors), jointly by workers and management (workplace factors), by management (governance factors) and by parties outside organisational boundaries (external factors). The remainder of this subsection summarises research evidence identifying various factors and explaining how they appear to influence, directly or indirectly, the health and safety of truck drivers.

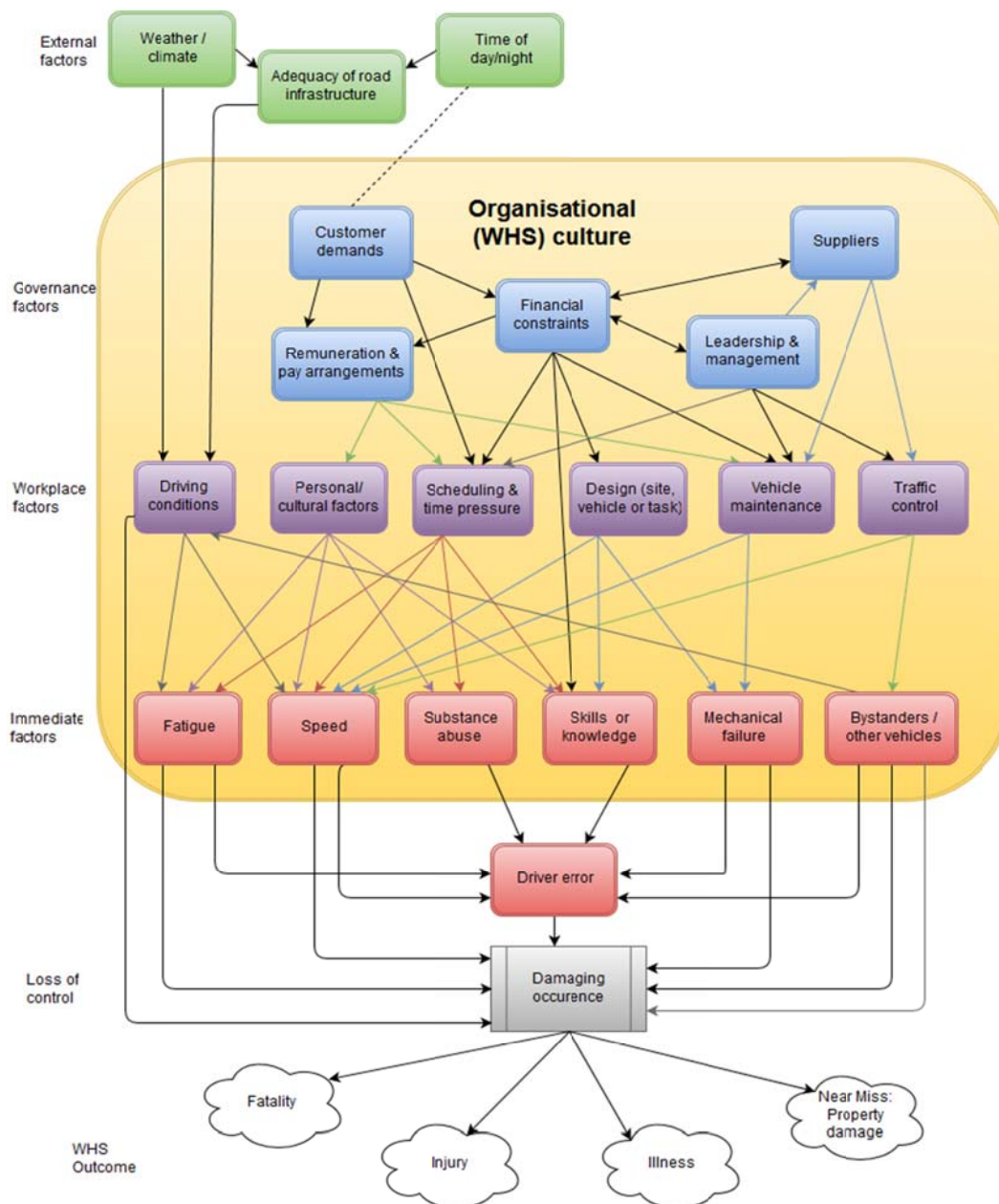


Figure 3.7: Mapping risk factors for injury and illness to road transport industry workers

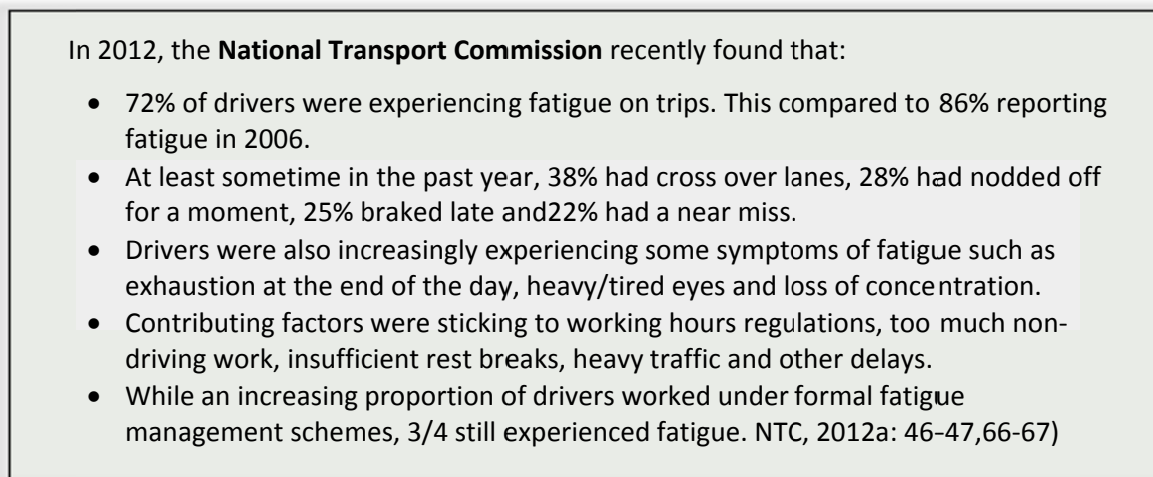
### 3.3.1. Immediate risk factors

Much of the focus of injury prevention is directed to the most immediate, and therefore most obvious, factors implicated in work-related incidents. In the road transport sector, these readily identifiable factors include driver fatigue, excessive speed, inadequate driver knowledge or skills, mechanical failure, and interactions with/from the general public (e.g. bystanders or other vehicles).

#### a) Fatigue

Fatigue has been well-established as a critical safety issue in the truck driving industry. It is strongly associated with truck crashes and truck drivers perceive this to be their greatest risk (Arnold *et al.* 1997; Baas *et al.* 2000: 188; Quinlan 2001; Crum and Morrow 2002: 20; Arboleda *et al.* 2003: 190; Cantor, *et al.* 2009: 204; Friswell and Williamson 2013: 203). Figure 3.8 details a range of the National Transport Commission findings on fatigue in 2012.

**Figure 3.8: National Transport Commission research findings (2012a)**



Prolonged fatigue and stress or pressure to meet performance targets compromises road safety (Quinlan and Wright 2008: 15). Endemic fatigue also contributes to common health issues for truck drivers, such as obesity, diabetes, sleep disorders, stress and mental health problems (Krueger *et al.* 2007; Edwards *et al.* 2014: 340). As well, physical fatigue increases the risk of drivers experiencing mental or emotional exhaustion, and dysphoric symptoms associated with depression, anxiety and risk of suicide (Kemp *et al.* 2013: 216). Endemic fatigue also leads some drivers to feel they have little choice other than to take prescribed or non-prescribed drugs in order to continue driving (Quinlan 2001: 19-20; Mayhew and Quinlan 2006: 225; Williamson 2007).

**Upstream factors:** Research to understand fatigue has largely tended to focus attention on the personal attributes and behaviours of drivers (Arnold and Hartley 2001: 2), such as the adequacy of rest they had obtained before starting the working week (e.g. Crum and Morrow 2002; Williamson *et al.* 1996). Nevertheless, a number of highly influential 'upstream' factors have been identified and confirmed in research into fatigue and truck crashes. For example, in a study seeking to examine why drivers perceive they get fatigued, Arnold *et al.* (1997) identified a range of reasons including: **driving long hours** (38.2%), **physical demands of (un)loading** (33.4%), **delays in (un)loading** (32.4%), **lack of sleep** (32.4%), **overly tight delivery schedules** (21.2%) and **driving between 2-5am** (21.2%).

Other studies on truck driver health and safety have revealed significant associations between fatigue and upstream factors including: **long driving hours; night driving; road/traffic conditions;**



uncomfortable sitting positions; consignor/consignee scheduling practices; monotony; workload/work pace; economic pressures; payment and incentive structures; access to fatigue management training; adequate rest stop facilities; and having safety devices installed in the vehicle (Baas *et al.* 2000: 190-191; Braver, Preusser and Ulmer 1999; Crum and Morrow 2002; Gander, Marshall, Bolger and Girling 2005; Cantor *et al.* 2009: 204; Friswell and Williamson 2013: 203; Kemp *et al.* 2013: 222; Williamson and Friswell 2013; Stevenson, Elkington, Sharwood, Meuleners, Ivers, Boufous, Williamson, Haworth, Quinlan, Grunstein, Norton, and Wong 2014). Furthermore, Friswell and Williamson (2013: 203) confirmed that fatigue is not only a problem for long haul truck drivers; short-haul drivers are equally at risk due to, for example: long daytime working hours; stresses of dealing with traffic; uncomfortable seating positions; and inadequate rest.

Thus, while it appears that fatigue is the result of workers' inability to manage their rest and sleep needs, evidence points to the significant and conflicting role that working conditions, scheduling and economic pressures can play in undermining opportunities for rest and sleep, thus exacerbating driver fatigue. These pressures have been acknowledged in legal decisions. For instance, Honour Justice Graham, in sentencing a truck driver following a fatal collision, stated that:

*"Heavy vehicle truck drivers are still placed under what is, clearly, intolerable pressure in order to get produce to the markets or goods to their destination within a time fixed, not by rational consideration of the risks involved in too tight a timetable, but by the dictates of the marketplace. Or to put it bluntly, sheer greed on the part of the end users of these transport services."* (Rawling and Kaine 2012: 245)

**Fatigue management:** Eliminating the WHS risk associated with fatigue, therefore, requires careful consideration of the interactions between drivers and their employers, consignors, consignees or contract providers, and the time pressures and incentives that arise through these interactions (Arnold and Hartley 2001). Illustrating the conflict this can foster are the findings of Arnold and Hartley's (2001) qualitative interviews with managers at 84 trucking companies in Perth, Western Australia. They found that while managers in half the companies reported that they would find an alternative driver or make other plans if a driver had reached the company's driving hour limits, other managers reported that driving time limits were 'not inviolable' and one in eight managers stated that drivers could continue to drive after reaching their legal limits (Arnold and Hartley 2001: 14). These drivers were expected to manage their own fatigue levels regardless of the scheduling pressures to which they were subject, and unsurprisingly, given management's tacit approval to drive excess hours, drivers were unlikely to report fatigue or discuss it openly for fear of termination (Arnold and Hartley 2001).

Confirmed by Mejza, Barnard, Corsi and Keane (2003), company policies and practices therefore have an important impact on whether drivers continue to work when fatigued. Quality driver fatigue training can also help control fatigue risk. Gander *et al.* (2005) surveyed 275 heavy vehicle drivers and 350 light vehicle drivers working in New Zealand. They received comprehensive training<sup>3</sup> about the physiological causes of fatigue, effects on driving and crash risks, and company policies for controlling fatigue-related risks, tailored for the type of driving they were doing. Drivers perceived they had benefitted from the training, had changed their practices according to company policies, and were communicating openly about fatigue issues in their workplace (Gander *et al.* 2005: 55).

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<sup>3</sup> This training was based on the NASA Fatigue Countermeasures Programme for the aviation industry.

## **b) Excessive speed**

Speed is another factor identified in many truck crash investigations. Major truck crashes are often widely reported in the media, accompanied by calls to increase enforcement of speed limits through police monitoring and higher penalties (Walker 2012: 16). Indeed, coronial inquiries in Victoria, Australia, between 2001 and 2007 were found to focus heavily on speed as a cause of fatal truck crashes (Brodie *et al.* 2010). Neeley and Richardson (2009) studied US speed regulations and truck crashes across several jurisdictions. They found that the greatest determinants of truck crashes were truck length and speed limits for all vehicles. These authors concluded that if speed had been limited to 55 miles per hour for all vehicles in the US in 2005, there would have been 561 fewer fatalities involving large trucks. Driving at or under the posted speed limit can also present a hazard if drivers fail to drive at an appropriate speed for the prevailing traffic and road conditions. Speeding is therefore an important safety concern for the road transport industry (Neely & Richardson 2009; Quinlan 2001: 20).

Research suggests that like fatigue, drivers' decisions to speed can be motivated by a range of factors, including inexperience and cultural factors (see point d below) and the considerable influence of economic and regulatory factors in this intensely competitive industry (Mooren *et al.* 2014a). For example, in their survey of 100 truck drivers in New Zealand, Baas and Taramoeroa (2008) found that approximately one in five drivers reported speeding on more than half their trips, with the most commonly cited reason for speeding being 'pressure to meet deadlines'. Notably, most vehicles of these speeding drivers had been fitted with speed limiting devices, which the drivers overrode to meet their deadlines.

## **c) Substance abuse**

Another factor shown to contribute to truck crashes is drivers' use of psycho-stimulant drugs (Gjerde *et al.* 2012; Labat *et al.* 2008; Leyton *et al.* 2012; Mabbott and Hartley 1999; Khan *et al.* 2012; Edwards *et al.* 2014: 342). Drivers in one study explained that drugs, such as amphetamines ('speed'), enhanced their ability to stay awake and alert so they could drive for longer (Mayhew and Quinlan 2006: 223). Nevertheless, effects and interactions of prescribed and non-prescribed drugs can contribute to crash risks (Krueger *et al.* 2007; Williamson 2007). Research demonstrates that truck drivers involved in fatal crashes in Australia are five times more likely to have been using stimulant drugs, and those drivers are more likely to be the culpable driver (Williamson 2007). Further, the risks associated with drug use extend to drivers' long term health and wellbeing (Quinlan 2001: 19-20).

It is noteworthy that, according to drivers, they take psycho-stimulants to stay on the road longer for two main reasons: first, to avoid physical or psychological pain; and second, to meet deadlines imposed by managers or clients (Quinlan 2001; Quinlan and Wright 2008). Indeed, Williamson (2007) found that a key reason for psycho-stimulant drug use by truck drivers is the difficulty they experience in managing fatigue arising from productivity-based payment systems. Some stimulant drugs are not illegal. Methods to detect illegal stimulant drug use, such as roadside testing by police or raids on truck stops, are resource intensive and haphazard, and police can be evaded. Moreover, detection and punishment of users does not address the reasons why truck drivers use these drugs (Quinlan 2001).

#### **d) Inadequate driver skills/knowledge**

Numerous researchers have identified significant correlations between the level of driving experience and heavy vehicle crashes (e.g., Lee and Leong 2016; Chen and Zhang 2016; Li and Itoh 2013). Also, Stevenson *et al.* 2014) found inexperience increased the risk of a crash by three or more times. Similarly, Guest, Boggess and Duke (2014) identified a connection between drivers' age and crash incidence, with older drivers having better safety records.

Training is, therefore, an important enabler of safety outcomes. Evidence suggests that training to reduce fatigue and technical driving errors, and to improve drivers' safety related attitudes, improves safety outcomes (Li and Itoh 2013: 247; Edwards *et al.* 2014: 344; Mooren *et al.* 2014b: 335-336). Training within the Australian trucking industry has traditionally been below other Australian industries. In 2001, Quinlan reported that 'The trucking industry currently employs 4.5% of the workforce nationally, yet only receives 0.7% of the training budget' (written submission ATA, page 3, Quinlan 2001: 120).

Mooren *et al.* (2014b: 335-336) suggest the positive implications for safety of a number of types of training, including sending experienced drivers out with new drivers to teach them how to conduct pre-start checks. Studies have also examined the influence of tailored training that seeks to address specific safety risks, such as fatigue management (see Gander *et al.* 2005, discussed above).

#### **e) Mechanical failure**

Mechanical problems with vehicles predictably increase the likelihood of crashes, and are common in those crashes where drivers have been identified as the 'driver at fault' (Jones and Stein 1989; Hakkanen and Summala 2001; Blower *et al.* 2010; and Edwards *et al.* 2014: 347). The most frequent mechanical defects implicated in studies of road traffic crashes involve burst tyres and brake failure (Mir, Razzak, and Ahmad 2013). Shen, Yan, Li, Xie and Wang's 2013 study of 708 accidents among tankers carrying hazardous materials revealed one in five crashes involved vehicle-related defects such as tyre, wheel, or tie rod failure; brake failure; steering failure; trailer attachment failure; vehicle self-ignition; and other mechanical failures. One in 12 involved tanker and safety accessory failures including: broken tank body; abnormal discharging of the safety valve; tank valve failure; and aging and disrepair of tank body and accessories. Their study concluded that 'enhancing vehicle inspection and [preventative] maintenance' of both the truck and tanker is likely to be effective in reducing serious tanker crashes (Shen *et al.* 2013 p768) (see also 3.3.2 Workplace factors).

#### **f) Interactions with the public**

Truck drivers routinely identify other road users as their greatest source of WHS risk and their claims are supported by evidence as to the involvement of bystanders and other drivers in truck accidents. For example, studies reveal between 81% and 84% of crashes involving trucks on public roads are caused by other vehicles (see, for example, Cherry and Adalakun 2012; Bjornstig *et al.* 2008; and Edwards *et al.* 2014). Further, Zhu and Srinivasan (2011) found that 'other' driver behaviour (e.g. drink driving) is correlated with injury severity resulting from accidents. The design of vehicles and work, therefore, needs to consider the prevention of unplanned interactions with the general public (such as bystanders or other drivers).

### 3.3.2. Workplace factors

#### a) Driving conditions

Various external factors associated with driving conditions constitute significant risks for heavy vehicle truck drivers. The most obvious influences on road conditions are the quality of road infrastructure and associated facilities and environmental factors such as the influence of weather, climate and time of day/night.

**Environmental factors.** Truck crashes are associated more commonly with particular times of the day including sunrise, sunset and night time (e.g. Ranney *et al.* 2000; Gander *et al.* 2006; Edwards *et al.* 2014). Pahukula, Hernandez and Unnikrishnan (2015) confirmed significant association between time of day and large truck-involved crashes, also finding that traffic flow, light conditions, surface conditions, and time of year and percentage of trucks on the road also differed between the time periods examined. In addition to light conditions, poor weather conditions have also been associated with crash likelihood (Williamson *et al.* 1996; Crum and Morrow 2002; Stevenson *et al.* 2014; Chen and Chen 2011; Edwards *et al.* 2014). Wet weather and low light are also associated with serious non-crash injuries such as truck drivers falling from heights and musculo-skeletal damage from slipping or tripping (Workcover, p.5).

The condition and accessibility of roads and other infrastructure, such as rest stops, has also been shown to contribute to truck drivers' safety. In particular, road design and conditions are commonly cited as causes of accidents. For example, Lee and Leong (2016) also found crashes on expressways are most likely to occur on straight sections of roads (85.4% of a sample of 267 crashes), while those occurring on rural roads are distributed across straight (47.6%), intersections (25%), downhill (12.8%) and curved (11.0%) sections of road.

Other studies have positively associated accidents with speed limits, traffic lights, road characteristics (e.g. specific locations or 'blackspots', particular sections and types of roads, road width, surface quality and curvature), and the availability and quality of rest stops and facilities (e.g. Lee and Leong 2016; Golob and Recker 1987; Sharma and Landge 2012; Archer and Young 2009; Wright and Burnham 1985). Furthermore, various studies of injuries not involving road crashes have confirmed links between road surface quality and vibration-induced musculo-skeletal damage (e.g. Safe Work Australia 2012).

Numerous studies have cited both environmental and infrastructure as significant risk factors. Brodie, Bugeja and Ibrahim's (2010) investigation of coronial inquiries into 330 fatal crashes in Victoria, Australia, between 2001 and 2007 found the coroners' recommendations centred on speed limits, signage, lighting, visibility and safety barriers or truck arrester beds on roads (Brodie *et al.* 2010: 139-140).

#### b) Personal/cultural factors

Research has also sought to understand whether specific personal characteristics of truck drivers may be a contributing factor in crashes (Mooren *et al.* 2014a: 80). For instance, Li and Itoh (2013) found that traffic infringement notices and emotional stability are correlated with crash risk. Cantor *et al.* (2010) identified correlations between risk of crash and body mass index, gender, employment stability and previous driver violations. Zhu and Srinivasan (2011) found that driver behaviour,

resulting from distractions or emotional factors, or alcohol consumption by other vehicle drivers are correlated with injury severity resulting from accidents.

Furthermore, employers and employees in the transport industry are more likely than those in other industries to perceive that workplace fatalities, injuries and illnesses are more likely to be caused by risk taking and unsafe work practices (Safe Work Australia 2015: viii). These perceptions were confirmed in our key stakeholder interviews, with claims that there is a common view among industry participants that many truck drivers are 'cowboys', with a low regard for personal safety. Figure 3.9 below provides a quote from one respondent expressing a common view:

“One of the reasons people drive a truck is for that feeling they are autonomous, having that self-employment and enjoying their work... Many drivers just want to break the law because they just like the speed. They like not wearing a seatbelt. They like the feel of a heavy load under them... ‘I don’t want to live by the rules’.”

**Figure 3.9: Interviewee (anonymous)**

### **c) Schedules and time pressure**

Scheduling is a significant factor contributing to driver fatigue and speeding, both of which impact on the safety of truck drivers and other road users (Braver *et al.* 1999: 194; Chen and Xie 2014; Edwards *et al.* 2014: 344; Quinlan and Wright 2008: 13; Safe Work Australia 2013: 5). Truck drivers are subjected to significant pressures to deliver loads on time in spite of numerous factors that are often outside their control, including management-imposed schedules, weather, traffic and road conditions, and delays loading or unloading freight (Kemp *et al.* 2013: 215). Because they may require a driver to rush when loading and unloading, and to speed when driving if they are to deliver on time, time pressured (i.e. tight) driver schedules are closely linked with unsafe driving and work practices (Williamson, Bohle, Quinlan and Kennedy 2009: 416).

Scheduling pressures for drivers are also compounded by supply chain delays (Kemp *et al.* 2013). When customers or suppliers fail to meet scheduled requirements to have freight ready to load or unload they add pressure to the driver, compromising driver safety. Williamson and Friswell's (2013: 32-33) study of 475 truck drivers found that drivers spent an average of two hours per trip waiting in queues. They also found that those who waited in queues were more likely to feel pressured to meet scheduled delivery times, to drive more than 72 hours per week, and to experience fatigue. Further, there are complex associations between how drivers are paid and the time pressures built into schedules (Williamson *et al.* 2009: 416). In particular, trip-based pay and lack of compensation for non-driving work, such as loading/unloading freight or maintaining the vehicle, have been associated with drivers experiencing greater scheduling time pressures (Arboleda *et al.* 2003; Williamson *et al.* 2009: 416). Thus customers have a significantly greater influence over truck drivers' safety than they do over workers' safety in most other industries (Edwards *et al.* 2014: 344).

These kinds of time pressures and factors outside a driver's control can result in prolonged stress, adverse to their health and wellbeing (Kemp *et al.* 2013: 215). As noted above, prescribed and non-prescribed drugs can be taken by drivers to sustain their efforts to meet demanding schedules (Mayhew and Quinlan 2006: 225).

Long driving hours and night-time driving are independent variables, both impacting driver fatigue (Braver *et al.* 1999: 194). Thus, schedules involving long driving hours or night-time driving both have the potential to compromise safe driving. However, evidence as to the safest scheduling arrangements is elusive. For instance, when US hours-of-service regulations increased allowable driving hours from 10 to 11 hours, a study by Hanowski, Hickman, Olson and Bocanegra (2009) revealed that there was no increased risk of drivers having a critical incident (crash) in the 11<sup>th</sup> hour compared with the 10<sup>th</sup> hour.

Although it is expected that scheduling (and taking) regular breaks is likely to reduce fatigue and improve driver safety, research has been inconclusive on the recommended scheduling of breaks. Chen and Xie (2014) analysed data from two US national load carriers in 2009 and 2010 and found that rest breaks significantly reduce the risk of truck crashes: during an 11-hour driving period, one rest break reduces drivers' crash odds by 68%, two breaks by 83%. However, the benefit of the third break was negligible, only reducing crash odds by a further 2% (85%). Williamson *et al.* (1996) observed 27 Australian professional truck drivers completing a 12-hour, 900 kilometre journey following one of three different driving practices: (1) a staged journey; (2) a one-way single trip following working hours regulations; and (3) a one-way flexible journey without requirement to comply with working hours regulations. The three different driving/rest stop practices had no effect on fatigue levels. Instead fatigue was determined by pre-trip fatigue levels. These discrepancies are likely to be explainable by the variations in maximum limits for hours of service driving in one shift for different jurisdictions, as well as different driving conditions (rural/long-distance or urban/short-haul/long days) or day/night driving schedules. For instance, Australia has considerably higher limits on hours-of-service than the US and this may explain some of the variation in results (Mooren *et al.* 2014b: 328).

The problem of long working hours has been increasing in the eastern states of Australia. In 1998, 19% of drivers reported working more than the maximum allowed 72 hours per week; in 2006, 23% of drivers reported exceeding the 72-hour limit; and in 2010, 29.4% reported exceeding the weekly limit (Williamson and Friswell 2013: 33). During this same period, most states in Australia have actually tightened the regulation of working hours, requiring drivers to have longer rests at night and shorter daily work hours, so it is troubling that working hours have continued to increase (Williamson and Friswell 2013: 33).

In most industrialised countries, hours-of-service regulations seek to address driver fatigue issues in the freight transport industry. First introduced in the United States in the 1930s, and in the European Union in 1985, a mutual regulation was introduced in most Australian states in 1998. No such regulations exist in Western Australia or Northern Territory. While Australian and US regulations on working hours aim to improve road safety, the EU regulations have the additional objective to improve health and working conditions for truck drivers and explicitly address the adverse impact of competition on truck drivers' health and safety (Jensen and Dahl 2009). Table 3.9 provides a summary of the differences in hours-of-service regulations between Australia, the EU and US.

**Table 3.9: Comparison of hours of service regulations**

	<b>Australia (excluding Western Australia and Northern Territory)</b>	<b>European Union</b>	<b>USA (excluding Alaska and Hawaii)</b>
<b>Last revision</b>	2014	2007	2011
<b>On-duty time (max hours)</b>			14
<b>Daily driving time (max hours)</b>	12 in a 24 hour period	9 hours (or 10 hours max 3 times weekly)	11
<b>Continuous driving time (max hours)</b>	5 <sup>1</sup> / <sub>4</sub> hours	4.5	
<b>Daily continuous rest (min hours)</b>	7	11 hours (or 9 hours max 3 times weekly)	10
<b>Regulated daily time (cycle in hours)</b>	24 Driving time defined in a 24 hour period	20.75 Min 18.75 Max 21.75	24 Including meals and fuel stops
<b>Day(s) off after days of driving (max days)</b>	6	6	7/8 then reaching 60/70 hours in 7/8 days
<b>Total driving time per period (max hours)</b>	72 in 7 days	56 weekly	60/70 in 7 or 8 days respectively

Source: Jensen and Dahl 2009: 365 and Heavy Vehicle National Law Act (2012) Qld, Heavy Vehicle Fatigue Management Regulation, Schedule 1.

Australia is unique in that higher than standard maximum driving hours are permitted if drivers have accreditation for fatigue management (see Heavy Vehicle Fatigue Management National Regulation Schedules 2, 4). The Basic Fatigue Management (BFM) and Advanced Fatigue Management (AFM) schemes require drivers to participate in a medical examination and complete a training course in fatigue management. It is notable that no hours-of-service regulations specify hours-of-sleep requirements before a shift commences, even though this has been found to be the most important factor affecting fatigue (Williamson *et al.* 1996; Crum and Morrow 2002; Jensen and Dahl 2009).

To monitor hours-of-service regulations, drivers are usually required to keep a logbook recording driving and rest hours. However, the accuracy of logbooks can be highly questionable when records are entered manually by drivers who have other incentives to exceed legal driving time limits (Braver *et al.* 1999: 194; Quinlan 2001: 22-23). Drivers can also perceive logbooks to be onerous and complex, an additional disincentive for accurate completion (Quinlan 2001: 240).

Research has demonstrated significant correlations between compliance with hours-of-service regulations and drivers having fewer accidents (e.g. Mejza *et al.* 2003: 17). Conversely, studies comparing compliant and non-compliant drivers have revealed that the 30% of drivers who are non-compliant are 30% more likely to be involved in an accident (Moses and Savage 1994). Together these suggest that if drivers comply with working hours limitations, safety will improve (Douglas and Swartz 2009: 280-281). Yet, research on compliance with hours-of-service limits have consistently demonstrated widespread driver non-adherence (Quinlan 2001: 22-23; Jensen and Dahl 2009: 364-365). A survey by Baas *et al.* (2000: 188) of 100 drivers in New Zealand revealed that 33% violate the 11 hours maximum driving in a 24-hour-period rule and 31% do not rest for nine hours minimum between driving shifts. A survey by Arnold *et al.* (1997) of 638 Australian truck drivers revealed that 38% were working more than 14 hours per 24-hour period. Mayhew and Quinlan (2006: 223) surveyed 300 drivers and also found that 47.5% of owner drivers worked more than the legal limit of 72 hours per week and 43.3% of drivers in small fleets exceeded the 72 hours per week limit,

whereas only 27% of drivers with large companies exceed weekly hours' limits. Violations of hours-of-service limits are closely linked with tight delivery schedules and penalties for late deliveries (Braver *et al.* 1999: 194).

Hours-of-service regulations have been criticised for their rigidity, which can impact drivers' autonomy (Jensen and Dahl 2009). This is more the case for simple hours-of-service regulations; although these are more easily understood and enforced, they can be less flexible and place emphasis on issues other than drivers' health and wellbeing. However, Australian hours-of-service regulations are significantly less rigid than those in the EU and US. Rigid hours-of-service regulations can be opposed for being overly focused on driver fatigue as the cause of crashes; it is unrealistic to expect drivers to comply with these regulations if other pressures and incentives are driving their behaviour (Kemp *et al.* 2013: 218).

Although some drivers appreciate having working hours' limitations and even electronic devices to monitor their driving time, others feel these mechanisms are cost prohibitive, an unreasonable imposition and infringement on their rights (Cantor *et al.* 2009; Kemp *et al.* 2013: 218). Some interviewed drivers argued that they understood their own circadian rhythms and did not appreciate an electronic device dictating their working methods (Kemp *et al.* 2013: 218). This lack of control can compromise a driver's physical and mental health as they feel added pressure from the restrictions (Jensen and Dahl 2009: 366).

#### **d) Safe design (of vehicles, site and work)**

##### **Vehicle design**

The design features of both prime movers and trailers can reduce injury, illness and fatality risk. For example, studies of vehicle design have sought to examine side-impact, crush testing and use of net and harness restraints in sleeper cabs (Friedman, Hutchinson, Minhora, Kumar and Strickland 2015); the association between truck length and crashes (Neeley and Richardson 2009) and the relationship between truck design features, such as trucks' front bumper height, offset and grille inclination on pelvic, thoracic and head injuries suffered by pedestrians (Chawla, Mohan, Sharma and Kajzer 2000).

B-double and B-triple articulated trucks have also been linked to the likelihood of trucks crashing (Stevenson *et al.* 2014: 600). Not only are articulated vehicles more difficult to handle, but crash risks increase when they contain no load for two main reasons: first, handling difficulties increase in trucks without loads and, second, drivers without loads who are paid on the basis of delivery only (i.e. not being paid to drive an empty truck) may drive at higher speeds, anxious to complete their trip or arrive to collect the next load (Stevenson *et al.* 2014). Weng and Meng (2011) identified factors including road alignment and vehicle age associated with increased driver casualty risk, while traffic control devices and restraint use are associated with reduced driver casualty risk.

Vehicle design also affects ergonomics for drivers, including seat design to reduce risk of back injuries, seatbelt design to reduce risk of neck and shoulder injuries, step design to minimise risk of slips and falls, and technology to assist in the covering of loads on trailers to minimise risk of injury (Robb and Mansfield 2007; Edwards *et al.* 2014: 348).

A range of technologies are also available to try and improve truck safety and lower crash risks. For example, cruise control and antilock braking systems have been shown to reduce crash risks (Stevenson *et al.* 2014: 600). Other devices include speed limiters, forward collision warning, collision mitigation technology, rearward video screens, lane departure warnings, roll and directional



stability sensors, driver alertness warnings, (Jones 2016; Saccomanno *et al.* 2009; Rakha *et al.* 2010; Edwards *et al.* 2014; Skydel 2014).

Notwithstanding the safety benefits, retrofitting devices can be costly and the use of speed limiting devices can be contentious and may be disabled or modified by drivers who wish to drive faster to meet delivery schedules (Quinlan 2001: 24). Reports suggest some technologies may compound the stress and pressure truck drivers experience because they allow clients, consignors or managers to monitor truck drivers' performance closely, tracking locations, distance travelled and time stopped in 'real time', and adjust payments accordingly (Lund and Wright 2004: 8). These devices are problematic where they do not address the underlying causes for drivers being delayed (Quinlan 2001).

### **Worksite layout and the design of work**

The design of work in the transport industry remains a significant issue. The importance of WHS considerations in site design and layout is underscored by the high rates of incidents involving workers being injured working on and around their trucks: being hit, trapped or crushed by falling or moving objects; being hit by, or hitting, a moving or stationary vehicle; or coming into contact with chemicals or electricity (Safe Work Australia 2015b). Considered attention to workplace layout can improve WHS controls by, for example, separating people from plant, and removing unnecessary work at heights.

The effective design of work requires consideration of the various immediate and workplace factors identified above. Of these, issues such as scheduling are particularly important because it is a driver of numerous risk factors including speed and fatigue. Pressure to work longer than the maximum legal hours-of-service has been found to accumulate at each stage of the supply chain and US research found that trucking companies accept contracts without considering if there is an available driver who can work within hours-of-service limits. In turn, dispatchers feel pressure to deliver what has been promised to the customer, so they then pressure drivers to work the added hours. Furthermore, dispatchers have power to punish drivers who refuse additional hours outside legal limits by not giving them work they want in the future (Arnold and Hartley 2001: 4-5).

Braver *et al.* (1999) found that, when determining whether to accept a load, dispatchers commonly perceive revenue (75%) as more important than delivery deadlines (25%) and hours-of-service status of the nearest driver (9%). Arnold and Hartley (2001: 14) had similar findings in their survey of management representatives from 84 trucking companies in Western Australia. Two thirds of dispatchers in Braver *et al.*'s study used rule-of-thumb average speed calculations to determine schedules, and 14% of these exceeded 60 miles per hour average speed, meaning that drivers would be likely to violate hours-of-service standards (Braver *et al.* 1999). Similarly, Baas and Taramoeroa (2008) noted that a significant proportion of sampled drivers reported speeding on more than half their trips, yet only half the companies involved had policies that prohibited speeding. Scheduling can also introduce risk unnecessarily. For example, evidence indicates that driving continuously for three hours between the hours of midnight and 5.59am has the equivalent effect on performance as a blood alcohol concentration of 0.08 (Stevenson *et al.* 2014: 598-599).

Importantly, while driver schedules have been criticised for the effect of perceived rigidity, time pressure and lack of control on drivers' autonomy (Jensen and Dahl 2009), driver scheduling autonomy, when it results in more flexibility, can also have detrimental effects on safety outcomes. Flexible working hours can be hazardous, particularly if the payment structure provides incentives

for drivers to exercise that autonomy to drive longer hours (Arboleda *et al.* 2003: 195). Furthermore, while drivers usually have varied routes and irregular schedules (Chen and Xie 2014: 57), research shows they tend to experience less fatigue and are safer when they have regular working schedules, driving the same routes for the same hours each week (Arboleda *et al.* 2003: 195; Chen and Xie 2014: 57).

Overall, research has found that it is not only employees, but also many employers who recognise that 'conditions at the workplace stop workers from following the [safety] rules' (32% of employer respondents in the transport industry compared to 17% in other industries) (Safe Work Australia, 2015). Curiously, many employers acknowledged that they are responsible for this non-compliance. For instance, greater proportions of employers in the transport industry (*vis a vis* all other industries) agree that drivers *need* to disregard safety rules to complete work on time; that dangerous behaviour is acceptable as long as there are no accidents; and minor incidents are to be expected as part of a normal days work (Safe Work Australia 2015: vii). Crucially, the research suggests that transport industry employers are more accepting of risk taking, rule breaking and minor incidents than employers in other industries. In particular, one in five employers:

- agreed they consider *minor incidents* a normal part of daily work, compared with 10% or less in other industries
- agreed they *accept dangerous behaviour* as long as there are no accidents, compared to less than 2% of employers in other industries
- agreed they *break safety rules* to complete work on time, compared with about 6% in other industries. (Safe Work Australia, 2015, viii).

Studies also identify employee participation and input into safe work practices as an important contributor to a culture of safety within an organisation (e.g. Arboleda *et al.* 2003; Mooren *et al.* 2014b). Arboleda *et al.* (2003) found that driver involvement in determining and implementing safety policies and practices at work can reduce the frequency and severity of injuries. Safe Work Australia (2015) research, however, has found that workers view WHS consultation processes in the industry as less effective than management do.

#### **e) Vehicle maintenance**

An association between mechanical failures and increased likelihood of heavy vehicle crashes was outlined in section 3.3.1 above (e.g. Edwards *et al.* 2014). Although many mechanical failures would be difficult to detect in advance, a number of studies, have demonstrated links between vehicle maintenance and truck crashes (Barengo, Mkamba, Mshana, and Miettola 2006; McLean, Offler and Sandow 1979; and Treat, Tumbasm, McDonald, Shinar and Hume 1977). While maintenance and inspections cannot prevent all mechanical failures, these findings underscore the need for adequate attention to daily vehicle inspections and routine preventative maintenance.

Evidence shows that attention to maintenance varies across truck operators, with cost pressures a cited reason for deferring or failing to adequately maintain vehicles. Where there is a scarcity of loads for the return leg of a trip (the 'backload'), for example, competitive pressures may see drivers accept heavily discounted rates, or no payment, for freight on the backload journey. Quinlan and Wright (2008: 29) report that, as a consequence of accepting very low rates for return trips, many drivers reduce their costs by spending less on tyres or vehicle maintenance.

## **f) Traffic control**

Safe Work Australia data cites the incidence of bystanders (including other road users) and other workers injured or killed in accidents with heavy vehicles. As noted in e above, the effective control of traffic and separation of people from vehicles and machinery is critical to ensure safety. Applying hierarchy-of-control principles to this problem results in a range of options including the use of restricted (un)loading facilities, designated pedestrian zones or walkways, support personnel (e.g. traffic controllers and 'spotters'), targeted safety barriers, and guarding and safety training for personnel working in and around heavy vehicles.

### **3.3.3. Governance factors**

The preceding sections have identified clearly the chain of relationships that exist between WHS outcomes and immediate triggers, such as speed and fatigue, and the impact brought to bear on those triggers by factors by such as driving hours, schedule flexibility, vehicle condition and safe design of work and assets. This section examines the capacity for management to influence those workplace factors and outlines how corporate policies, practices and resourcing decisions shape the determinants of safe and healthy work for heavy vehicle drivers.

#### **a) Remuneration and payment arrangements**

In 2002, Belzer *et al.* reported that 'higher pay produces superior safety performance for firms and for drivers... truck driver pay is an extremely strong predictor of driver safety' (2002:14). Over recent decades, however, the structure of remuneration for truck drivers has been rationalised as a result of increasing competition, the proliferation of just-in-time deliveries and outsourcing of truck driving services (Quinlan 2001; Mayhew and Quinlan 2006: 214). This rationalisation has taken a variety of forms. Rather than receiving weekly or even hourly wages, with paid rest breaks and overtime allowances, increasingly drivers are being paid on the basis of distances travelled or loads delivered and payments for non-driving activities based on rates calculated through time and motion studies (Lund and Wright 2004: 2, 7; Mayhew and Quinlan 2006: 214).

When Williamson *et al.* (2000) surveyed 1007 long-haul truck drivers in 1999, they found that the majority of drivers were paid per kilometre travelled or weight or volume of freight delivered (68.3%), while 14% were paid a flat rate for each load delivery. Some of these drivers were negotiating rates for each load carried (17%). At least 17% of these drivers were aware they were being paid less than award wages (Quinlan and Wright 2008: 13-14). Furthermore, technological advances in monitoring driver 'performance' are enabling the penalisation of drivers for failing to meet delivery schedules (Quinlan and Wright 2008: 12,15). This rationalisation of payments, along with outsourcing of drivers, has been particularly pervasive in supermarket grocery distribution chains in both the US and Australia, where large supermarket chains at the top of the supply chain have extraordinary bargaining power (Lund and Wright 2004: 7; Mayhew and Quinlan 2006: 213-214; Rawling and Kaine 2012).

As payment systems and employment arrangements are related, there is also a clear link between truck drivers' health and safety and whether they work as permanent full-time employees, part-time, casual, or dependent contractors or owner drivers (Edwards *et al.* 2014: 344). Williamson *et al.* (2009) survey of 217 short-haul truck drivers revealed that owner drivers were more likely than permanent or casual employees to drive longer distances, work longer hours and be paid on a per

delivery basis. Mayhew and Quinlan (2006: 225) interviews with 300 long-haul drivers also found that owner drivers were more likely to have exceeded working-hours limits and been involved in a crash. As well, Mayhew and Quinlan discovered that owner drivers experienced more occupational violence and stress. However, owner drivers were less likely to take time off work or seek medical treatment for injuries and made fewer workers' compensation claims than permanent employees.

Tendering practices are particularly problematic. Elaborate networks of subcontractors are employed to meet low cost demands of customers with strong bargaining power at the top of the supply chain (Rawling and Kaine 2012: 246). Yet each party in the subcontracting network takes a portion of the freight delivery payment, lowering the final payment made to the truck driver (Quinlan 2001: 122). The result is unstable and minimal freight rates for those truck drivers in poor bargaining positions due to the intense industry competition (Rawling and Kaine 2012: 246). Evidence suggests the associations between drivers receiving lower or less secure incomes and reduced safety (excess hours, speed, etc) hold true for both employee drivers and owner drivers; if they have reasonable contract or employment conditions and can reliably secure loads they are less likely to engage in unsafe work practices to secure their income (Quinlan and Wright 2008; Monaco and Williams 2000; Quinlan and Wright 2008; Rawling and Kaine 2012: 243-244; Mooren *et al.* 2014b: 336).

Drivers who are paid per voyage or load delivered and given incentives to meet delivery time targets typically have less bargaining power when negotiating with consignors or contractors (Monaco and Williams 2000) and are more likely to work longer hours, travel longer distances, have less rest and experience higher levels of fatigue (Williamson and Friswell 2013). For these workers, a variety of non-driving activities increasingly are not being compensated (Lund and Wright 2004: 4). These activities include loading and unloading, queuing to load and unload, attaching or detaching trailers, completing paperwork, maintaining the truck, rearranging or organising the truck for deliveries, and other non-driving activities. The need to recover lost (non-income producing) hours creates pressure to work additional hours per shift and incentivises drivers to breach maximum legal hours regulations (Belzer 2000). Williamson and Friswell (2013) revealed those drivers not paid for waiting time were the most likely to be waiting in queues and that those receiving performance-based pay were working an average of 8 hours per week more than those paid on the basis of time worked. Further, performance based pay results in lower incomes, which affects drivers' overall health and wellbeing (EU Director General for Research, Division for Agriculture, Regional Policy, Transport and Development 2001, p. 3, in Mayhew and Quinlan 2006: 214).

Together, this body of evidence points to a direct link between performance-based payment systems and fatigue, and compelling evidence that payment structures contribute heavily to excess driving hours, speeding, dangerous driving practices, drug use and other traffic infringements (Quinlan and Wright 2008; Quinlan 2001: 145; Williamson *et al.* 2000; Feyer *et al.* 2001; Mayhew and Quinlan 2006: 217; Mooren *et al.* 2014b: 336). Indeed, Williamson and Friswell (2013: 32-33) identified the two most significant predictors of fatigue experienced by truck drivers as being paid per trip and not being paid for non-driving hours. Drivers who are paid per trip are more than twice as likely to experience fatigue as drivers paid hourly or weekly rates (Quinlan and Wright 2008; Williamson and Friswell 2013: 32-33).

## **b) Financial constraints**

Management are responsible for the design and implementation of organisational strategy and policies, for setting performance targets and allocating financial and human resources. They therefore control the practical mechanisms that shape the organisation's WHS culture and outcomes. Consciously or unconsciously, management influence WHS through the impact of their decisions on: WHS policy and practice, and on the work environment more generally. Their choices in the design, alignment and implementation of financial and management control systems, contributes significantly to workers' experience of WHS. This is because "competing controls and incentives can operate to radically undermine, rather than strengthen, the organisation's best WHS efforts" (O'Neill and Wolfe, 2015: 5). This is most apparent where WHS efforts target policies and practices governing frontline employees, while the corporate and organisational policies, practices and incentives subject those same employees to hazardous work conditions or pressures (O'Neill and Wolfe, 2015).

In particular, financial considerations place important constraints on safe work in a number of ways. Tight financial resources limit the potential for management to invest in newer and safer vehicles, machinery and training; to attract more experienced and high-performing staff and remunerate staff well; to retain sufficient capacity (e.g. in terms of both drivers and vehicles) to manage unexpected breakdowns and staff shortages; and to reject those customers whose demands are inconsistent with safe work. Conversely, well-resourced companies also have the capacity to operate newer and well-maintained vehicles and attract and retain high-quality workers. To that end, evidence suggests larger companies have access to economies of scale and therefore access to greater resources, and that larger companies have better safety outcomes (Moses and Savage 1994; Monaco and Williams 2000). Confirming the potential for these businesses to manage their operations 'safely', Monaco and Williams (2000) found that the truck drivers who were least likely to be involved in accidents, issued infringement notices for traffic violations, or under-report hours in their log books were those who worked for larger companies, had more sleep, drove fewer miles, and were paid higher rates.

Mooren *et al.* (2014b) found that trucking companies with lower insurance claims were those which invest in WHS by conducting proactive risk assessments, consulting drivers about safety issues and pay drivers for hours worked. Nevertheless, management commitment to safety is often impeded by fatalistic views and perceptions that investments in WHS are inefficient and/or unnecessary. For example, in their study of 106 transport company managers, Nja and Fjelltun (2010: 1079) found that 50% of managers perceive investment in health, safety and the environment to be too expensive, 33% believe that measures above existing procedures would be unnecessary and 25% perceive that mandatory measures compromise competitiveness (25%). Educating owner drivers and other decision makers is particularly important in such circumstances as stakeholders often make decisions which could trade off safety for price (Quinlan 2001).

In this hyper-competitive market, minimum freight rates are being driven down to a point where small operators and owner drivers accept unrealistically low rates to win work (Quinlan 2001). Quoting from a government inquiry on trucking safety, Quinlan (2001: 126) noted that an operations manager of a large road transport firm argued that subcontractors were cheaper,

*"because they don't value their labour... he might pay himself a wage but that wage won't be anywhere near what an employee driver would get... Generally, the*

*interstate subcontractors won't value the part of their wage that's tacked on at the beginning or start of their trip".*

Such views neglect the fact that inadequate remuneration of subcontracted labour is often the result of bargaining power disparities (Quinlan and Wright 2008: 8; Rawling and Kaine 2012). The result is subcontractors' rates that often fail to cover their capital, maintenance or labour because they do not cover costs for queuing to (un)load, backloads, local deliveries and working extended hours.

### **c) Customer and supplier selection**

The recent attention to chain of responsibility (CoR) recognises the ability of stakeholders along the supply chain to influence WHS outcomes for workers. Consequently, obligations are reflected in both WHS and NHVR regulation. Importantly, customers have significant control over setting pickup/delivery deadlines, price paid and the type and packaging of freight collected.

The level of control over safe work practices is also more challenging as work extends across the supply chain. In their review of safety audits for 75,577 trucking companies, between 1986 and 1991, Moses and Savage (1994) also found that companies transporting their own goods were 20% less likely to have an accident than for-hire companies (although they were 22% more likely to be involved in an accident if they were transporting hazardous materials).

### **d) Management commitment and safety leadership**

Management commitment is a crucial driver of WHS outcomes. For example, a review of existing research by Mooren *et al.* (2014a: 86) identified scheduling of journeys, safety training and management commitment as statistically significant predictors of safety outcomes. Similarly, Zohar *et al.*'s (2014) survey of 3,578 truck drivers, accompanied by in-vehicle monitoring of near-miss events (GPS-based truck deceleration data to detect hard-braking events) found that the style of leadership from dispatchers correlated closely with the likelihood of near-miss events. This is a significant finding given that truck drivers work remotely. Zohar *et al.* (2014: 22) showed that despite the distance, managers still have a meaningful leadership role and influence over their drivers' safety behaviours. Management commitment to investigating accidents and implementing relevant programs, such as training, as a result of what was learnt from investigations has also been shown to improve company safety (Moses and Savage 1994).

Management commitment, attitudes and practices are central to the quality of safety culture in an organisation (Mooren *et al.* 2014a: 83) and there is a well-established correlation between the safety culture of an organisation and the frequency and severity of work-related accidents (Arboleda *et al.*, 2003: 189; Zohar *et al.* 2014). Although the definition and conceptualisation of safety culture, as distinct from organisational culture, remains somewhat contested, Zhang *et al.* (2002: 4), describes safety culture in terms of:

The enduring value and priority placed on worker and public safety by everyone in every group at every level of an organization. It refers to the extent to which individuals and groups will commit to personal responsibility for safety; act to preserve, enhance and communicate safety concerns; strive to actively learn, adapt and modify (both individual and organisational) behaviour based on lessons learned from mistakes; and be rewarded in a manner consistent with these values.

The UK Health and Safety Executive, for instance, suggest that the largest influences on an organisation's safety culture are:

- management commitment and style
- employee involvement
- training and competence
- communication
- compliance with procedures, and
- organisational learning (Health and Safety Executive 2011).

Meanwhile, Shaw *et al.* (2008) argue that, in Australia's mining industry, the cultural dimensions most closely associated with good WHS management, include:

- mindfulness
- workgroup cohesion
- trust in management
- organisational justice
- supervisor support, and
- role clarity.

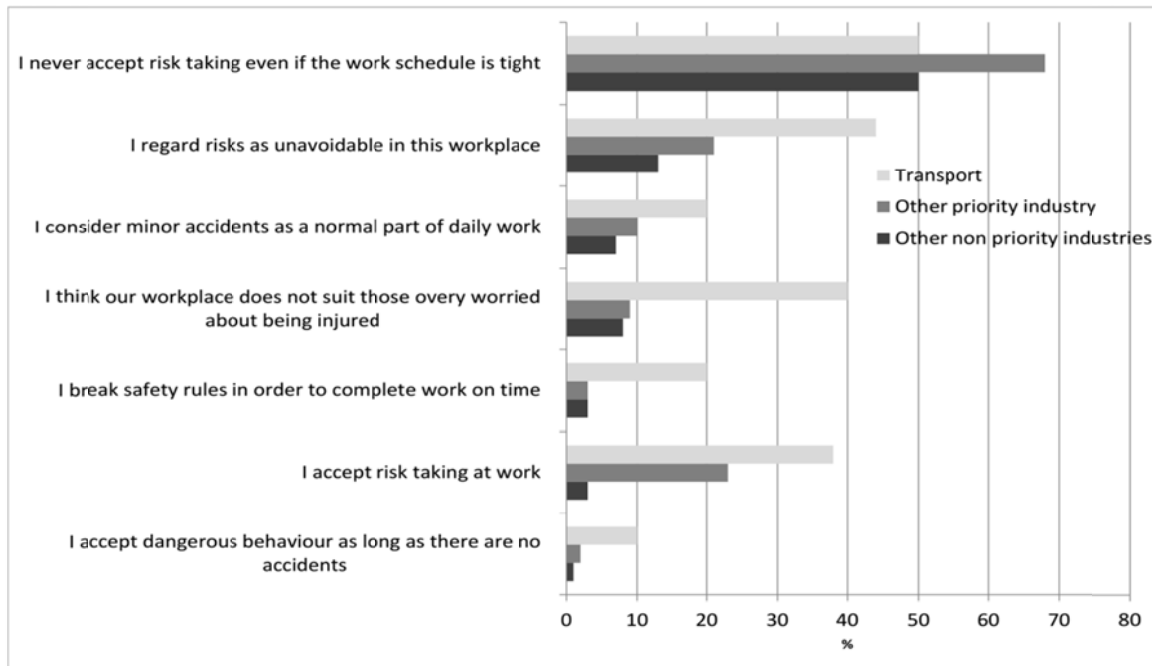
Notably, leaders not only create or change culture directly, they influence (safety) culture indirectly by shaping individual perceptions of safety (i.e. by changing the safety climate). Schein (1992) observes that leaders influence by,

... what they systematically pay attention to. This can mean anything from what they notice and comment on to what they measure, control, reward and in other ways systematically deal with.

Company policies and practices, therefore, have an important impact on whether drivers work when fatigued, report being fatigued and exceed maximum driving hours (Mejza *et al.* 2003: 17; Arnold and Hartley 2001). Arboleda *et al.* (2003) found that drivers, dispatchers and safety directors consider that three factors - driver fatigue training, driver opportunity for safety input and top management commitment to safety – are the most important aspects of safety culture. Critically, studies have identified common preconceptions among both drivers and managers that while other drivers are unsafe, and other companies exceed safe driving hours, the respondents themselves were safe (Arnold *et al.* 1997; Baas *et al.* 2000: 188). These types of attitudes can contribute to management placing significant pressures on truck drivers, which have been found to result in unsafe behaviours, such as excessive hours of driving and fatigue, drug usage, sleep disorders and stress (Crum and Morrow 2002; Edwards *et al.* 2014: 344; Mooren *et al.* 2014b).

These outcomes can be exacerbated where there is a management culture of accepting risk taking and 'safety rule' breaking. Safe Work Australia (2015: viii) research indicates, for instance, that 40% of employers agreed that their workplace does not suit those overly concerned about being injured (compared to 20% of employees and 9% of other priority industries). Further, compared with employers from other industries, transport industry employers were twice as likely to regard risks as unavoidable, with 44% regarding risks as unavoidable and one in five employers considering minor accidents a normal part of daily work. Subsequently, 50% would accept risk taking where the work schedule is tight, almost 40% accept risk taking behaviour at work and 10% of transport employers reported to agree that they 'accept dangerous behaviour as long as there are no accidents' (Safe Work Australia 2013b, see also Figure 3.10).

**Figure 3.10: Agreement with risk taking statements by transport industry (employers)**



(Source: Safe Work Australia 2015b, p6)

Exploring further these employer perceptions of risk taking and acceptance, Safe Work Australia (2015) found over 30% of transport industry employers acknowledge that conditions at the workplace stop workers following safety rules and the same proportion accept that workers ignore safety rules to get the job done. Importantly, as Figure 3.11 shows, almost one in four employers (25%) agreed that ‘workers break rules due to management pressure’ (Safe Work Australia 2015b, p8).

**Figure 3.11: Agreement with rule breaking statements by transport industry employers**



(Source: Safe Work Australia 2015b, p8)



Together these findings draw attention to another impediment to a strong safety culture, that is a culture of 'paper compliance' where the rhetoric and appearance of compliance with safety standards is not matched by practices adopted (Quinlan, Bohle and Lamm 2010). Indeed, Mooren *et al.* (2014b: 335) found in their study of 50 companies, that those with accreditation membership and policies were no less likely to place insurance claims but rather had higher rates of insurance claims for safety matters than non-accredited companies. More research is needed to understand safety culture in the workplace and how management influence safety in the trucking industry (Edwards *et al.* 2014: 341). In particular, more research is needed to understand the complex range of interlocking factors that make up the safety culture, and how they interact to influence safety outcomes (Mooren *et al.* 2014a: 80; Newnam and Goode 2015).

### 3.4. Summary

Truck safety has historically been regulated predominantly through road transport and associated dangerous goods and environmental regulations, rather than through WHS regulations (Mayhew and Quinlan 2006: 216). Policymakers commonly have adopted a reductionist approach when identifying causes of truck crashes, focusing on immediate mechanisms of injury only and targeting preventative strategies at drivers (Newnam and Goode 2015: 141). Many scholarly articles also take this reductionist approach, seeking to identify singular, driver-centred causes of crashes, such as speeding, age, experience, traffic infringements or drug use (Cantor, Corsi, Grimm and Ozpolat 2010; Zhu and Srinivasan 2011; Li and Itoh 2013) and failing to recognise the higher order factors that underlie and in many cases motivate these behaviours.

The result implies that drivers are to 'blame' for truck crashes and ignores the complex system of essential and contributory factors<sup>4</sup> that contribute to accident causation (Mooren *et al.* 2014a; Newnam and Goode 2015; O'Neill and Wolfe 2015). For instance:

a crash caused by fatigue might not only reflect the individual driver's disregard of fatigue management policies and procedures (e.g., inadequate rest breaks), but also the supervisor's lack of involvement in journey management (i.e., lack of involvement/approval of trip plan), or the type of compensation method used by the organization to align performance objectives (i.e., deliveries made, tonnage hauled, or km driven) to driver payments. Moreover, the supervisor may be restricted in their level of involvement through their own workload, company policies, and pressures from higher up in the organization and so on. Finally, the company themselves will be influenced by financial and production pressures along with regulatory frameworks. In this sense, the road freight transportation system is representative of a complex sociotechnical system (Newnam and Goode 2015: 141-142).

Recognising and understanding the complexity of factors implicit in work-related injury and illness in the road transport sector – illustrated in Figure 3.7 – provides greater insight into injury causation, both within organisations and across the supply chain. More importantly, it facilitates the identification and elimination of perverse incentives and, critically, also presents numerous opportunities for injury prevention through early-intervention. Consistent with the due diligence obligations that now exist under WHS legislation, this includes identifying and eliminating those governance-level decisions and workplace-level activities that increase WHS risk at the 'coal face'. The next section examines the regulation of WHS in more detail.

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<sup>4</sup> See G McDonald 1985 for a discussion on 'essential and contributory factors'.

## 4. REGULATION

The object of this report is to examine the impact of a range of WHS mechanisms either operating in or considered for the heavy vehicle road transport industry in Australia. The WHS mechanisms on which this report focuses are all forms of regulation. Compliance with safety regulations is important for truck drivers' safety: researchers have found correlations between road transport companies that adhere to safety regulations for drivers and higher levels of safety performance (Douglas and Swartz 2009: 278). However, in Australia, there has been little empirical research on the complex mix of WHS regulatory instruments in this industry and the impact of these different modes of regulation on truck driver safety, both individually and in combination. As a prelude to analysing the specific forms of regulation – or pillars – in Figure 1.1, this section discusses key concepts concerning forms, strategies and tools of regulation. We begin by defining what we mean by regulation, and then consider in turn, the choices of regulator, forms of regulation, strategies and enforcement tools. In discussing each aspect of regulation, we include a table which indicates the particular presentation of each of the pillars to enable comparison.

### 4.1. What does regulation mean?

The meaning of the term 'regulation' is strongly contested. For many commentators, regulation is state-based and only includes legal instruments or rules. A broader definition is that regulation refers to all forms of social or economic influence, whether deliberate and designed or incidental. (Baldwin *et al.* 2012:3) Other scholars define regulation more by reference to the regulatory outcome than the means used. Thus, Black (2002:1) maintains that regulation is:

'The sustained and focused attempt to alter the behaviour of others according to defined standards or purposes with the intention of producing a broadly identified outcome or outcomes.'

Koop and Lodge (2015: 11) report that there is a shared conception that 'regulation is about intentional intervention in the activities of a target population'. However, while for Koop and Lodge regulation is something exercised only by public sector actors, many experts would argue for an approach that decentres the state. This approach stems from the concept of 'regulatory space'. As Shearing explains:

'One way of thinking about this is to imagine regulation as taking place in a space in which different regulatory schemes operate simultaneously. The occupants of this space may change but it is never empty. If one set of regulatory influences diminishes this simply changes the relationship between occupants of this space... regulatory space is a terrain in which the state must compete for control of regulation with other regulatory entities' (Shearing 1993: 72-73).

This suggests that regulatory space includes:

'alternative ways to shape regulatory regimes with the potential to affect outcomes directly ... through the use of other mechanisms which regulate without the classic public institutional focus.' (Scott 2001: 347)

In discussing the decentring of regulation, Black (2001:112) observed that 'decentred regulation involves a shift... in the locus of activity of regulating from the state to other, multiple, locations and

the adoption on the part of the state of particular strategies of regulation'. Freiberg (2010: 4-5) argues that the benefits of a broader approach, as reflected in Black's definition, are that:

- regulation is something intentional, purposive and instrumental
- it recognises that government regulation is only one element of power or social control in a society
- it is not limited to laws or rules; and regulation is not just restrictive or coercive, but may also be constitutive, facilitative and enabling.

Further, this approach suggests that, rather than considering that one set of solutions will fit all problems, policymakers should think in terms of a multi-faceted instrument mix (Black 2001: 113). However, as Gunningham and Sinclair (1998: 3) caution, a 'kitchen sink' approach of throwing in every possible policy combination should be avoided because not only does regulatory overload inhibit compliance overall, but combinations can be 'counterproductive, duplicative and sub-optimal'.

In this Report, we adopt the broader conceptual approach to regulation. As Freiberg noted (2010: 18), while all governments regulate they are not the only source of regulation and are, indeed, the subject of regulation themselves. Other organisations that exercise regulatory power include, for instance, firms, non-government bodies, business and professional associations, trade unions, and standard-setting bodies.

The broadening of conceptual approaches to regulation was coterminous with the political shift towards neo-liberalism and its emphasis on business flexibility and what proponents labelled 'deregulation'. However, in the WHS sphere, in a practical sense, the shift occurred earlier, as part of the wave of reform in the United Kingdom, Canada, Australia and other countries, which followed the UK Robens Report in 1972. The Robens Report recommended a shift from highly prescriptive statutory regulation to the provision of a principle and performance-oriented legislative framework which placed responsibility and specific duties on employers and other parties to make workplaces safe. Today, in Australia, there are many layers and configurations of regulation operating in the WHS space, focused on different sites – the worker, the employer, the supply chain and other participants – with different sources of authority, and with the balance between legal and non-legal, state and non-state changing over time. Increasingly, stakeholders have recognised that, to achieve desired WHS outcomes, traditional law is only one regulatory tool, and regulators need to utilise an array of different tools to change attitudes and behaviour, foster compliance and deter non-compliance with norms, rules and statute (Ayres and Braithwaite 1992; Arup, Gahan, Howe, Johnstone, Mitchell and O'Donnell 2006; Hart 2010).

## **4.2. Choice of regulator**

While various typologies exist, there is wide scholarly agreement that, essentially, there are four choices in relation to *who* regulates.

- Self-regulation
- Co-regulation
- Meta-regulation
- Direct government regulation (Freiberg 2010: 22)

### **4.2.1. Self-regulation**

Pure self-regulation is voluntary, where a firm or an industry makes and enforces rules with no direct government involvement (Gunningham 2011a: 7). Forms of self-regulation include *formal* regulatory arrangements within an organisation, professional or occupational group or industry through voluntary codes of practice, certificates, registration, or standards. This allows businesses the scope to control their own behaviour without the government interference, which, some argue, can lead to inefficiencies. Freiberg (2010) notes, however, that in modern societies, institutional arrangements created voluntarily by industries and other bodies usually have some relations with government.

According to Hart (2010: 585), the business case for self-regulation is strong. With self-regulation, parties may be better situated to recognise problems and solutions in their industry, and can act without the political and process constraints of government. This may engender higher compliance. As well, corporate codes of conduct, for instance, may engender more ethical or moral cultures within an industry or profession and a closer responsiveness to social and community concerns. The costs and regulatory burdens for participants may also be lower, although the industry body might acquire administrative, auditing and other costs otherwise borne by governments (Freiberg 2010: 29-30).

However, researchers have also criticised self-regulation for not protecting workers' rights, including their health and safety, effectively or reliably (Hart 2010: 585; Johnson 2012). Hart (2010: 586, 596) observes, for instance, that companies are likely to perform within a narrow range around regulatory norms, instrumentally limiting policy initiatives to tackle only short term and easily measured objectives. Further, organisational codes of conduct, for example, might establish norms of responsibility but change practices very little because of insufficient accountability and enforcement (Hyde 2012: 97).

The uptake of self-regulatory mechanisms and their effectiveness can depend on a firm's size and reputational risks. In their study of environmental regulations in the trucking industry, Thornton, Kagan and Gunningham (2009: 408-410) found that large trucking companies with recognisable names and reputations to protect are more likely to establish policies and procedures to comply with or even exceed regulations or government guidelines. In contrast, small operations or owner drivers who are less visible and have fewer resources are less likely to respond to social and normative pressures to improve safety standards.

### **4.2.2. Co-regulation**

Co-regulation occurs when government interventions are combined with self-regulation by the firm or industry. Typically these are blended forms of regulation whereby an industry or professional body develops regulatory arrangements in consultation with government and then administers them through the industry or profession in the shadow of enforceable statutory rules and sanctions (Gunningham 2011a: 7; Saurwein 2011: 351). However, co-regulation also includes less direct forms of government oversight such as accreditation and rating schemes whereby an organisation which establishes self-regulatory programs may be allowed to use an official sign as a marketing and publicity device, with the possibility that endorsement will be withdrawn if the quality of self-regulation declines. Another example of co-regulation is where government prescribes broad duties,

such as the duty to provide safe work, and leaves to industry and/or individual organisations, the autonomy and responsibility to design how to achieve the requirements (Gunningham 2011a: 16).

The advantages of co-regulation are that, unlike traditional government interventions, these arrangements use the expertise of the industry and its professional associations, empowering parties to participate. Compliance is also likely to be stronger when regulated parties are engaged and committed. Co-regulation may also cost less and impose lower regulatory burdens on parties than government-imposed regulation. However, co-regulation can encourage anti-competitive behaviour within an industry. Another disadvantage is regulatory capture; regulated parties have so much input that their interests can override public interests (Freiberg 2010: 33).

### **4.2.3. Meta-regulation**

Meta-regulation can also be described as supervised self-regulation or mandated risk management (Freiberg 2010: 33). This places the onus of responsibility on organisations to propose and implement their own systems of regulation for the government regulator to approve. The role of the government regulator is to oversee the management of risk for firms (Gunningham 2011b: 217). The public-sector audit is an example of widely-used meta-regulation (Scott, 2003). A related example is where legislation or mandatory codes of practice require organisations to identify risks and choose and implement appropriate controls. This requires organisations to establish internal management systems, with appropriate norms, cultures and practices, and to monitor and report on performance to a third party.

An oft-cited illustration is the development of meta-regulation following the North Sea Piper Alpha disaster of 1998. This involved successful implementation of the 'safety case' approach to underpin safety management systems; this is now widespread practice (Gunningham 2011b: 213). In Australia, WHS laws operate partly as a form of meta-regulation: the government prescribes that employers put safety management systems in place, and inspectors can then monitor and scrutinise these systems to ensure compliance with regulatory objectives (Gunningham 2011b: 10). Collective agreement-making, which occurs under industrial law, is another form whereby employers and employees negotiate conditions subject to statutory minima and procedural requirements.

Meta-regulation minimises the hands-on regulatory role of government, which operates at a distance, with organisations required to report to an external (state) agency on their regulatory and compliance activities (Frazer 2006: 239-40). The advantage of this approach is that regulation is not limited to prescriptive rules made by regulators; instead regulations are more responsive to specific organisational circumstances, and organisations are encouraged to self-assess effectiveness (Gunningham 2011b: 212). This form of regulation can have serious limitations notwithstanding that safety plans can be developed and approved, and audits can even show they are correctly implemented, unless they are effectively adopted in practice across the entire company.

Indeed, assessments of the effectiveness of meta-regulation can only usually be conducted on the records kept, so evaluation of actual effectiveness can be problematic (Freiberg 2010: 37). Effectiveness is also related to enforcement. In the case of collective bargaining, enforcement occurs through industrial action and industrial tribunal processes and sanctions which rely largely on a party launching an inquiry through the Fair Work Ombudsman or dispute proceedings in the Fair Work Commission.

#### 4.2.4. State regulation

Traditional approaches to regulation centred on state-based actions to ‘command and control’ through centralised, prescriptive rules supported by penalties and other sanctions (Weber 1968). Regulation revolved around a set of binding rules, monitored and enforced by a state agency or inspectorate. By the 1980s, there was ‘increasing disenchantment with the goals, structures, and performance of the regulatory state’ (Teubner 1983: 239).

When used in isolation, ‘command and control’ is susceptible to avoidance, leading to unintended consequences or even regulatory failure (Ayres and Braithwaite 1992: 47-51). Increasingly, though, direct government regulation is being developed in consultation with affected parties, to reduce risks of avoidance or regulatory failure. Meanwhile other, less prescriptive, forms of government regulation have also emerged. Importantly, a feature of direct government regulation has always been, and remains, that rather than relying entirely on voluntary compliance, regulations are enforceable (Ayres and Braithwaite 1992).

Applying the above discussion, Table 4.1 maps the regulatory systems which are the focus of this report against the choice of regulator. In this table, as in the mapping tables which follow, to facilitate comparison, we have separated into two panels those interventions that are based in statute from those which are not (including codes of conduct, Bluecard, SAFED and the five star trucking rating system. This table makes apparent that there is often more than one regulator, the one mechanism having multiple sources of authority.

**Table 4.1: Mapping choice of regulator by mechanism in Australian heavy vehicle truck industry**

	SELF-REGULATION	CO-REGULATION	META-REGULATION	STATE REGULATION
<b>Not based in statute</b>	Organisational Codes of Conduct Bluecard Retail logistics Supply chain of practice Trucksafe	SAFED 5-STAR		
<b>Based in statute</b>		HVNL Accreditation System. WHS Act	WHS Act HVNL RSRT FWA (collective agreements have elements of meta- regulation)	RSRT FWA HVNL WHS Act

#### 4.3. Forms of regulation

Regulations vary not only in their source, but also in the way they are expressed. According to Freiberg (2010: 88), there are three main forms of regulation: prescriptive, principle or standard-based, and performance-based regulation. These forms of regulation are often used in conjunction with each other.

- **Prescriptive regulation** takes the form of a rule or statement that specifies in reasonably precise words the requirements of regulated parties. Examples include restrictions on dimensions, mass and weight of trucks, and maximum working hours for fatigue

management. The advantages of such prescriptions are their certainty and clarity but critics point out they may also be inflexible, carry high compliance costs, date easily and target only participants at the lower end of the supply chain.

- **Performance-based regulation** specifies the desired outcomes or objectives, but not how they must be achieved. Performance standards can be quantitative or qualitative and operate at a variety of levels, but must be capable of measurement and monitoring. Critics argue that because performance-based regulation can be difficult to assess, uncertainty about whether requirements are being met, and enforcement difficulties can prove common. One example of performance-based regulation in road transport is where an operator’s accreditation for fatigue management is linked to the demonstration of particular behaviours, such as that scheduling takes into consideration each drivers’ previous working hours, driver involvement in setting schedules, and safe driving time.
- **Principle-based regulation** involves setting a general objective, standard or duty without specification of the means to achieve the outcome (e.g. ‘reasonably practicable’ requirements in WHS Legislation). Conduct is regulated according to reasonableness, good faith and other criteria. Support for principle-based regulation is based on arguments that individuals and organisations are more likely to act to secure objectives that are absorbed into their regulatory system. However, given the inherent vagueness and ambiguity of meaning of *principles*, compliance, consistency and enforcement are problematic (Freiberg 2010: 88-92).

According to Johnstone (2003), in the WHS regulatory space, principle-based regulation has substantially replaced prescriptive regulation. This is certainly true in relation to state-based regulation but, when self, co, and meta-regulation are taken into account, performance-based forms of regulation also remain pervasive. Regulation of the size and mass of vehicles, for instance, has shifted to minimum performance standards to stimulate vehicle design innovation and operator accreditation based on meeting performance standards. Typically, as Table 4.2 indicates, a particular regulation will embody more than one form. Thus, for instance, Bluecard is both prescriptive and performance-based.

**Table 4.2: Mapping forms of regulation for Australian heavy vehicle truck industry**

	PRESCRIPTIVE	PERFORMANCE-BASED	PRINCIPLE-BASED
<b>Not based in statute</b>	Organisational Codes of Conduct Bluecard SAFED 5-STAR Trucksafe	Bluecard SAFED 5-STAR Trucksafe Retail Logistics Supply Chain Code of Practice	Organisational Codes of Conduct Retail Logistics Supply Chain Code of Practice
<b>Based in statute</b>	RSRT FWA NHVL WHS Legislation	NHVL WHS Leg	RSRT FWA NHVL WHS Legislation

#### 4.4. Whom to regulate

Choices of regulatory method are also influenced by the target of regulation – or *regulatee*. The potential regulatees in the transport industry include every participant in the chain of responsibility: load owners or customers, receivers, dispatchers, consignors, brokers, freight forwarders, transport companies, and truck drivers, working under various employment arrangements. Given the industry’s complexity, in terms of multiple stakeholders and multiple co-existing employment arrangements, until recently some participants in the supply chain were not regulated in relation to WHS at all. Development of the concept of the chain of responsibility (CoR) and its legislative expression in various jurisdictions, including at federal level, especially through the HVNL, has imposed obligations across the supply chain. Thus, manufacturers, suppliers, and the ultimate purchasers of products and services in Australia are now legally accountable for meeting responsibilities in relation to truck driver safety. However, there remain inconsistencies and gaps which we discuss in Sections 5 and 7.

**Table 4.3: Mapping the targets of WHS regulation in relation to Australian heavy truck driving.**

	INDIVIDUALS	OWNER DRIVERS / CONTRACTORS	TRANSPORT COMPANIES	CHAIN OF RESPONSIBILITY
<b>Not based in Statute</b>	Bluecard SAFED	Organisational Codes of Conduct Bluecard 5 STAR SAFED Trucksafe Retail Logistics Supply Chain Code of Conduct	Organisational Codes of Conduct 5 STAR Trucksafe Retail Logistics Supply Chain Code of Conduct	Retail Logistics Supply Chain Code of Conduct
<b>Based in Statute</b>	HVNL WHS Legislation	RSRT HVNL FWA WHS Legislation	RSRT FWA HVNL WHS Legislation	HVNL WHS Legislation

#### 4.5. Regulatory strategies

Scholars have developed various typologies of the *strategies, instruments or techniques* used to achieve regulatory outcomes (Gunningham and Grabovsky 1998; Parker and Braithwaite 2003; Morgan and Yeung 2007). While the different taxonomies vary in their conceptual organising principles and hence the number and precise strategies identified, generally they encompass the same range of regulatory techniques (see Freiberg 2010; Baldwin, Cave and Lodge 2012; and Morgan and Yeung 2007).

In this report we adopt Freiberg’s (2010) typology of ‘tools’ of regulation (see Figure 4.1 below) identified six main regulatory tools or strategies: economic, transactional, authorisation, structural, informational and legal. Each of these are examined in turn below.

##### 1. Economic tools

Economic regulation can refer to providing, limiting or preventing access to markets, making markets, or interventions in existing markets. It can also involve altering the costs and benefits of actions to influence behavioural change. Examples include the use of negative and positive economic incentives to induce desired behaviours. Potential incentives include taxes, grants



and subsidies. Thus, an organisation can be induced to behave in accordance with particular standards on the basis that taxes will penalise poor behaviour and/or financial assistance will reward compliant behaviour.

Systems of compensation and social insurance that link premiums to performance records provide an economic incentive to avoid undesirable behaviour. For example, workers' compensation schemes may incentivise improvements in management practices by linking an organisation's premiums to its past claims experience. This link operates in two main ways: educationally, by making employers conscious of the costs of their actions, and financially, by providing premium discounts. Similarly, providing discounts on the costs of employers' workers' compensation claims, on the basis of timely and durable return to work outcomes for injured workers, may motivate employers to concentrate on these outcomes.

In the heavy transport industry, other economic incentives include the provision of market-enhancing opportunities for organisations. For example, accreditation systems, such as the proposed five star trucking rating system, can grant incentives and regulatory concessions. These can include increased carrying capacity for an organisation's trucks, longer and more flexible driving-hours' provisions, or access to certain parts of the road network to make trips shorter. According to Moren and Grzebieta (2012: 9), research does not prove that accredited operators necessarily have better safety performance than others.

## 2. *Transactional or market-based regulation*

Transactional or market-based regulation influences behaviour by linking market access and opportunities to those who meet particular standards. An example, in the WHS arena, is where government service delivery contracts for the supply of goods and services are dependent upon parties demonstrating their engagement in specific safe work practices. Competition laws are another means of influencing market forces to control behaviour. These laws can be used to prevent uncompetitive or unfair trading practices by dominant operators in an industry. Another example in road transport is the regulatory concessions extended to operators which install in-vehicle monitoring and GPS technology. Concessions can include exemption from regular roadworthiness inspections and access to certain parts of the road network.

## 3. *Authorisation as regulation*

Authorisation can take many forms: licensing, accreditation, certification, registration, permissions and exemptions. For Freiberg (2010: 141), authorisation is a tool that is 'quintessentially a state power'. In the WHS space, however, self-regulated and co-regulated schemes also regulate through authorisation. Bluecard, for instance, is an industry-wide form of trade union certification of individual drivers who undergo a particular WHS training scheme, and the concept of five star tracking is of a co-regulated accreditation scheme. Regulatory concessions are again one of the advantages of these systems. As Leyden, McIntyre and Moore (2003: 10) observe, however, where 'accreditation and other schemes are combined with economic tools, the commercial disadvantage suffered by non-accredited operators can make the scheme less than truly voluntary.' Considerable rigour in the scheme's design, processes and record-keeping is required given the prospect that aggrieved operators who fail to achieve, or lose, their accreditation may appeal. This also places a burden on the accreditation body to indemnify itself against legal challenge.

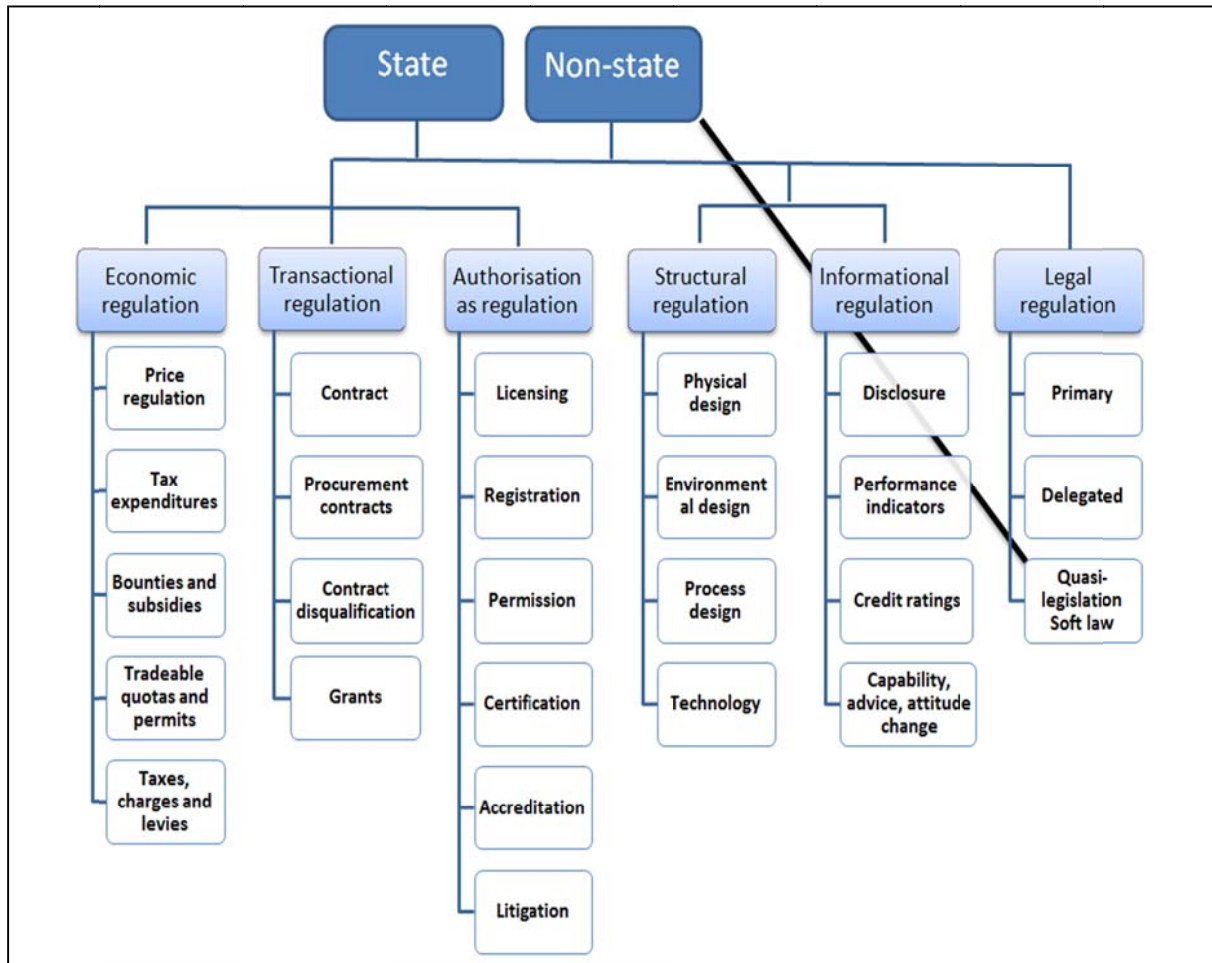


Figure 4.1. The Tools of Government (Freiberg 2010).

#### 4. *Structural regulation*

Structural regulation occurs where mechanisms structure the architecture of decisions – or the choices of regulatees – in such a way that they act in accordance with desired behaviours. This can involve interventions in physical and process design and the use of technology to regulate behaviour. For instance, to reduce driver speeding on roads, the state can develop road architectures that make speeding impossible or use speed and point-to-point cameras to encourage compliance. Another example, includes statutory requirements placed on those who are conducting a business to design plants, structures and the handling of substances in ways that preclude health risks to persons in a workplace. In heavy vehicle haulage, this could include regulations encouraging the redesign of loading docks and trucks to prevent falls, slips and other risks.

#### 5. *Informational regulation*

These regulations involve forms of disclosure which can incentivise compliance with regulations. These range from requirements on individuals and organisations to reveal particular information about their products which allows others in the supply chain to make informed choices about whether to contract with them, through to ‘naming and shaming’

those who fail to comply with regulations. Another form is the league table which ranks organisations in a field to inform consumers' choice of provider.

#### 6. Legal regulation

Legal regulation, often referred to as 'command and control' regulation, is the exercise of influence through primary and secondary legislation, enforced by the state through civil and criminal sanctions. On the edges of law and non-law, however, there is also 'soft law' which refers to forms of self-regulation, co-regulation and quasi-regulation conducted under a statutory umbrella. Thus governments can facilitate, rather than mandate, behavioural change through standards, industry codes of conduct, non-binding agreements and policy guidelines. These may include both performance and principle-based forms of regulation.

**Table 4.4: Mapping strategies involved in WHS Regulations in Australian heavy vehicle truck driving**

ECONOMIC	TRANSACTIONAL	AUTHORISATION	STRUCTURAL	INFORMATIONAL	LEGAL
<b>Organisational Codes of Conduct (reputational)</b> <b>SAFED (cost reduction – petrol)</b> <b>Trucksafe</b>	Potentially: SAFED 5 STAR Trucksafe	BLUECARD (certification scheme) Retail Logistics Supply Chain Code of Practice  Accreditation schemes: SAFED 5 STAR Trucksafe		Organisational Codes of Conduct (reputational)  Retail Logistics Supply Chain Code of Practice 5 STAR Trucksafe (disclosure re accreditation and failure to meet perf standards)	
<b>RSRT (regulated price – ie cost of labour)</b> <b>FWA (awards etc) (regulated price)</b> <b>HVNL (accreditation influences insurance premium)</b>		HVNL (Accreditation scheme)	HVNL, WHS Legislation (Regulations on processes, dimensions of loads etc)	HVNL (disclosure re accreditation and failure to meet performance standards)	RSRT FWA (awards etc) HVNL WHS Legislation

#### 4.6. Enforcement tools

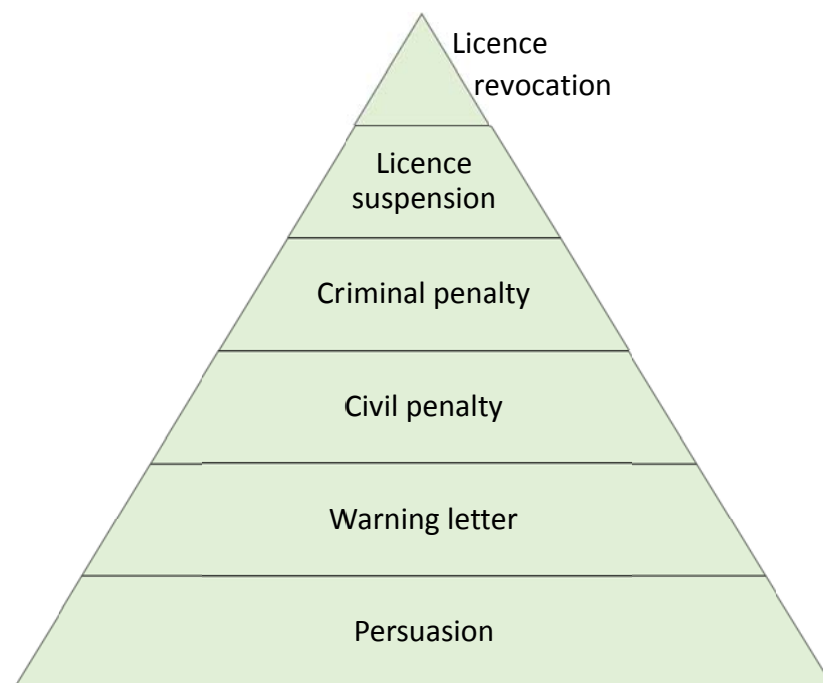
The range of potential sanctions for regulatory infractions is broad and depends very much on the form of regulation. State sanctions range from warnings to administrative sanctions requiring remedial action to civil and criminal penalties. Sanctions for economic and market-based regulations include such measures as reputational penalties, the suspension and revocation of licenses and accreditation, and withdrawal of regulatory concessions. There is considerable scholarly debate about the most effective ways to enforce regulations. Much of the discussion focuses on two issues: the relative effectiveness and desirability of compliance and deterrence approaches to enforcement, and the role of hierarchies and the associated sequencing of sanctions.

Following Reiss (in Baldwin *et al.* 2012: 239), scholars commonly draw a distinction between 'compliance' and 'deterrence' approaches to enforcement. Compliance strategies emphasise the use of measures falling short of prosecution, including persuasion, education, advice and negotiation to

seek compliance. Deterrence approaches, on the other hand, use prosecution and penal sanctions to discourage non-compliance. Both approaches have supporters and critics. Scholars variously argue that each approach is more effective in influencing changes in organisational culture: compliance methods because they foster and encourage changes in values and behaviour; deterrence methods because these treat infractions seriously and concretely reinforce expectations and standards. Particular limitations of deterrence strategies are linked to whether sanctions are sufficient to incentivise compliance, and whether lack of awareness, ignorance, bounded rationality and the potential to arouse resistance, reduce their efficacy (Baldwin *et al.* 2012: 237-239).

Ayres and Braithwaite (1992) argued that ‘the trick of successful regulation is to establish a synergy between punishment and persuasion’. They established the model of ‘responsive regulation’, together with the concept of an enforcement pyramid. For Ayres and Braithwaite, responsive regulation involves implementation of an explicit enforcement hierarchy termed a ‘pyramid’, whereby regulation escalates to tougher enforcement with continuing or advancing non-compliance (see Figure 4.2). The enforcement pyramid involves advisory and persuasive measures at the bottom, mild administrative sanctions in the middle and punitive sanctions at the top. This is premised on the importance of a gradual escalation up the face of the pyramid and the existence of a credible peak which, if activated, would deter the most recalcitrant actors. Regulators begin by assuming virtue but can respond to non-compliance with progressively punitive, deterrent-oriented strategies culminating in incapacitation of the actor being regulated. Incapacitation can take the form of a prison sentence and/or prohibitions on operating in the field, through such mechanisms as licence revocation or bans on management roles.

**Figure 4.2: The Classic Enforcement Pyramid (Source: Ayres and Braithwaite 1992)**



Critics have identified substantial weaknesses in this pyramid model, including the apparent automaticity of escalation and its one-dimensional nature in mapping only state compliance tools. Responsive regulation also relies on notions that those being regulated are rational, that regulations are coherent, and that regulators will have the resources to monitor and enforce sanctions (Freiberg 2010; Baldwin *et al.* 2012). In addition, as Freiberg (2010: 99) argues:

‘In some cases, it may be unrealistic or undesirable to start at the bottom and then escalate the response if the harm caused was very great. Some harms or offences warrant immediate serious responses, such as criminal sanctions.’

Nonetheless, discussion of regulatory enforcement now routinely refers to the enforcement pyramid (OECD 2005: 74; Purse, Dawson and Dorrian 2010).

Arguing that ‘responsive regulation’ confines its analysis to state regulation, Gunningham, Grabosky and Sinclair (1998) proposed an alternative model, ‘smart regulation’, which recognises a more diverse picture of regulators and available sanctions. This reflects the broader definition of regulation adopted in this Report, which expands regulation beyond systems of rules administered by government. Gunningham *et al.* (1998) conceived of smart regulation as multi-dimensional - a three dimensional pyramid - with a number of different parties wielding a range of regulatory strategies. This allows for the adoption of creative mixes of who regulates and how regulation occurs. Nonetheless, the model still relies on an escalation of sanctions and it introduces coordination difficulties between regulators and the three faces of the pyramid.

Later in this Report, we draw on the literature on enforcement tools to consider the range and scope of enforcement attached to the various forms of WHS regulation in the Australian heavy vehicle transport industry.

#### **4.7. Effectiveness of regulatory mechanisms**

In considering the effectiveness of WHS regulatory mechanisms in the heavy vehicle sector, three issues are paramount. These include first, evaluating the extent to which the specific forms of regulation work, and second, identifying the reasons for limits in efficacy. The third issue is the mix of regulation and the implications of the particular range of mechanisms in place.

Addressing the first issue, the extent to which specific forms of regulation work, Freiberg (2010) identified three main sets of criteria.

- *Effectiveness* – this refers to whether the desired regulatory object has been achieved. Achievement includes levels of compliance, and also whether parties have moved *beyond* compliance.
- *Efficiency* – this refers to the relationship between costs and benefits as broadly defined.
- *Non-instrumental values* – this refers to the extent to which the regulation conforms to general principles of justice, administrative law and good government. Measures here might include the extent to which regulations are clear, understandable and transparent to those targeted, and whether the rules are predictable and consistent enough to establish trust, while also being sufficiently flexible to adapt to changing circumstances. Other crucial factors include the degree to which regulators and enforcement agencies are accountable for decisions, whether grievance and appeal mechanisms are available to safeguard justice, the proportionality of interventions and their compatibility with human rights.

In some cases, regulatory design will also be inadequate, with mechanisms failing to identify correctly the problem or the targets or the tools appropriate to addressing the problem (Freiberg 2010). The implementation of regulations may also be poorly conducted in certain situations. For instance, insufficient resources may be allocated to supervision, monitoring and enforcement, or

there may be inadequate information, education and training; or the target group may capture the regulatory agencies.

To some extent, implementation deficiencies may be due to the lack of knowledge or ability of the target group (OECD 2005: 12). However, a lack of willingness (OECD 2005:12) or resistance is also common.

For the OECD, the reasons for unwillingness include perceptions that compliance is too costly, overly legalistic regulation, regulation is incompatible with market incentives or cultural practices, a failure of prior consultation with the target group, failure to monitor, procedural injustice and deterrence failure, because rule breaking has high rewards and a low probability of detection. To maximise willingness, the OECD (2005: 12) advocates the use of multiple policy instruments to influence target group behaviour, backed by a variety of enforcement activities.

In the Netherlands, the Dutch Ministry of Justice and Erasmus University developed *The Table of Eleven* (2004), a framework for considering the causes of (non)compliance. This has been influential across Europe in recent decades (OECD 2010). The Table refers to 11 causes and motives for legislative compliance and provides a checklist of questions for regulators to ask in relation to different rules to identify weaknesses. Table 4.5 provides details of *The Table of Eleven*, the elements of which fall essentially into three categories: first, spontaneous (or voluntary) compliance dimensions; second, the probability of detection of non-compliance; and third, the value of sanctions.

While *The Table of Eleven* is concerned with knowledge, ability and willingness to comply, the causes it lists go towards questions of inadequate regulation and poor implementation. Importantly, *The Table of Eleven* clearly emphasises the risk calculations that regulatees make, such as the risks of being reported, inspected, detected and sanctioned. This may particularly be the case for such industries as heavy vehicle truck driving. As Saurwein (2011) argues, the viability of alternative forms of regulation depends on the features of the particular industry. In the case of truck driving, too heavy a reliance on voluntary forms of regulation is contraindicated by factors which particularly limit the potential for willingness to comply. These include:

- the intensity of competition, number of participants and fragmentation of the market
- the shielding of many firms from sensitivity around public reputation
- the substantial divergence between the private interests of supply chain participants and public policy objectives
- the lack of a strong tradition of cooperation in the supply chain with public policy objectives.

This points to the importance of legal regulation in making truck driving workplaces safer, even as other regulatory strategies coexist with it. Here the tougher the possible enforcements, the more likely that regulation will secure compliance without the necessity for resort to sanctions (Ayres and Braithwaite 1992: 40). However, as Gunningham observes (2007: 359), the deterrent effect of sanctions varies according to the motivations underpinning the actions of industry participants. In terms of the broader supply chain, achieving compliance is difficult for a number of reasons, including the difficulties in attributing liability, proving criminal fault and dealing with recalcitrant operators. As well, even where prosecutions cause reluctant compliers and recalcitrant operators to improve their behaviour, for firms which consider themselves to be 'good guys', prosecution may prove counter-productive, causing resentment, a sense of injustice and resistance (Gunningham 2007: 359).

Moreover,

'All corporate actors are bundles of contradictory commitments to values about economic rationality, law-abidingness, and business responsibility. Business executives have profit-maximising selves and law-abiding selves, at different moments, in different contexts, the different selves prevail' (Ayres and Braithwaite 1992: 19).

Thus, depending on actors' motivations at a given point in time, strategies based solely on persuasion or on punishment will fail to engender compliance.

**Table 4.5: The Table of Eleven**

Dimensions	Specific factors
<p>1. <b>Spontaneous compliance dimensions.</b> These are factors that affect the incidence of voluntary compliance - that is, compliance which would occur in the absence of enforcement.</p>	<ol style="list-style-type: none"> <li>1. <i>Knowledge of Rules</i> –level of clarity, knowledge, familiarity with and understanding of rules.</li> <li>2. <i>Costs/Benefits</i> – advantages and disadvantages of compliance or non-compliance, expressed in time, money and effort.</li> <li>3. <i>Extent of acceptance</i> – extent to which the policy objective and policy effects are acceptable by the target group</li> <li>4. <i>The target group's respect for authority</i> – its respect for official authority and competing authority including own standards and values.</li> <li>5. <i>Non-official control (social control)</i> – the risk of sanctions on members of target group by their own target group or professional groups via social control or 'horizontal supervision'.</li> </ol>
<p>2. <b>Control dimensions.</b> This group of factors determines the probability of detection of noncomplying behaviour. The probability of detection is directly related to the level of compliance.</p>	<ol style="list-style-type: none"> <li>6. <i>Risk of being reported</i> – the risk or probability of third parties reporting target group's non-compliance (eg tip-off or complaint)</li> <li>7. <i>Risk of inspection</i> – the probability of inspection by government officials</li> <li>8. <i>Risk of detection</i> – the probability of inspection uncovering noncompliance; and</li> <li>9. <i>Selectivity</i> – the ability of inspection authorities to target inspections effectively (eg the 'hit rate')</li> </ol>
<p>3. <b>Sanctions dimensions.</b> The third group of factors determines the expected value of sanctions for non-compliance.</p>	<ol style="list-style-type: none"> <li>10. <i>Risk of sanction</i> – the probability of a sanction being imposed where noncompliance is detected.</li> <li>11. <i>Severity of sanction</i> – the severity and nature of the sanction associated with the violation and any additional disadvantages of being sanctioned (eg loss of reputation, legal costs)</li> </ol>

Source: Adapted from Dutch Ministry of Justice 2004 and OECD 2012.

Freiberg (2010: 269) observes that 'it is very rare that regulation fails totally'. Nonetheless, given the strengths and weaknesses attached to various design features of regulations discussed in this part, establishing a complementary and reinforcing mix of mechanisms is often desirable (Ayres and Braithwaite 1992; Hardy and Howe 2009). In the heavy vehicle truck driving sector, there is a complex mix of statutory and alternative types of WHS regulation. Reviewing the tables in this part, which map the different regulatory mechanisms against the features of regulation, it is clear that existing mechanisms in Australia vary according to the source of regulation, who is regulated, and forms and strategies through which regulation occurs. The next part examines in detail the six pillars on which this report focuses.

## 5. THE SIX PILLARS

The six modes of regulating truck drivers' work health and safety examined in this project (Figure 1.1) include:

- Pillar 1: Voluntary mechanisms (codes of conduct, policies and strategy)
- Pillars 2 and 3: Market mechanisms (accreditation and certification systems)
- Pillars 4 and 5: Industrial Law (awards, agreements and tribunals)
- Pillar 6: WHS law (such as HVNL 2012 and WHS Act 2011)

An overview of each of these regulatory mechanisms follows.

### 5.1. Voluntary mechanisms

Companies and industries take different approaches to voluntary commitments to WHS. It is important to note at the outset that voluntary codes and policies are established under the umbrella of WHS laws<sup>5</sup> (discussed later). Voluntary WHS mechanisms tend to be linked to meeting legal compliance requirements, although the content and commitments may, of course, extend beyond compliance. WHS strategies also emerge under corporate social responsibility (CSR) agendas which are also interlinked with legal obligations. In the Australian context, these types of regulation may constitute self-regulation but, more commonly, are types of meta-regulation, prescribed by government, with the precise details decided in-house.

Some companies publish comprehensive accounts of their WHS objectives, codes and policies on their websites. While commercially sensitive details are excluded, these illustrate the WHS policies companies consider important to publicise. Toll, for example, provides details on its website of its OHS policy, a general Code of Practice and Stakeholder Codes of Conduct<sup>6</sup>. The OHS Policy includes an OHS vision, strategy and safety principles. There is also a statement of leadership commitment, a list of broad priorities and a framework for performance measurement, which includes a combination of lag, lead and compliance indicators. No specific goals or measures for improvement are provided, nor are specific objectives for truck driving identified<sup>7</sup>. A number of companies, including Linfox and BP Australia<sup>8</sup> publicise Zero Tolerance policies. K and S Freighters Pty Ltd<sup>9</sup> and Star Track<sup>10</sup> publish their stated commitments and policies in relation to the CoR. Other companies such as Border Express, Finemores, Farragher, and Scotts Transport do not publish a code of conduct, OHS policy or similar on their websites. However, Border Express received Safety, Rehabilitation and Compensation Commission (SRCC) Safety Awards in 2010 and 2011.<sup>11</sup>

Some of the advantages and disadvantages of company codes and policies as regulatory mechanisms are discussed in the previous section on regulation under self- and meta-regulation. Formal policies and practices within organisations are a form of private ordering aimed at changing and guiding

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<sup>5</sup> In Australia, two separate bodies of law impose obligations and responsibilities on participants in the heavy vehicle road transport CoR: Work Health and Safety legislation which applies primarily to employers and employees the Heavy Vehicle National Law 2012 (Qld) and associated regulations. These laws are discussed in a later section.

<sup>6</sup> <http://www.tollgroup.com/policies-and-procedures>

<sup>7</sup> <http://www.tollgroup.com/cs/22Think+safe.+Act+safe.+Be+safe.+health+and+safety+strategy+.pdf>

<sup>8</sup> [www.bp.com/content/dam/bp-country/en\\_au/products-services/procurement/health-safety-policy.pdf](http://www.bp.com/content/dam/bp-country/en_au/products-services/procurement/health-safety-policy.pdf)

<sup>9</sup> [www.ksgroup.com.au/company/policies/Transport%20Law%20Compliance%20Policy.pdf](http://www.ksgroup.com.au/company/policies/Transport%20Law%20Compliance%20Policy.pdf)

<sup>10</sup> [www.startrack.com.au/content/files/1%20HSECoR\\_PolicyV1%201%28StarTrack\\_PolicyTemplate%29.pdf](http://www.startrack.com.au/content/files/1%20HSECoR_PolicyV1%201%28StarTrack_PolicyTemplate%29.pdf)

<sup>11</sup> <http://www.borderexpress.com.au/ABOUT/AWARDS.aspx>



employee behaviour. Some of the advantages of addressing WHS risks through voluntary corporate policies and codes of conduct are that practices may be better tailored to specific circumstances, may generate a higher level of compliance, and can nurture a safety culture because principles and rules emerge from within the group that regulates itself (Freiberg 2010). Fundamentally, the effectiveness of these mechanisms relies on the strength of management commitment, resources, implementation, monitoring and enforcement. Given the voluntarist nature of these regulations, the only real sanction for non-compliance is reputational, which may or may not lead to economic/market implications. Such is the competitive nature of this industry, that, rather than there being a benchmark for policy quality, individual company codes of conduct and WHS policies may only ever be as good as those of their major competitors. Beyond hypothesis and anecdotal evidence, however, the actual impact of corporate WHS policies on safety outcomes in the sector is not known because there have not been any large detailed studies across companies.

In the heavy vehicle road transport sector, the main industry codes of conduct are designed and administered by employer-trade associations. These include: the Retail Logistics Supply Chain Code of Practice/Conduct, developed by the Australian Logistics' Council (ALC); Truck Safe, which the Australian Trucking Association established in 1996; and the Australian Livestock Transport Association Accreditation scheme. While substantial research has been conducted on industry self-regulation in various industries worldwide (Sammeck 2011; King and Lenox 2000; and Sethi and Emelianova 2006), and in the Australian road transport industry, particularly in terms of WHS accreditation schemes (Mooren and Grzbieta 2012; Gunningham 2011a; and Baas and Taramoaroa 2008), there has not been detailed research on particular schemes.

The Retail Logistics Supply Chain Code of Practice is a voluntary scheme designed to aid ALC members to improve safety and maintain compliance with WHS laws. The Code includes 10 principles concerning WHS responsibilities, best practice standards, measures of compliance standards, auditing tools and independent auditing requirements. Responsible parties through the supply chain building compliance requirements into contracts with other members (Australian Logistics Council 2011a and 2011b).

In 2012, Mooren and Grzbieta (2012: 10) noted that 'to date there has been little buy-in to the National Logistics Safety Code in Australia apart from the retail majors and the mining and steel industries'. There is no more recent research data to indicate the level of use of the Code. However, as with company codes of conduct, the impact of the ALC Code of Practice on WHS is limited by its reliance on principles rather than prescription to guide behaviour, the strength of the commitments which companies voluntarily make, and the strength of its sanctions. Enforcement of the Code relies principally on the reputational consequences of breaches and of membership being revoked. The Code is also limited by its emphasis on the objective of achieving compliance rather than going *beyond* compliance. On the ALC website, key corporate members such as Coles, Metcash and Woolworths clearly emphasise that the fundamental impact of the Code for them has been to increase understanding of compliance requirements, provide an efficient and thorough way of determining their level of compliance and identifying gaps, and increasing their confidence in being compliant with legislative requirements (Australian Logistics Council 2011a).

As well, the ALC appears to have a limited understanding of the factors that drive safety. This is demonstrated in the reasons which the ALC gave for its continual lobbying for the abolition of the Road Safety Remuneration Tribunal (RSRT) (discussed below). The ALC argued for its abolition on the

basis that there is a lack of definitive evidence that provides the link between remuneration and safety outcomes in the heavy vehicle industry, it is inherently difficult to establish a safe rate, the RSRT ignores and diverts attention from CoR obligations, and it had a proven negative impact on the economy. The RSRT relied on statistics concerning fatalities and collision in the industry to maintain there is no remuneration/safety link: a conclusion clearly belied by research evidence (Australian Logistics Council 2016). This reflected a limited understanding of the real picture of injury and the factors that drive safety in the industry. As well, the ALC provided no substantive evidence of negative economic impacts. As an employer association, however, its submissions to government sought to protect the interests of its members in the retail supply chain, primarily the largest companies. This suggests an internal conflict of interest between promoting safety through the Code of Practice and representing the broader commercial interests of members.

Trucksafe is an accreditation system owned and operated by the Australian Trucking Association, a peak employer association in the sector. Trucksafe is a risk management system based on a code of conduct and accreditation through independent auditing. The Code of Conduct refers to a set of responsibilities to comply with general Trucksafe standards in relation to roadworthiness, vehicle maintenance, workplace and driver health, training and management systems. Accreditation is based on compliance with general standards. In addition to the reputational effects of accreditation, Trucksafe provides specific market-oriented and economic incentives, including premium discounts through one insurer (National Transport Insurance) and, in Queensland, preferred status in government tendering and service delivery.

Mooren *et al.* (2012) observed that less than 10% of the Australian transport industry was accredited with Trucksafe. Research by Austroads (2008: 24) indicated that non-accredited operators are 50% more likely than Trucksafe-accredited operators to have crashes and their insurance claims (when using National Transport Insurance) are 38% lower. Operators who have become accredited noted improvements in company culture and management systems, observing that external audits help drive internal change. However, Austroads (2008: 8) also argued that accreditation schemes such as Trucksafe are suited to operators who are generally compliant or who strive for best practice, not for recalcitrant operators. Indicating a similarly weak understanding of the factors leading to unsafe work practices for truck drivers, like the ALC, the Australian Trucking Association which runs Trucksafe also lobbied vigorously for abolition of the RSRT.

## **5.2. Market mechanisms**

### **5.2.1. 'Five star trucking' rating system**

Safety rating systems have been implemented by national heavy vehicle regulators in the USA, UK, Canada and New Zealand (TWU 2015). A five star trucking safety rating system for the Australian transport industry was conceived in 2012 as a potential new market-based approach to improving safety. The proposal was set aside in March 2015 due to political difficulties. Nonetheless, as an example of a particular regulatory form, five star trucking warrants critical consideration.

The context for the proposal of a five star trucking rating system (subsequently known as the 'Safety Rating Scheme') was a 13% increase in road fatalities in NSW in 2009. This prompted the NSW Government to establish a Road Safety Roundtable to identify strategies to reduce the road toll. One

of the strategies identified was to introduce a star system for rating trucking company behaviour (TWU 2015).

The National Road Freight Advisory Committee established a 5-Star Trucking Sub-committee to investigate this option. Three commissioned research reports elaborated on the potential, structure, and implementation of such a system. The Standing Committee on Transport and Infrastructure then agreed in May 2013 that the NHVR, together with the NTC and NSW, would lead a project to develop a framework for the rating system in 2013-14 to be piloted in 2014-5. After significant delays in starting the project, funding was withdrawn from the Steering Committee and the project lapsed.

The proposal of the Sub-Committee had been to develop a star rating system for the heavy vehicle road transport sector which would accredit operators based on safety performance. Truck companies across all Australian transport sectors and company sizes could earn between one and five stars for safety performance, measured against regulations and best practice. A scoreboard would fuse industry data to provide benchmarks. Four specific safety factors were specified for inclusion: fatigue, speed, driver health (including drug and alcohol issues), and vehicle equipment and conditions (TALC 2012: 10). The key design features included:

1. A national 5 Star Standard Ratings Framework for Road Freight Transport Safety, incorporating the rules for auditing and generating a scoreboard.
  2. A shared commitment through a tripartite approach across industry, unions and government.
  3. Participation open to all road freight transport operators whatever their specialty and size.
  4. Access to benefits and concessions for operators relative to the ratings achieved.
  5. Strength in governance through clarity of roles and responsibilities across all participants.
  6. Advances in information availability through new five star and regulator data sets.
  7. Integrity of audit assessment through a rigorous process with review procedures.
  8. Transparency through public availability of operator results plus national evaluation of impacts.
  9. Capacity for the five star system to evolve with experience and changing circumstances.
- (TALC 2012: 18)

The Sub-committee also considered options to incentivise operators to participate in the proposed scheme. Options included preferred supplier/tender arrangements, driver training subsidies, and regulatory and enforcement concessions such as fewer vehicle inspections (TWU 2014). Economic incentives could also operate through investments in safety being linked to reduced insurance premiums and discounted insurance claim costs.

Transactional or market-based regulatory strategies such as star ratings are increasingly common in many industries including, for example, tourism accommodation, white goods and food. The underpinning concept is that, in providing indications to the market of safety performance and quality, these schemes influence behaviour. Effectiveness depends upon the extent to which market access and opportunities are linked to those who meet particular standards by enabling customers to use their purchasing power to reward highly-rated behaviours (TWU 2014; TALC 2012). The heavy vehicle road transport sector in Australia still lacks such a market-based mechanism.

### 5.2.2. SAFED

For the freight transport industry, another form of voluntary safety regulation is linked to driver training and development. SAFED New Zealand is the *Safe and Fuel Efficient Driving* driver development course operated by the NZ Government Ministry of Transport and NZ Transport Agency for truck and bus drivers. SAFED is a one-day driver development course conducted off-the-job and drivers gain a certificate of attainment on completion. This program, which commenced in NZ in 2010, is based on a similar accredited training program which the UK Department of Transport has run since 2003 ([www.dft.gov.uk/rmd/project.asp?intProjectID=9986](http://www.dft.gov.uk/rmd/project.asp?intProjectID=9986)). Australia has not adopted any similar program.

The emphasis of the NZ training course is on improving drivers' skills to enhance fuel efficiency to reduce costs of operation and CO2 emissions. The techniques used to improve fuel efficiency include:

- optimising travel speed and gear selection
- ensuring appropriate engine speeds at which gears are changed
- reducing aggressiveness of accelerator and brake pedal use
- reducing the amount of time the driver leaves the truck idling ([safednz.govt.nz/about-safed/questions-and-answers/](http://safednz.govt.nz/about-safed/questions-and-answers/)).

While there has been little research on links between safety and fuel efficiency, many of the techniques used to improve both are the same: managing speed, anticipating the situation ahead, reducing aggressive driving behaviours, checking tyre pressures, vehicle maintenance and reducing travel. While safety training is not specifically included in this training course, it is a positive side effect of the skills taught to improve fuel efficiency. According to SAFED, 'the practical in-cab elements of the course provides drivers with real-world skills that can help them feel less fatigued, lower their stress levels and increase their value to their employer through keeping fuel costs down and accident rates low' ([safednz.govt.nz/about-safed/](http://safednz.govt.nz/about-safed/)). SAFED Training is administered by private instructors accredited by the NZ Government. By mid-2015, a total of 2,268 truck drivers had gained their SAFED certificate ([safednz.govt.nz/about-safed/](http://safednz.govt.nz/about-safed/)).

SAFED operates as a market-based regulatory strategy because participation typically occurs when an operator registers drivers for training. Operators report their involvement with SAFED training to support their credentials in the market as environmentally and safety conscious organisations.<sup>12</sup>

### 5.2.3. Bluecard

Awarded on successful completion of a specific WHS training program for the road transport industry, the Bluecard is a qualification or form of generic, minimum accreditation<sup>13</sup>. Bluecard training is aligned with National Competency Standards in the vocational education and training sector<sup>14</sup>. Transport and distribution workers who complete this WHS training are issued a wallet

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<sup>12</sup> See, for instance, comments of Winstone Aggregates, a large concrete, sand and bulk cartage company at: <http://www.winstoneaggregates.co.nz/products/bulk-cartage/fuel-efficiency/>

<sup>13</sup> <http://www.bluecard.com.au/>

<sup>14</sup> <http://www.bluecard.com.au/index.php/about>

sized card, designed also to be used to record ongoing competencies and qualifications acquired (TEACHO 2013).

The Bluecard system is administered by the Transport Education Audit Compliance Health Organisation (TEACHO) Limited, a not-for-profit company established by the Transport Workers Union of Australia (TWU) with employers and industry experts to improve research, training and compliance related to career pathways, industrial rights, and health and safety services across Australia. Bluecard training includes statutory responsibilities of transport workers under the WHS Act, including the reporting of hazards and safe work procedures. Bluecard is not designed to replace site specific training, workplace training on safety or vehicle operations, cargo handling or specialised equipment<sup>15</sup>. By attaining a Bluecard qualification, drivers make a commitment to read and abide by workplace policy and procedures<sup>16</sup>.

The stated purposes of the Bluecard are to:

- 'develop and maintain consistent standards of safety training in the transport Industry;
- build a co-operative employer/employee work environment that will promote safety and training of employees;
- familiarisation with basic safety needs in the Transport Industry;
- understanding of the Acts and Regulations which govern safe workplace practices in the Transport Industry.'<sup>17</sup>

As a regulatory strategy, Bluecard is a form of authorisation regulation involving the certification of individual drivers on completion of WHS training. It is the only industry-wide certification available in the heavy vehicle road transport sector. One limitation of Bluecard is that while drivers commit to abide by laws and policies, there are no guarantees that this training is transferred to the workplace. Effective transfer is dependent on management's commitment to supporting training as part of the safety culture and safety leadership. Further, there is no ongoing monitoring of compliance. Compared with compulsory programs, the voluntary nature of Bluecard limits its impact on WHS in the road transport industry. In contrast, with a similar WHS training program operating in the West Australian construction industry, the state government has mandated this as compulsory pre-site training. Research suggests this mandatory training is contributing widely to cultural change in the construction sector (Barratt-Pugh and Bahn 2012).

### **5.3. Industrial law**

#### **5.3.1. Fair Work Act (2009)**

Modern awards and collective agreements establish legally enforceable minimum wages and conditions of employment. In relation to the road transport industry, *The Fair Work Act 2009 (Cth)* applies only to drivers who are 'employees' within the meaning of section 15, thus excluding owner/contractor drivers. The Act establishes three tiers of federal industrial relations regulation, including minimum labour standards in the forms of National Employment Standards (NES), and provisions for modern awards and enterprise-based collective bargaining agreements (EBAs).

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<sup>15</sup> <http://www.bluecard.com.au/index.php/information-pack>

<sup>16</sup> <http://www.bluecard.com.au/index.php/about>

<sup>17</sup> <http://www.bluecard.com.au/>

Enterprise agreements are the primary instrument for upholding and upgrading labour standards for *employee* truck drivers. These collective agreements are underpinned by the modern awards that apply in the road transport industry. The four main awards are:

- Road Transport and Distribution Award 2010
- Road Transport (Long Distance Operations) Award 2010
- Transport (Cash in Transit) Award 2010
- Waste Management Award 2010

The Road Transport and Distribution Award 2010 applies to truck drivers hired as full-time, part-time and casual employees. The Award establishes minimum weekly and hourly rates of pay, as well as overtime, shift and penalty rates, and allowances for particular forms of freight transport and various specified activities. The Road Transport (Long Distance Operations) Award prescribes minimum rates of pay for full-time and casual long distance drivers. Under the Award, full-time and casual drivers are entitled to a guaranteed minimum fortnightly payment that is twice the minimum rate for weekly payments set for their classification. Employers must pay these drivers for all driving time on the basis of either kilometres travelled or hours for the trip, and the Award contains schedules with the numbers of kilometres and hours deemed to be the number that apply to particular journeys. The Award also provides for payment to employees for loading and unloading duties.

Registered collective agreements override modern awards, subject to the 'better off overall' test. Examples of inclusions in collective agreements that impact truck drivers' labour standards and work health and safety include:

- higher rates of pay than those prescribed in the modern award
- higher rates of superannuation than those prescribed in the modern award
- minimum proportions of employee drivers compared to contracted drivers
- employer commitment to pay contracted drivers' rates that do not undercut those received by employee drivers
- employer commitment to all employee drivers completing Bluecard training at the company's expense.

Industrial mechanisms such as collective agreements and awards are forms of both co-regulation and state regulation. Legislation establishes the rules within which parties negotiate precise conditions. In relation to the heavy vehicle road transport industry, transport companies, owner drivers/contractors and other freight operators are only bound in relation to *employee* labour. Ultimately, these work as economic and legal regulatory strategies. In economic terms, collective bargaining may take the wages out of competition, through general industry standards, and/or enable the negotiation of terms and conditions which advantage the particular firm, through enterprise bargaining. As a legal strategy, the effectiveness of collective agreements is only as strong as the monitoring and enforcement which take place, and these are subject to the vagaries of political decisions to do with resourcing. The initiation of enforcement largely relies upon individual complaints to the Fair Work Ombudsmen (FWO) or industrial dispute proceedings in the Fair Work Commission (FWC). The FWO can conduct (industry blitz) campaigns when patterns of noncompliance emerge. No such campaigns have been conducted in this industry to date.

### 5.3.2. Road Safety Remuneration Act (2012)

A review commissioned by the National Transport Commission in 2008 confirmed the strong relationship between driver payments and WHS outcomes (see Quinlan and Wright 2008). The Commonwealth Government then enacted the *Road Safety Remuneration Act 2012 (Cth)* (RSR Act) which provided for establishment of the Road Safety Remuneration Tribunal (RSRT). In April 2016 the RSRT was abolished, to prevent its 2016 Remuneration Order (see below) commencing operation on 4 April.

The RSRT was independent of the Fair Work Commission (FWC), although the President, Deputy Presidents and Commissioner held dual appointments with the FWC. The RSRT had four main functions:

1. Making road safety remuneration orders
2. Approving road transport collective agreements
3. Dealing with certain disputes relating to road transport drivers, their employers or hirers, and participants in the supply chain
4. Conducting research into pay, conditions and related matters that could be affecting safety in the road transport industry.<sup>18</sup>

During its brief life, the RSRT made two Orders: the *Road Transport and Distribution and Long Distance Operations Road Safety Remuneration Order 2014*, and the *Contractor Driver Minimum Payments Remuneration Order 2016*. The 2014 Order applied to road transport drivers engaged in the provision of driving services in the supermarket supply chain, and long distance operations in the private transport industry within the meaning of the Road Transport (Long Distance Operations) Award (s4). Somewhat akin to a modern award, the 2014 Order prescribed requirements in relation to development of safe driving plans, WHS training, a 30-day deadline for payment of contract drivers, drug and alcohol policies, protection of participants against adverse conduct and dispute resolution procedures. The notable difference between a modern award and the 2014 Order was that the Order applied to contracted drivers (as defined in s3) as well as employees. Accordingly, the Order also included requirements for written contracts with road transport workers.

The 2016 Order set national minimum payments for contractor drivers in the road transport supply chain and also imposed requirements on the hirers of those drivers and other supply chain participants. In addition, the Order imposed requirements in relation to minimum payments and unpaid leave for distribution and long distance operations, supply chain contracts, unpaid leave and other provisions related to promotion the observance of the provisions. Excluded from the Order were particular industry groups such as drivers engaged in cash in transit, waste management and other sectors.

The RSRT also had authority to approve collective agreements between hirers and groups of contracted drivers. These collective agreements were to be somewhat akin to those made under the FWC between employee groups or their representatives and employers. The important distinction, however, is that agreements would be made with drivers hired on a contract *for* service rather than

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<sup>18</sup> <http://www.rsrt.gov.au/index.cfm/about-rsrt/what-rsrt/>

employees on a contract of service. As with modern awards and collective agreements, road safety collective agreements were prohibited from undercutting conditions prescribed by an Order<sup>19</sup>.

Establishment of the RSRT was politically controversial. Employer groups, in particular, criticised the RSR Act and the tribunal for being anti-competitive, raising prices of goods transported and imposing unnecessary administrative burdens (Ai Group 2015: 98). The narrow focus on remuneration methods and amounts was also criticised, with the Ai Group advocating broader regulation of heavy vehicles, including road maintenance, fatigue management, education and training, drug and alcohol policies, and improved compliance mechanisms (Ai Group 2015: 98-99).

As the commencement date for the 2016 Order approached, employer groups lobbied the RSRT to defer the starting date. Following submissions and hearings, the RSRT determined not to vary the date. In response to the political lobbying which followed, the Commonwealth Government passed legislation to abolish the RSRT through both houses of parliament in one evening and both Orders were nullified. In abolishing the RSRT, the government relied heavily on the findings of two commissioned reports; one by Jaguar Consulting in 2014, the other by PricewaterhouseCoopers (PwC) in January 2016, both of which claimed that there was no evidenced link between pay and safety and that the RSRT was damaging the economy.

The RSRT had only been established for 14 months when the Abbott Coalition Government was elected on 18 September 2013. Within two months of its election, on 19 November 2013, the Coalition Government had contracted Jaguar Consulting P/L to assess the RSRT's operation and advise whether it represented 'an effective and appropriate means of addressing safety concerns' in the industry (Cth Government, 2013). Not surprisingly, in April 2013, Jaguar Consulting reported that the Tribunal had achieved little of a concrete nature – it was yet to issue the 2014 Order. Had the RSRT acted faster, it might have been accused of unseemly haste. However, the authors of the Jaguar Report were looking for a decline in collisions and fatalities among truck drivers.

Even though collisions and fatalities constitute a negligible proportion of safety incidents, compared to slips, falls, and air pollution, the Jaguar Report held these were the only valid indicators of whether the RSRT had improved road safety (Jaguar Consulting 2014: 33-49; 73-75). The report then claimed, as there was no strong evidence that collisions and fatalities decline when truck drivers are paid more, there is no point increasing truck driver remuneration (Jaguar Consulting 2014: 10-13).

The PwC Report, commissioned in June 2015 and published in January 2016, reiterated the Jaguar Report's argument and conclusions concerning the lack of evidenced links between truck driver pay and safety. That is, PwC relied again on collision and fatality statistics as the indicator of whether improved remuneration leads to better safety outcomes. As well, the PwC determined that the RSRT had not met the statutory objective of promoting safety and fairness in the road transport industry. It is important to note that PwC's report was designed to meet the terms of reference, the first of which required PwC 'to examine the extent to which the objectives and functions of the RSRT aligned with government priorities and policies' (PwC 2016: iii). PwC (2016: iv) concluded that the system was not aligned with the then government's priorities and policies. Meanwhile, as the Jaguar Report noted, owner-drivers receive 30% below the award rate remuneration of employee drivers.

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<sup>19</sup> see <http://www.rsrt.gov.au/index.cfm/research/research-on-contractor-driver-costs/>



The RSRT was an industrial mechanism akin to the FWC which oversees the system of federal awards and agreements. The application of its orders to owner/contractor drivers distinguished it from the FWC. Its abolition has left a gap, particularly in the regulation of remuneration and working conditions for drivers who are not employees.

## **5.4. Work Health and Safety law**

### **5.4.1. Model Work Health and Safety Act (2011)**

The Commonwealth Government developed the model *Work Health and Safety Act 2011* (WHS Act) with a view to harmonising all Australian state and territory health and safety laws. The model Act and Regulations provide a framework to protect the health, safety and welfare of all workers at work and of other people who might be affected by the work. All jurisdictions have enacted harmonious legislation, except Victoria and Western Australia. A key difference between the Victorian and Western Australian WHS legislation and the WHS Act is that the harmonised legislation has introduced the obligation for persons conducting the business or undertaking (s19) to be held responsible, as far as is 'reasonably practicable' (ss17-18), for the health and safety of employees and contractors along the supply chain. Under Victorian and Western Australian law, as under legislation in other jurisdictions preceding the WHS Act for that matter, employers are responsible only for the health and safety of employees, not contracted or subcontracted workers.

The WHS Act aims to:

- protect the health and safety of workers and other people by eliminating or minimising risks arising from work or workplaces
- ensure fair and effective representation, consultation and cooperation to address and resolve health and safety issues in the workplace
- encourage unions and employer organisations to take a constructive role in improving work health and safety practices
- assist businesses and workers to achieve a healthier and safer working environment
- promote information, education and training on work health and safety
- provide effective compliance and enforcement measures, and
- deliver continuous improvement and progressively higher standards of WHS.

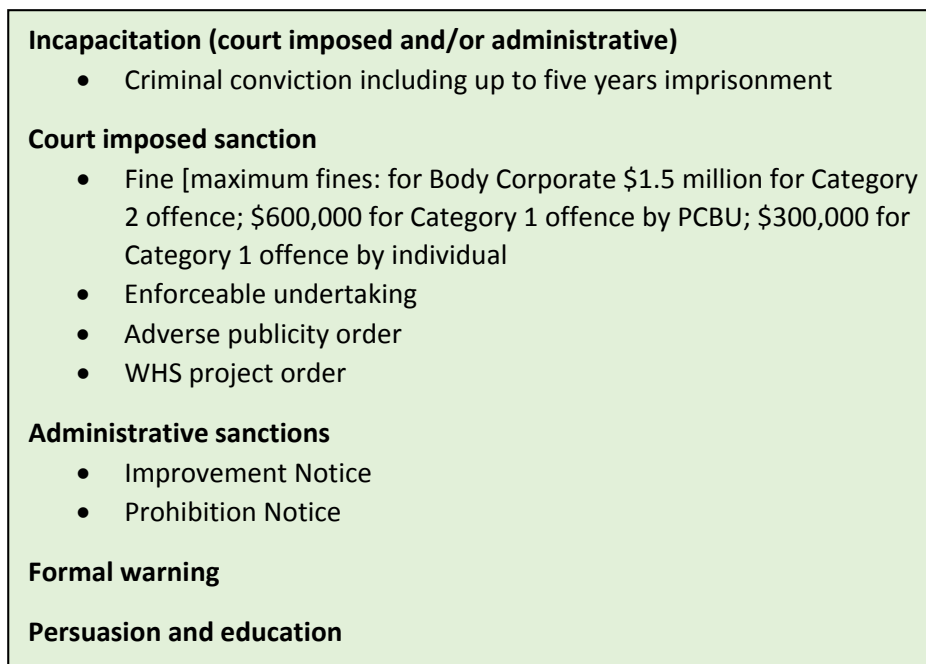
A guiding principle of the WHS Act is that all people are given the highest level of health and safety protection from hazards arising from work, so far as is reasonably practicable. For these purposes, 'health' includes psychological as well as physical health. The term 'reasonably practicable' means what could reasonably be done at a particular time to ensure health and safety measures are in place.

The WHS Act and Regulations attach specific duties of care to people conducting business units (PCBUs), officers, unincorporated associations, government departments and public authorities including municipal governments, workers and other people at a workplace (ss13-17). Under the primary duty of care a PCBU must ensure, so far as is reasonably practicable:

- the provision and maintenance of a working environment that is safe and without risks to health, including safe access to and exit from the workplace

- the provision and maintenance of plant, structure and systems of work that are safe and do not pose health risks (for example providing effective guards on machines and regulating the pace and frequency of work)
- the safe use, handling, storage and transport of plant, structure and substances (for example toxic chemicals, dusts and fibres)
- the provision of adequate facilities for the welfare of workers at work (for example access to washrooms, lockers and dining areas)
- the provision of information, instruction, training or supervision to workers needed for them to work without risks to their health and safety and that of others around them
- the monitoring of the health of workers and the conditions of the workplace to prevent injury or illness arising out of the conduct of the business or undertaking, and
- the maintenance of any accommodation owned or under their management and control to ensure the health and safety of workers occupying the premises.

Accordingly, the Act contains detailed provisions for consultation with workers and their representatives, resolution of issues and disputes, enforcement (functions and powers of regulators and inspectors), offences and penalties (including fines, jail terms and alternative penalty options). In addition, the Act establishes duties for upstream PCBU, including designers, manufacturers, importers and suppliers. These businesses or undertakings have a responsibility to ensure that their products, throughout their entire lifecycle, do not constitute risks to WHS.



**Figure 5.1 Elements of the enforcement pyramid under the WHS Model Act**

The WHS legislation is a form of command and control regulation, enforced primarily by civil remedies. Sanctions include improvement notices, enforceable undertakings, civil prosecutions against the business or undertaking (up to \$3 million) *and* the individual who is an officer or person conducting the business or undertaking (up to \$300,000 and/or up to five years imprisonment). However, it also operates as a form of meta-regulation. In prescribing that parties meet their duty of

care through establishing and monitoring safety management systems, the onus is also placed on organisations to regulate themselves within the shadow of the law.

Some limitations of the WHS Act include the extensive monitoring it requires for detection and the difficulty in defining who the decision-makers are in a business or undertaking and, hence, who to hold accountable for noncompliance. The key advantage of the WHS Act, nonetheless, is that it has the potential to hold key decision makers to account for all workers' health and safety along the supply chain.

#### 5.4.2. National Heavy Vehicle Regulator

The National Heavy Vehicle Regulator (NHVR) oversees the Heavy Vehicle National Law 2012 (Qld) (HVNL) and four related regulations<sup>20</sup>, which apply to heavy vehicles over 4.5 tonnes gross vehicle mass. This law and the regulations commenced in Queensland in 2013 and were adopted by the Australian Capital Territory, New South Wales, South Australia, Tasmania and Victoria in February 2014. The purpose is to provide for consistent regulation across the sector regardless of jurisdiction. However, the Northern Territory and Western Australia have not adopted the HVNL.

The HVNL:

- provides for establishment of the NHVR as the regulator of heavy vehicles.
- provides for the national registration of heavy vehicles.
- prescribes required performance-based standards for heavy vehicle design, loads, and driver speed and fatigue related behaviours. This includes detailed requirements for drivers to record long distance trips in a work diary.
- imposes obligations on those who can influence whether drivers and their vehicles comply with those prescribed required standards – including the employer, prime contractor, operator, scheduler, consignor or consignee, loading manager, loader or unloader of goods.
- allows access to roads that have been restricted for heavy vehicles if drivers and vehicles meet these required standards and additional accreditation scheme standards.<sup>21</sup>

Figure 5.2 A perspective on prosecution

#### Why are CoR prosecutions so difficult?

'You're relying on people having to give direct evidence – 'this is what we had to do and why' – and there's a whole variety of reasons why that won't happen. The only people that can give that evidence are staff from the transport company, and they won't give that evidence because if they do, they will potentially lose the contract with the customer, so it's a very difficult hurdle to jump. When you're looking at the bottom end of CoR, which is simply driver/operator, it's still difficult to prove, but in comparison it's easy because a lot of it's on record.'

'In late 2010 Ag-Spread was fined \$95,000 (from a maximum fine of nearly \$3million) for a litany of fatigue management breaches ... Two investigators each spent more than seven months cross-referencing the types of records (kept) for a sample of drivers for a period of a month ... These cases are labour intensive.'

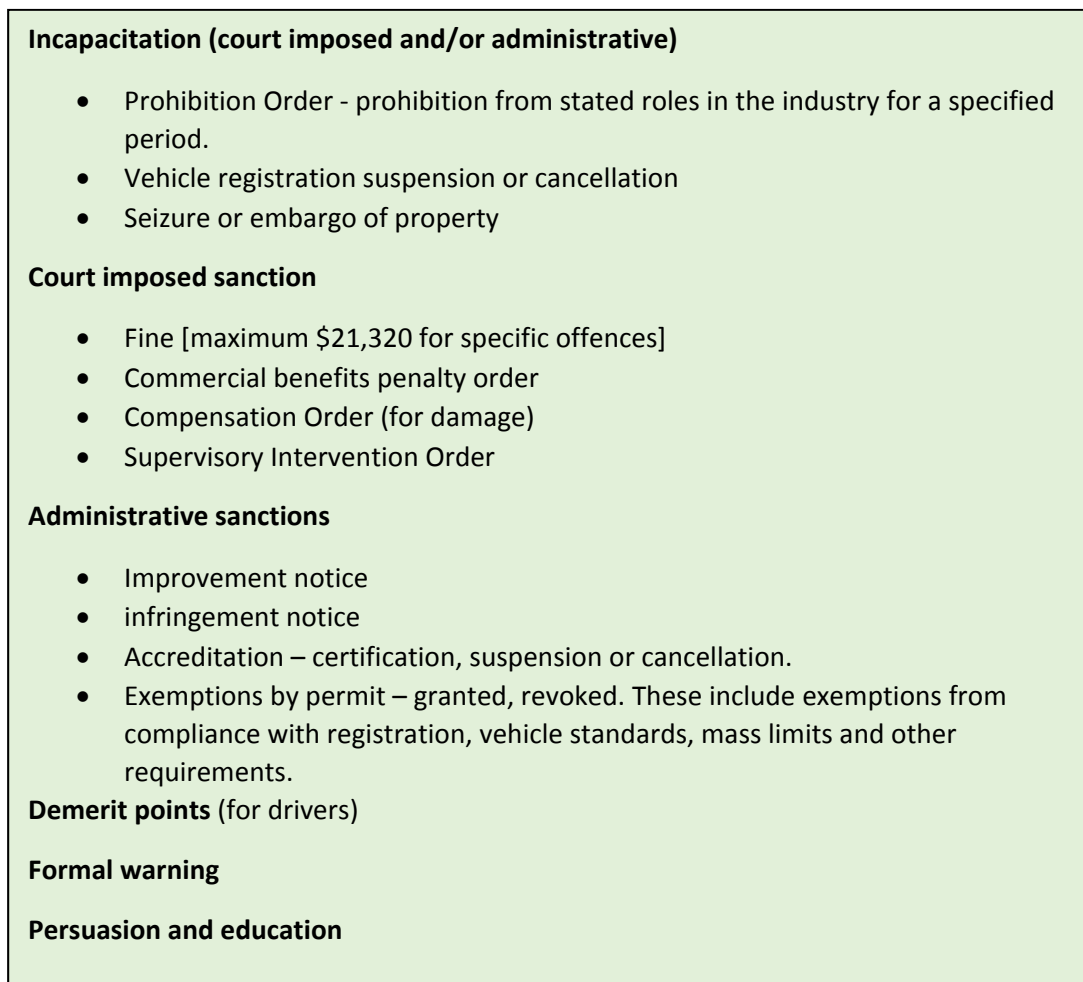
With the VicRoads prosecution of Miles Transport in 2010: 'The company was fined \$30,000 and three drivers more than \$8,000 between them as a result of an undercover 'tailing' and video operation that was held between Sydney and Melbourne ... We had six staff back then. It took all six staff for three days. No other work for six staff for three days ... but we had that solid evidence.'

Quotes from: Skinner, S. (2015) 'Rusty Chain' *FULLYLOADED.COM.AU*, April: 34-39.

<sup>20</sup> Regulations include: the Heavy Vehicle (Fatigue Management) National Regulation; Heavy Vehicle (General) National Regulation; Heavy Vehicle (Mass, Dimension and Loading) National Regulation; and Heavy Vehicle (Vehicle Standards) National Regulation.

<sup>21</sup> Heavy Vehicle National Law Act 2012 (Qld) s4.

The NHVR administers the work diary system. In addition, the regulator also oversees enforcement of the HVNL and Regulations through a system of national penalties. The NHVR appoints authorised officers with the power to inspect, monitor and enforce compliance with the laws. Police officers also have these powers<sup>22</sup>. Where authorised officers detect non-compliance that does not constitute a substantial or severe risk breach they can issue a formal warning. Where non-compliance is substantial, severe or repeated the authorised officer can issue an infringement penalty.



**Figure 5.3: Elements of the enforcement pyramid under the HVNL**

The National Heavy Vehicle Accreditation Scheme, which previously fell under the purview of individual state and territory authorities is now administered by the NHVR. This is a voluntary scheme, offering accreditation to operators who have implemented a management system for mass, maintenance, basic fatigue management and/or advanced fatigue management. By July 2014, the scheme had accredited more than 7,000 transport businesses (covering more than 93,000 vehicles), and was receiving an average of 82 new accreditation applications each month (NHVR 2014: 8).<sup>23</sup> Other accreditation and standards schemes which the NHVR administers include the Performance-Based Standards Scheme and the Vehicle Standards Approval Scheme.

<sup>22</sup> Heavy Vehicle National Law Act 2012 (Qld) ch9.

<sup>23</sup> For statistics on NHVAS applications and approvals go to NHVR Annual Report 2013-14, page 82.

Some of the limitations of the HVNL are the complexity of the regulations and that it requires extensive monitoring for detection. In addition, the focus remains foremost on the driver, before considering the chain of responsibility. However, the HVNL has the potential to hold all parties in chain of responsibility accountable and provides for court imposed and infringement penalties to deter non-compliance.

There is an overlap between the HVNL and WHS laws, with both imposing obligations on road transport operators in relation to providing safer workplaces. This is the chief objective of the WHS law which applies across industry sectors. However, the HVNL, which applies specifically to the heavy vehicle sector, also regulates particular aspects of the industry which have a bearing on health and safety, including the physical and structural design of workplaces and fatigue management. In addition, the HVNL has a further reach in the chain of responsibility than the WHS Act, to those who can influence driver compliance which extends beyond those who employ or directly contract with drivers.

### **5.5. The regulatory mix and enforcement strategy**

The complexity of WHS regulation in the heavy vehicle trucking sector is a common source of concern for industry stakeholders. In our interviews with key stakeholders, the difficulties of understanding and complying with so many schemes was a common refrain. Corporate respondents, in particular, urged the need for greater simplicity through the rationalisation of standards and auditing requirements.

One of the key difficulties in rationalising the current array of regulatory mechanisms lies in the mix of strategies used to change attitudes and behaviour. This is well-represented in Table Y below which maps the enforcement mechanisms involved. The four *legislative* schemes we have examined are accompanied by a traditional enforcement pyramid, although these vary in the range of options available and pyramid height. The three non-legislated schemes – codes of conduct, Bluecard and five star/SAFED – have different enforcement strategies. With all schemes the intention is to motivate safe behaviours through persuasion and education. However, where the WHS Act provides for criminal and civil prosecutions, administrative sanctions, structural requirements and reputational impacts, Bluecard invokes change through authorisation of certificates, and Voluntary Codes of Conduct rely on reputational impacts for enforcement.

In the Australian heavy vehicle sector, as Table 5.3 demonstrates, the HVNL provides the most comprehensive range of sanctions and incentives. Although the HVNL does not provide for criminal convictions and imprisonment (as does the WHS Act), it does contain provisions for incapacitation in the form of prohibition of persons from roles and responsibilities in the industry, as well as fines, administrative sanctions, powers to award and revoke accreditation, powers to award and withhold economic and market-based concessions, and sanctions in relation to physical/process design requirements.

**Table 5.1: The enforcement pyramid pertaining to each of the Six Pillars**

REGULATORY STRATEGY	SANCTIONS	CODES OF CONDUCT	BLUECARD	5 STAR TRUCKING and SAFED	FW Act	RSRT	HVNL	WHS Act
CRIMINAL/ INCAPACITATION	Conviction and/or term of imprisonment Prohibition from holding roles in industry.						X	X
CIVIL	Compensation orders and any other order the court considers appropriate					X		
CIVIL	Fines				X Max fine \$33,000	X Max fine \$6,600	X Max fine \$21,320	X Max fine \$1.5 million (Body Corporate)
ADMINISTRATIVE	Notices, prohibitions, orders and court-imposed undertakings				X	X	X	X
AUTHORISATION	The suspension or revocation of: <ul style="list-style-type: none"> <li>• Licences</li> <li>• Accreditation</li> <li>• Certification</li> <li>• Registration</li> </ul>		X	X			X	
INFORMATIONAL	Reputational sanctions	X		X			X	X
TRANSACTIONAL / MARKET	Largely confined to regulatory concessions in Australian road transport context			X			X	
ECONOMIC	Discounts and regulatory concessions			X			X	
STRUCTURAL	Physical/process design requirements (also sometimes linked to accreditation)						X	X
EDUCATION AND PERSUASION		X	X	X	X	X	X	X

### 5.5.1. Compliance and deterrence

Obviously, it is not enough to have sanctions available: evidence indicates that the deterrence effect of regulations is linked to the risk and probability of non-compliance being detected and sanctioned, and the existence of a credible peak (Ayres and Braithwaite 1992; OECD 2004). According to Purse *et al.* (2010: 54), the probability of detection makes the most significant contribution to deterrence, even when sanctions are low. The NTC reports many studies that demonstrate a positive relationship between threat of detection and compliant behaviour. For instance, Tasmanian and South Australian research indicated that random on-road intercepts for mass checking reduced non-compliance substantially (NTC 2013: 48-9). There is strong evidence that point-to-point speed enforcement is associated with high compliance (NTC 2013: 49). Purse *et al.* (2010: 53) report US research findings on the deterrent effect of inspections, that only inspections which result in sanctions for non-compliance have a deterrent effect.

There is evidence that specific *and* general deterrence also play important roles. With 'general' deterrence, the punishment of one organisation discourages others from engaging in similar conduct. 'Specific' deterrence is based on the notion that punishment of one organisation will make that organisation more inclined to take actions to avoid further sanctions. Evidence suggests that specific deterrence is stronger than general deterrence: the direct experience of having one's own organisation detected and sanctioned for committing an offence has a greater impact than hearing of it happening to others (Purse *et al.* 2010: 54).

Given that the risk and probability of sanction are critical to their deterrence effect, enforcement must impact directly on those actually responsible for non-compliance. However, for a number of well-documented reasons it remains difficult for regulators to sanction the supply chain participants who effectively control the parameters of work in the heavy vehicle sector. Several points illustrate this problem. First, the most commonly imposed civil penalty is a fine for infringements. Yet, according to the NTC, less than 1% of infringements are directed towards the responsible entities in the CoR. Rather,

'Overwhelmingly, it is drivers that bear the brunt of infringements as they are the observable entity at the point of breach. The weakness of this enforcement tool is that it has limited impact on the other parties in the CoR. These parties may influence or even induce the non-compliant behaviour of drivers and operators but incur no punishment or deterrent' (NTC 2013, p.55).

Second, as Stewart-Crompton, Mayman and Sherriff (2008: 127) observed, inspectors and courts persist in imposing excessively low average fines. In 2013, the NTC reported that while the HVNL empowered courts to impose financial penalties for a host of breaches, courts appeared unwilling to impose penalties at or near the theoretical maximum. The NTC found that, in Victoria, courts were imposing less than 3% of the theoretical maximum available. Further, the NTC noted that a fatigue offence that attracts a \$600 infringement reported regularly attracted a court fine of only \$150. When combined with the fact that fines were largely only imposed on drivers and operators, this meant that penalties were having little deterrent effect through the supply chain (NTC 2013: 65). The NTC also found that courts were making little use of other financial sanctions. For instance, the HVNL empowers a court to fine a person convicted of an offence up to three times the amount of gross commercial benefit they would have derived had the non-compliance gone undetected. However, evidence suggested that commercial benefit penalties were not being widely applied.

Similarly, courts were not awarding the compensation orders which the HVNL provided to pay a road authority compensation for infrastructure damage caused by overloaded vehicles. According to the NTC, a key reason why courts are reluctant to issue these penalties is that they lack industry knowledge and a methodology to calculate an appropriate monetary figure (NTC 2013: 66-67). This is not a phenomenon confined to the heavy vehicle road transport sector. Gunningham (2007: 365) observed in the mining industry, 'a cultural antipathy to prosecution' in some jurisdictions which has led to 'a paucity of prosecutions and the failure to provide any credible tip to the enforcement pyramid'.

In 2010, Purse *et al.* (2010: 23) noted that the use of criminal sanctions to address breaches of WHS legislation remained at an inordinately low level. Stewart-Compton *et al.* (2008: 83) argued that the reason why there had been so few prosecutions of senior managers lay in the legal complexities involved in determining the relevant corporate offices and the roles expected of them.

In responsive regulation theory, the notion of the 'benign big gun' is critical. Ayres and Braithwaite (1992: 6) argued, 'the greater the heights of the punitiveness to which an agency can escalate, the greater its capacity to push regulation down to the cooperative base of the pyramid' (p.40). The agency will therefore be more effective at securing compliance and less likely to have to resort to tough enforcement. Gunningham (2007: 359) observed that 'prosecution should be used sparingly, and carefully targeted to appropriate circumstances, and to actors who are most likely to respond positively to it'. He added that 'much greater impact is likely to be achieved by the strategic (and relatively frequent) use of administrative penalties, improvement and prohibition notices and on the spot fines at the lower reaches of the pyramid' (p.359). Yet, as Purse *et al.* (2010:39) observe, personal liability is a major motivator for CEOs and senior managers to comply with OHS obligations. A 2001 KPMG study found that 84% of CEOs regarded the threat of personal prosecution as a motivator for OHS improvements. Nonetheless, Gunningham (2007: 379) also concluded (in relation to the mining industry) that:

'It is only if OHS duty holders believe that persuasive and administrative enforcement mechanisms at the lower levels of the pyramid are being backed up by big sticks at the top of the pyramid, that specific and general deterrence are credible, and that 'rational calculators', in particular, are given sufficient incentive to comply with their legal obligations'.

Herein lies the importance of courts awarding penalties that demonstrate the 'big guns' at their disposal. However, the use of harsh penalties can also be counter-productive. Ayres and Braithwaite (1992: 52) argue that where a regulatory pyramid is in operation, 'compliance is predicted by the existence of an awesome armoury and by the avoidance of clumsy deployment of it' in terms of over- and under-reactions. In relation to prosecutions, Gunningham (2007: 369) cites evidence that a confrontational style of enforcement may diminish the willingness of firms to cooperate, learn from experience, share information and consult regulators for guidance. Gunningham (2007: 369) also notes there is evidence that deterrence is likely to have a much greater impact on small and medium-sized enterprises than large ones, because smaller firms have simpler management structures and key decision makers have relatively less capacity to avoid personal liability.

Despite the limited use of 'big guns', there have been notable successes with enforcing CoR. Data from Roads and Maritime Services in NSW suggests that a coordinated approach to enforcing speed limits has dramatically reduced speeding and fatal crashes. Through education, targeted operations,



point-to-point speed cameras and other strategies, the volume of heavy vehicles (over 12 tonnes) detected above 105 km/h dropped from a high of 54,000 in January 2011 to 4,000 in January 2015 (Wells, Interview 2015; Endycott, Interview 2015 (see Appendix 1)).

However, enforcement of legislation at the top of the CoR is difficult for several reasons: investigations are lengthy and resource intensive because they require dedicated staff, managers, IT analysts and other experts conducting investigations for sustained periods. As the NTC reports, typically investigations examine evidence of systemic and habitual breaches, unfair commercial advantage resulting from non-compliance, accidents and damage caused, pressures and demands placed on parties in the supply chain to breach laws. This requires examination of business premises and vehicles, electronic equipment and data, business documents, contracts and other records.

The NSW Roads and Maritime Services employs 350 compliance officers/investigators, of whom 20 are CoR investigators, as well as 285 front-line inspectors and eight safety stations to enforce heavy vehicle regulations. Not only is this investment in staffing and the associated investigative activity expensive, but it can also expose investigating bodies to negative press and political censure if unsuccessful (NTC 2013: 61-63). When the NSW Police and Roads and Maritime Services issued charges against a number of trucking companies, including Freds Interstate Transport in May 2012, a representative of Freds accused the NSW authorities of running 'a public relations stunt'. Mr Lennon, whose company Lennons Transport had received 240 court attendance notices for speeding and speed limiter offences, said: 'The drivers are the ones on the road, it's their issue... My trucks are getting checked and they never find anything' (Moore 2012).

### **5.5.2. Enforcement and the information gap**

As discussed in Section 4, many of the WHS pillars examined in this report motivate change through regulatory strategies other than legislation. These include a range of administrative arrangements which may or may not be court-ordered, including notices, undertakings and forms of accreditation and certification which are accompanied by economic, transactional, informational and reputational incentives and penalties. A key factor inhibiting analysis of the impact of each of these sanctions, in addition to the impact of prosecutions, is the lack of coherent, consistent, longitudinal statistical data on enforcement activity across jurisdictions. For example, there is no single, definitive collection of case law on WHS prosecutions under the HVNL, WHS Act and FW Act. There is also no dataset in the public domain which enables analysis of court-ordered administrative mechanisms and the outcomes of these arrangements.

Several mechanisms, including codes of conduct, 5five star trucking rating systems, accreditation under the HVNL, and the WHS provisions for adverse publicity, aim to improve safety behaviours through risks to corporate reputation. Do reputational sanctions have a significant deterrence impact? Purse *et al.* (2010; 38) report UK research which found that the concern for corporate reputation had a strong influence on board-level governance arrangements regarding OHS. However, the limited Australian research suggests that corporate reputation is more important to CEOs in large companies particularly those operating in high-risk areas, but overall plays a significant role in motivating CEOs to act on OHS in only one third of cases. There is no known research on the impact of more recently introduced reputational strategies.

A number of commentators on the heavy vehicle road transport industry have expressed concern about the lack of empirical data on WHS in recent years. In 2010, Purse *et al.* (pp55-56) noted the

'conspicuous lack of published studies' on the impact of particular sanctions under OHS law as well as the role of enforcement, more broadly, in promoting compliance with OHS legislation and reducing OHS risks and incidents. An NTC (2012:12) survey on compliance and enforcement found that the heavy vehicle industry wants to know more about prosecutions because they provide tangible evidence of the impact of supply chain reforms. The NTC (2013: 46) argues the importance of publicising the outcomes of enforcement activity, including prosecutions, to reinforce self-regulation, assure the 'good guys' that the 'bad guys' are being caught, and demonstrate to non-compliers the likelihood of detection. Publication is also an avenue for impacting on corporate reputations through naming and shaming.

## **5.6. Concluding observations**

This section has explored six forms of WHS regulation either operating in or considered for the Australian heavy vehicle road transport sector. In terms of types of the range of mechanisms currently operating, a significant gap that there is not yet a comprehensive transactional strategy which has the potential to influence directly the market access of firms according to whether or not they adopt systems of accreditation or certification. Regulation of the chain of responsibility is heavily reliant on legislation, particularly since abolition of the RSRT removed the collective bargaining option for contractor drivers. Overall, however, the above analysis suggests that the regulation of WHS in the heavy vehicle road transport industry lies in a complex network of arrangements with a variety of sources, targets, forms and strategies within which it would be difficult to identify one mechanism which could 'cover the field'.

Almost two decades ago, Gunningham and Johnstone (1999: 124) suggested that the OHS pyramid in Australia was 'bottom heavy'. Johnstone (2004: 177) observed that the sanctions available at the upper level of the pyramid were inadequate to serve the purposes for which they are intended. This has changed in recent years with the introduction of criminal sanctions, incapacitation (in the form of bans) and increased fines. These have the potential to engender stronger specific and general deterrence. The absence of comprehensive data in the public domain on enforcement, however, reduces the likelihood of general deterrence. Moreover, the difficulties of resourcing investigations leading to successful prosecutions impedes both specific and general deterrence.

At the same time, however, the range of administrative/supervisory arrangements under legislation, along with co- and meta-regulation through accreditation and certification systems provides potentially rich sources of education, guidance and persuasion to engender compliance but also to move beyond compliance. In the next section, we examine research findings on drivers' perceptions and experiences of regulation in the heavy vehicle workplace.

## PART C. RESULTS

This Part examines the findings of the survey of heavy vehicle truck drivers which was conducted online, as a paper survey, and through face-to-face interviews. Drivers' perceptions and experiences of WHS risks, injury causing events, WHS training, reporting and regulation are explored, along with correlations between these and the characteristics of the respondent population and the complex and multi-layered workforce they inhabit. The survey is included in Appendix B.

### 6. FINDINGS

The survey collected data on truck drivers' perceptions and experiences with WHS risks and hazardous events, safety policies and procedures at work, management commitment to safety, regulatory enforcement, WHS reporting and other WHS matters. We also collected data on respondents' employment arrangements, working hours and remuneration methods. Information on respondents' age, geographical base, driving experience, type of truck and distances travelled were also gathered.

#### 6.1. Characteristics of sample

Table 6.1 outlines the demographic characteristics of the 559 drivers in the respondent population. While we drew respondents in all age categories, the sample is skewed towards older workers: 71% were 45 years or over with more than 51% having been truck drivers for 20+ years. This is broadly representative of the road transport industry profile. One in five respondents were owner drivers and the majority of respondents drove for a single employer or contractor.

**Table 6.1. Descriptive statistics**

Respondents	Driver age			Driving experience			Driving for:		
<b>Owner drivers (N=118, 21%)</b>	Under 25yrs	7	6%	Less than 6yrs	12	10%	A single		
	25-34	15	13%	6-10	15	13%	company	84	71%
	35-44	13	11%	11-20	19	16%	Multiple		
	45-54	37	31%	21-30	21	18%	Companies	34	29%
	55-64	37	31%	31+	31	26%			
	65 +	9	8%	No response	20	17%			
	<b>TOTAL</b>	<b>118</b>	<b>100%</b>	<b>TOTAL</b>	<b>118</b>	<b>100%</b>	<b>TOTAL</b>	<b>118</b>	<b>100%</b>
<b>Employee drivers (N=441, 79%)</b>	Under 25yrs	2	0.5%	Less than 6yrs	33	7.5%	A single		
	25-34	44	10.0%	6-10	51	11.5%	company	404	92%
	35-44	78	17.5%	11-20	85	19.5%	Multiple		
	45-54	141	32.0%	21-30	84	19.0%	companies	37	8%
	55-64	146	33.0%	31+	89	20.5%			
	65 +	25	6.0%	No response	99	22.0%			
	<b>TOTAL</b>	<b>441</b>	<b>100%</b>	<b>TOTAL</b>	<b>441</b>	<b>100%</b>	<b>TOTAL</b>	<b>441</b>	<b>100%</b>
<b>Total (N=559, 100%)</b>	Under 25yrs	9	1.6%	Less than 6yrs	45	8.0%	A single		
	25-34	59	10.6%	6-10	66	11.8%	company	488	87%
	35-44	91	16.3%	11-20	104	18.6%	Multiple		
	45-54	178	31.8%	21-30	105	18.8%	companies	71	13%
	55-64	183	32.7%	31+	120	21.5%			
	65 +	34	6.1%	No response	119	21.3%			
	<b>TOTAL</b>	<b>559</b>	<b>100%</b>	<b>TOTAL</b>	<b>559</b>	<b>100%</b>	<b>TOTAL</b>	<b>559</b>	<b>100%</b>

**Table 6.2. Descriptive statistics – driving work**

Respon- dents	State in which the driver is based:		Vehicle Type	N	%	Distance:	Metro- politan	> 100 kms	> 500 kms	Inter- state
<b>Owner drivers (N=118)</b>	NSW	60 51%	Rigid	30	25%	Most/all	44%	43%	26%	16%
	VIC	27 23%	Semi-trailer	67	57%	Some-times	21%	36%	31%	24%
	QLD	17 14%	B-Double	15	13%	Rarely/never	25%	14%	30%	42%
	SA	4 4%	Road train	5	4%	No response	10%	7%	13%	18%
	WA	6 5%	No Response	1	1%	<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
	Other	1 1%	<b>TOTAL</b>	<b>118</b>	<b>100%</b>					
	No response	3 2%								
	<b>TOTAL</b>	<b>118 100%</b>								
<b>Employee drivers (N=441)</b>	NSW	242 55%	Rigid	112	25%	Most/all	46%	47%	37%	26%
	VIC	90 21%	Semi-trailer	139	32%	Some-times	18%	31%	20%	15%
	QLD	45 10%	B-Double	160	36%	Rarely/never	29%	17%	35%	51%
	SA	23 5%	Road train	22	5%	No response	7%	5%	8%	8%
	WA	27 6%	Other	4	1%	<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
	Other	8 2%	No Response	4	1%					
	No response	6 1%	<b>TOTAL</b>	<b>441</b>	<b>100%</b>					
	<b>TOTAL</b>	<b>441 100%</b>								
<b>Total (N=559)</b>	NSW	302 54%	Rigid	142	25%	Most/all	46%	46%	34%	24%
	VIC	62 21%	Semi-trailer	206	37%	Some-times	18%	32%	22%	16%
	QLD	117 11%	B-Double	175	31%	Rarely/never	28%	17%	35%	50%
	SA	27 5%	Road train	27	5%	No response	8%	5%	9%	10%
	WA	33 6%	Other	5	1%	<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
	Other	9 2%	No Response	4	1%					
	No response	9 2%	<b>TOTAL</b>	<b>559</b>	<b>100%</b>					
	<b>TOTAL</b>	<b>559 100%</b>								

The majority of respondents were based in NSW (54%), then Victoria (21%) and Queensland (11%), although each jurisdiction was represented (Table 6.2). A quarter of respondents drove a rigid truck, and 70% drove either a semi-trailer or B-double. While 46% of respondents drove more than 100 km for **all their trips**, a third drove more than 500 km every trip and for 25% that included interstate travel. For distances driven in **any trip**, however, we found that over 40% drive interstate at least some of the time, 56% drive more than 500 km for their return trip and 78% are driving more than 100 km from base at least some of the time. This means the large majority of drivers are involved in long distance haulage at least some of the time. The main types of freight carried were general or mixed freight (37.2%), refrigerated/groceries (31.8%), bulk material (24.9%) and dangerous goods (20.9%), with other freight categories represented, but at much lower proportions (See Table 6.3).

**Table 6.3. Descriptive statistics – freight**

Types of Freight carried by drivers					
Owner drivers		Employee drivers		All drivers	
General/mixed	31%	General/mixed	43%	General/mixed	37%
Bulk materials	28%	Grocery/refrigerated	37%	Grocery/refrigerated	32%
Grocery/refrigerated	27%	Bulk materials	27%	Bulk materials	25%
Dangerous goods	21%	Dangerous goods	23%	Dangerous goods	21%
Construction	18%	Construction	16%	Construction	15%
Vehicles	15%	Vehicles	8%	Vehicles	7%
Farm/stock	9%	Farm/stock	7%	Farm/stock	6%
Containers/secured	3%	Containers/secured	4%	Containers/secured	3%
Other	10%	Other	13%	Other	11%

Note: percentages do not add to 100% as many drivers carried multiple types of freight

## 6.2. Prior injury experience

Safe Work Australia (2015) has identified the most common injuries experienced by truck drivers and the associated causes<sup>24</sup>. These result in thousands of injuries to truck drivers each year, including hundreds of fatal or permanently disabling injuries. Using the causes identified by Safe Work Australia, we asked respondents a series of questions about their experience of these causal events. The results are summarised in Table 6.4.

**Table 6.4. Hazardous events experienced**

HAZARDOUS EVENT	OWNER DRIVERS		EMPLOYEE DRIVERS		ALL RESPONDENTS		N
	Past 12 mths	Ever	Past 12 mths	Ever	Ever	Never	
Falling or slipping out of the cab	22 (20%)	55 (50%)	72 (18%)	212 (52%)	267 (52%)	249 (48%)	516
Falling off the cab, trailer or loading dock	15 (14%)	49 (44%)	48 (12%)	185 (46%)	234 (45%)	283 (55%)	517
Exposure to damaging levels of air pollution	31 (28%)	46 (41%)	121 (30%)	176 (44%)	222 (43%)	292 (57%)	514
Driving into a stationary object other than a vehicle	14 (13%)	37 (34%)	40 (10%)	177 (44%)	214 (42%)	300 (58%)	514
Walking into things	18 (16%)	38 (35%)	73 (18%)	154 (38%)	192 (37%)	323 (63%)	515
Being hit by falling objects	13 (12%)	30 (28%)	41 (10%)	133 (33%)	163 (32%)	351 (68%)	514
Driving into a moving vehicle	6 (5%)	18 (16%)	27 (7%)	120 (29%)	138 (27%)	380 (73%)	518
Driving into a stationary vehicle	6 (6%)	22 (21%)	15 (4%)	81 (20%)	103 (20%)	410 (80%)	513
Being hit by moving vehicles	4 (6%)	7 (10%)	8 (2%)	63 (16%)	70 (15%)	404 (85%)	474
Roll overs	2 (2%)	10 (9%)	5 (1%)	40 (10%)	50 (10%)	463 (90%)	513

Given falls from height are associated with the greatest number of compensation claims for severe and fatal injury, it is notable that over half the respondents indicated they had fallen or slipped out of the cabin of a truck, and almost half had personally fallen off the cab, trailer or loading dock. Table 6.4 shows that the most commonly experienced incidents reported by respondents were falling or slipping out of the cab (52%), falling off the cab, trailer or loading dock (45%), driving into stationary objects (42%) and exposure to damaging levels of air pollution (43%). In contrast, relatively few respondents had personally experienced rollovers (10%), being hit by moving vehicles (15%) or driving into a stationary vehicle (20%). Curiously, employee drivers were over 20% more likely than owner drivers to report having ever driven into stationary objects or been hit by falling objects, almost twice as likely driven into a moving vehicle (29% versus 16%) and 56% more likely to have been hit by a moving vehicle (16% versus 10%). Furthermore, we recognise the potential for under-reporting of events as accurate recall can be difficult over a long period. One interviewed driver stated that he had never fallen from a cabin, then was reminded by a colleague of a serious injury sustained years before. He responded, "Oh yeah, I forgot about that". Another survey stated,

*"[Have I been] Hit by moving vehicles? No... but many near misses. All the time."*

<sup>24</sup> These contributing factors ('causes') are identified in the Safe Work Australia reports as mechanisms of injury and breakdown agencies.

### 6.2.1. Perceptions of likelihood of injury

Drivers were then asked about their perceptions of the likelihood that these types of hazardous events could be experienced by drivers, generally. Evidence from workers' compensation claims suggests that truck drivers have a significant risk (12-53% chance) of experiencing one or more of these serious events over their work life. Despite this, over half the respondents rated most events as unlikely or very unlikely, or were unsure as to their likelihood.

**Table 6.5: Perceptions of incidents experienced by truck drivers**

Hazardous event	Very likely	V/Likely +Likely	Unsure	V/unlikely + Unlikely	Very unlikely	Total (N = )
Falling off the cab, trailer or loading dock	13%	55%	9%	36%	14%	524
Falling or slipping out of the cab	11%	54%	10%	36%	12%	524
Exposure to damaging air pollution	15%	49%	12%	39%	16%	523
Driving into a stationary object (not vehicle)	7%	46%	17%	38%	14%	524
Being hit by moving vehicles	8%	46%	18%	37%	13%	525
Driving into a moving vehicle	7%	45%	15%	39%	13%	521
Walking into things	8%	39%	15%	47%	18%	523
Roll overs	6%	38%	17%	44%	20%	522
Being hit by falling objects	6%	35%	15%	50%	17%	522
Driving into a stationary vehicle	4%	33%	13%	53%	16%	522

Table 6.5 reveals that respondents generally underestimated the potential for drivers to experience the types of incidents that history shows to frequently result in serious injury and illness for truck drivers, which is cause for concern.

### 6.2.2. Association between injury experience and risk perception.

To what extent do drivers' perceptions of risk match their personal experience? The correlation matrix presented in Table 6.5 demonstrates a robust and significant relationship between the experience of a particular event and perceived likelihood of an injury arising from that type of event. The results demonstrate that, for those respondents who had not experienced a particular event, the very large majority (77%-96%) thought that it was unlikely to happen to other drivers. There was also a tendency, though less pronounced, for those drivers who had experienced a particular event to think it was likely to happen to others. While the pattern was consistent across each item for the negative, the finding was slightly weaker for the positive. That is, there was a correlation between the perception that an incident is likely to occur and a driver having had personal experience of a similar incident. Thus, as Table 6.5 indicates, **specific**\_experience of an event is more strongly linked to accurate perceptions of risk than **general**\_experience in the driver population.

Furthermore, drivers who **had** experienced a major hazardous event, such as a fall from height, were more likely to recognise other potentially hazardous events and perceive them as likely occurrences than those who had not. A clear exception was evident, however, for drivers who had experienced a vehicle rollover. Those drivers were no more or less likely to perceive the risk of rollover to be probable than drivers who had not experienced a rollover. This is perhaps because rollover incidents are more widely publicised and the resulting risk of injury is more widely recognised as a work-related hazard among drivers than other potentially harmful events.

**Table 6.6: Correlation matrix: Perception versus experience of hazardous event**

		Perception: Driving into a moving vehicle	Perception: Driving into a stationary vehicle	Perception: Driving into a stationary object (not vehicle)	Perception: Vehicle rollovers	Perception: Falling off the cab, trailer or loading dock.	Perception: Falling or slipping out of the cabin	Perception: Being hit by falling objects	Perception: Being hit by moving vehicles	Perception: Walking into things	Perception: Exposure to damaging air pollution
Experience: Driving into a moving vehicle	Pearson Correlation	<b>-.209**</b>	<b>-.121**</b>	<b>-.125**</b>	0.018	-0.085	-0.058	-0.026	-0.048	<b>-.098*</b>	<b>-.117**</b>
	Sig. (2-tailed)	0.000	0.006	0.004	0.677	0.053	0.188	0.558	0.275	0.024	0.007
	N	520	522	523	521	523	523	521	524	522	522
Experience: Driving into a stationary vehicle	Pearson Correlation	<b>.163**</b>	<b>.229**</b>	<b>.188**</b>	-0.008	<b>.116**</b>	<b>.120**</b>	0.057	<b>.153**</b>	<b>.113*</b>	<b>.237**</b>
	Sig. (2-tailed)	0.000	0.000	0.000	0.864	0.009	0.007	0.202	0.001	0.011	0.000
	N	501	503	504	502	505	504	502	506	503	503
Experience: Driving into a stationary object - not vehicle	Pearson Correlation	<b>-.185**</b>	<b>-.218**</b>	<b>-.334**</b>	0.001	<b>-.169**</b>	<b>-.166**</b>	-0.063	<b>-.136**</b>	<b>-.101*</b>	<b>-.184**</b>
	Sig. (2-tailed)	0.000	0.000	0.000	0.983	0.000	0.000	0.159	0.002	0.023	0.000
	N	503	505	506	504	506	506	504	507	505	505
Experience: Vehicle rollovers	Pearson Correlation	-0.069	-0.038	-0.008	<b>-.097*</b>	0.030	-0.002	0.026	-0.009	-0.084	-0.011
	Sig. (2-tailed)	0.123	0.389	0.856	0.030	0.504	0.963	0.560	0.834	0.060	0.800
	N	502	504	505	503	505	505	503	506	504	504
Experience: Falling off the cab, trailer or loading dock	Pearson Correlation	<b>-.155**</b>	<b>-.107*</b>	<b>-.151**</b>	<b>-.097*</b>	<b>-.309**</b>	<b>-.256**</b>	<b>-.184**</b>	<b>-.124**</b>	<b>-.221**</b>	<b>-.190**</b>
	Sig. (2-tailed)	0.000	0.015	0.001	0.029	0.000	0.000	0.000	0.005	0.000	0.000
	N	507	509	510	507	510	509	508	511	509	509
Experience: Falling or slipping out of the cab	Pearson Correlation	<b>-.206**</b>	<b>-.162**</b>	<b>-.192**</b>	-0.063	<b>-.312**</b>	<b>-.381**</b>	<b>-.135**</b>	<b>-.162**</b>	<b>-.186**</b>	<b>-.168**</b>
	Sig. (2-tailed)	0.000	0.000	0.000	0.154	0.000	0.000	0.002	0.000	0.000	0.000
	N	505	507	508	506	508	508	506	509	507	507
Experience: Being hit by falling objects	Pearson Correlation	<b>-.091*</b>	<b>-.108*</b>	-0.048	-0.043	<b>-.155**</b>	<b>-.172**</b>	<b>-.444**</b>	-0.082	<b>-.183**</b>	<b>-.152**</b>
	Sig. (2-tailed)	0.041	0.015	0.282	0.339	0.000	0.000	0.000	0.065	0.000	0.001
	N	504	506	507	504	507	506	505	508	506	506
Experience: Being hit by moving vehicles	Pearson Correlation	<b>-.138**</b>	-0.089	<b>-.128**</b>	<b>-.120**</b>	-0.088	<b>-.126**</b>	<b>-.171**</b>	<b>-.195**</b>	<b>-.195**</b>	<b>-.175**</b>
	Sig. (2-tailed)	0.003	0.054	0.006	0.010	0.057	0.007	0.000	0.000	0.000	0.000
	N	464	466	467	464	467	466	465	468	466	466
Experience: Walking into things	Pearson Correlation	<b>-.200**</b>	<b>-.205**</b>	<b>-.207**</b>	<b>-.119**</b>	<b>-.190**</b>	<b>-.186**</b>	<b>-.213**</b>	<b>-.144**</b>	<b>-.464**</b>	<b>-.210**</b>
	Sig. (2-tailed)	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.001	0.000	0.000
	N	504	506	507	505	507	507	505	508	506	506
Experience: Exposure to damaging air pollution	Pearson Correlation	<b>-.153**</b>	-0.034	<b>-.113*</b>	-0.002	<b>-.123**</b>	<b>-.122**</b>	<b>-.115**</b>	<b>-.124**</b>	<b>-.127**</b>	<b>-.570**</b>
	Sig. (2-tailed)	0.001	0.443	0.011	0.960	0.006	0.006	0.009	0.005	0.004	0.000
	N	505	507	507	504	507	506	505	508	507	506

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

### 6.2.3. Perceptions concerning the causes of injury

We asked respondents about their perceptions of why drivers experienced work-related injuries and whether they resulted from one or more of a list of identified factors. The respondents were asked to rate on a five point Likert scale how likely they thought each of 16 factors was to lead to driver injury. Notably, drivers readily identified immediate mechanisms of injury, such as other road users, fatigue and lack of concentration as the most likely cause of injury. As Table 6.7 indicates, causes most frequently identified by drivers included (in the following order):

- other drivers on the road (89 %),
- being tired, distracted or rushing (86 %),
- poor or very tight schedules (82 %)
- inadequate rest times or rest breaks (76 %)
- poor maintenance of vehicles (74 %)

Nevertheless, many drivers also recognised various upstream factors, such as, maintenance, roadside rest facilities and safe design, as important to ensure WHS.

**Table 6.7: Drivers' perceptions of causes of injury**

	Very likely	Likely or very likely	Unsure	Unlikely or very unlikely	Very unlikely	N =
1. Other drivers on the road (e.g. cars)	54	89	4	7	3	495
2. Rushing	54	86	7	7	0	117
3. Being tired	52	85	3	12	4	495
4. Being distracted/poor concentration	46	87	2	11	4	494
5. Poor or very tight schedules	38	82	5	13	5	496
6. Inadequate rest time and rest breaks	39	76	5	19	7	496
7. Poor maintenance of vehicles	39	74	6	21	9	496
8. Inadequate toilets and other rest facilities	32	68	9	22	7	495
9. Inadequate formal truck driver training	35	72	7	20	7	496
10. Lack of WHS training	24	71	9	20	7	496
11. Poor truck design (e.g. steps and handrails)	25	64	11	26	10	498
12. Lack of familiarity with vehicle	23	62	9	29	11	495
13. Strapping difficult loads	22	63	12	24	12	494
14. Lack of familiarity with the route	21	68	10	22	7	498
15. (Un)loading at different destinations	17	53	16	31	7	494
16. Carrying different types of freight	16	53	15	32	14	491



### 6.3. Influence of WHS training

Drivers were asked about the types of WHS training they had received/undertaken. The analysis sought to explore the extent to which various types of formal and informal training may influence the risk perceptions presented in Section 6.2. Most apparent from the responses was the level of WHS training with which many truck drivers had engaged. Table 6.8 demonstrates that almost every driver reported having undertaken training in one form or another. The vast majority (83.3%) reported having engaged in multiple forms of training. Most prevalent was informal, company provided training such as employer instructions and tool box talks, with participation in formal, external training courses less evident.

**Table 6.8: WHS training that truck drivers have received/undertaken**

Training	Owner drivers		Employee drivers		All drivers N=538%
	For one contractor N=84	Multiple contractors N=34	One employer N=404	Multiple companies N=37	
<b>Employer instructions / inductions*</b>	<b>83 %</b>	58 %	<b>84 %</b>	75 %	82.0%
<b>On the job training*</b>	63 %	50 %	<b>72 %</b>	53 %	67.8%
<b>Toolbox talks**</b>	58 %	22 %	<b>67 %</b>	42 %	61.3%
<b>Formal driver training</b>	36 %	36 %	<b>47 %</b>	44 %	44.4%
<b>Bluecard</b>	40 %	33 %	40 %	<b>42 %</b>	39.6%
<b>Union training*</b>	20 %	14 %	<b>31 %</b>	17 %	27.3%
<b>No training</b>	8 %	8 %	4 %	6 %	5 %

**Note:** Respondents indicate each type of training provided and some recorded multiple answers.

As Table 6.8 indicates, training profiles differed across employment types. Drivers employed by and driving for a single company were most likely to be provided on-the-job WHS training and opportunities to attend toolbox talks. By comparison, owner drivers working for a single company, and casual/contract drivers working for multiple companies reported lower levels of engagement in WHS training. In particular, they were least likely to attend regular training, such as toolbox talks, and more likely to have undertaken no WHS training. Overall, the data indicates strongly that unless a driver is working with a single company, WHS training is given less attention.

Engagement in the various types of training did not vary significantly across drivers with varying lengths of driving experience; with one exception. A weak association was found between drivers with less than six years driving experience and higher participation in formal driver training courses. That is, those driving for less than six years were more likely to have had formal driving training (63%) than those who had been driving for six to 10 years (49%) or more than 10 years (38-45%). This may reflect recent trends in government subsidised vocational training as well as increasing demand from employers for appropriately skilled young workers.

Survey respondents took the opportunity to provide free text responses about training, with most talking about the need for better training of new drivers. Typical of the responses were,

*“I’ve had 20 years experience and I was taught well by the old school drivers. A lot of the new blood in the industry aren’t being taught very well I’ve noticed. We have less Professional Drivers these days, and far too many Steering Wheel Attendants. I believe this in itself is contributing to a lot of accidents in our industry. Particularly on the road.”*

*“Inexperienced drivers on the road. Getting a licence isn't regulation enough - people need experience.”*

*“Trainee truck drivers should be treated as apprentices. The skill level of drivers is falling under commercial pressures while the responsibilities are increasing. Giving someone a full HC or MC license today without a competent understanding of state and federal laws, maintenance, vehicle operation, load restraint, dangerous goods handling, transport and storage, record requirements, accident and survival training. Load planning and route familiarisation is just the start. We don't expect pilots of large commercial planes to guess their job. Yet we send green drivers out, including some who cannot speak or read English, out onto our highways with 50, 60 and some places 100t+ juggernauts. [They] just want to work but do not get adequate training.”*

Demands for better education were not only directed at truck drivers. Many respondents raised concerns about the extent to which car drivers understand the needs of heavy vehicles. For example,

*“People in cars and on motor bikes regularly cause accidents by cutting in front close or overtaking on the left hand side of all trucks, reducing safe stopping distances for the truck driver. This requires more effort and skill from the truck driver to brake and stop in an emergency situation and usually ends in an accident. More driver education is required.”*

*“I think there needs to be more education for car drivers. On how to drive around and with heavy vehicles. i.e. gap stealing, stopping too quickly, sitting beside trucks. They don't understand how many blind spots there are around a truck. How long it takes to stop. They don't give enough indication when turning. More education, I can't stress it enough.”*

*“Other drivers (car drivers etc) need to be better informed about the challenges and dangers of driving a heavy vehicle, so they can better accommodate them on the road.”*

*“All road users should sit a road rules written test every time they renew their licence & licences should be renewed every five years.”*

*“There should be a section in the learners permit manual, plus drivers manual (truck characteristics, length, weight, turning parameters and stopping distances) for car drivers. I would also like more funded advertisements and video on compatibility between cars and trucks via the media, TV AND RADIO. Remember, the BETTER EDUCATED we are the safer we will hopefully be.”*

### **6.3.1. Association between training and risk perception.**

Correlation analysis was used to explore whether there may be a significant association between types of training and driver perceptions about causes of injury (Table 6.9). This revealed that drivers who had completed tailored on the job training, formal driver training, or bluecard training were significantly more likely to recognise risks associated with organisational-level risk factors, such as quality of scheduling or job design, than those who had not received those types of training. Further, drivers whose only training was informal and employer-based were significantly less likely to identify inadequate training or experience as a significant WHS risk factor (29.9%) than those completing external WHS training courses (70%).

**Table 6.9: Correlation matrix: Perception versus experience of hazardous event**

		Inductions/ instructions	Toolbox talks	On-the- job training	Formal driver training	Union training	Bluecard
Personal factors (tired/distracted)	Pearson Correlation	-0.078	0.034	0.027	0.033	0.034	0.108
	Sig. (2-tailed)	0.080	0.444	0.551	.0458	0.451	0.016*
	N	497	497	497	497	497	497
Poor scheduling	Pearson Correlation	-0.046	0.019	0.084	0.095	0.008	0.065
	Sig. (2-tailed)	0.301	0.676	.062	0.034*	0.865	0.150
	N	497	497	497	497	497	497
Poor job design	Pearson Correlation	-0.045	0.052	0.119	0.115	0.001	0.103
	Sig. (2-tailed)	0.303	0.248	0.008**	0.010*	0.979	0.022*
	N	499	499	499	499	499	499
Inadequate training/ experience	Pearson Correlation	-0.021	0.000	0.069	0.083	0.100	0.075
	Sig. (2-tailed)	0.635	0.994	0.125	0.065	0.026*	0.094
	N	498	498	498	498	498	498
Other drivers	Pearson Correlation	-0.105	0.042	0.008	0.017	0.049	0.017
	Sig. (2-tailed)	0.020**	0.347	0.858	0.713	0.270	0.700
	N	495	495	495	459	495	495

### 6.3.2. Association between training and injury experience.

Analysis also explored whether there was any association between WHS training and drivers' perceptions of the likelihood of injury resulting from the events (causes) most commonly associated with fatal/disabling injury for transport workers (Table 6.10). The results revealed surprising differences in experience of hazardous events and perceived injury risk, depending on the type of WHS training drivers had received. On the one hand, drivers who had undertaken formal driver training reported having experienced lower rates of those incidents (such as falling off a truck, out of a cab, or being hit by falling objects). In contrast, drivers who had only received informal training had experienced higher rates of these types of hazardous events.

**Table 6.10 Correlation between training and perceived risk of injury.**

Question	% Perceive injury as very/likely					% Prior experience of hazardous events				
	No training	Informal training	Formal training	Both modes	Total	No training	Informal training	Formal training	Both modes	Total
<b>Falling off the cab, trailer or loading dock</b>	59	58	43	52	54	46	48	35	43	44
<b>Falling or slipping out of the cab</b>	44	60	36	55	55	50	56	42	50	51
<b>Roll overs</b>	26	43	32	37	38	4	13	12	8	9
<b>Exposure to damaging air pollution</b>	37	48	32	47	46	41	43	33	41	41
<b>Walking into things</b>	19	49	43	36	39	33	43	38	35	37
<b>Being hit by moving vehicles</b>	37	53	39	44	46	17	19	14	12	14
<b>Being hit by falling objects</b>	15	40	21	33	33	38	36	20	29	31
<b>Driving into a moving vehicle</b>	31	45	39	48	46	15	26	23	28	27
<b>Driving into a stationary vehicle</b>	22	34	32	38	36	19	18	20	21	20
<b>Driving into a stationary object other than a vehicle</b>	22	49	32	53	49	15	43	32	44	42

Despite this, drivers who had participated only in informal training opportunities, such as toolbox talks or on-the-job training, were more likely to recognise the hazards as likely or very likely to cause injury than those who had participated only in a formal education course. This result held, albeit weakly, even after adjusting for drivers with a prior experience of these events. It also held when examining responses in the reverse direction, i.e. for those drivers who reported to perceive risks as 'unlikely', and those who had never experienced these events (Table 6.11).

**Table 6.11 Correlation between training and unlikely risk of injury.**

Question	No training	Informal training	Formal training	Both modes	No training	Informal training	Formal training	Both modes
	% Perceive injury as very/UN-likely				% NO prior experience			
Falling off the cab, trailer or loading dock	37	10	43	38	54	52	65	57
Falling or slipping out of the cab	52	9	46	36	50	44	<b>58</b>	50
Being hit by falling objects	67	13	64	55	62	64	<b>80</b>	71
Being hit by moving vehicles	52	10	43	38	83	81	86	88
Driving into a moving vehicle	48	10	39	40	85	74	77	72
Driving into a stationary vehicle	63	10	46	50	81	82	80	79
Driving into a stationary object other than a vehicle	59	8	50	37	85	57	68	56
Roll overs	56	12	43	48	96	87	88	92
Exposure to damaging air pollution	52	11	50	36	59	57	67	59
Walking into things	67	13	36	50	67	57	62	65

Together, this appears to indicate that the continual reinforcement of risk awareness among workers, through regular, targeted training activities such as toolbox talks, has strong benefits for developing risk perception. However, this risk awareness does not necessarily appear to translate into prevention of hazardous experiences. We note that those drivers who had completed formal training had lower rates of experience with hazardous events. It may be that drivers with formal training better understand, and apply, appropriate controls and practices to reduce that risk of injury and therefore perceive these events as less likely. Clarification of this relationship between training, risk perception and injury experience through future and more focused research into the content and effectiveness of WHS training is clearly warranted.

## 6.4. Influence of work environment

### 6.4.1. Task variability

The survey sought to identify patterns of work and task variation, because prior research points to an association between unfamiliarity in aspects of work and WHS outcomes. We asked respondents how often their work changed in the following ways: driving different types of truck, different trucks of the same type, different routes, different types of freight and loading/unloading at different destinations. The data revealed considerable variability in routes driven and the destinations at which drivers (un)load their vehicles. More than four in five respondents drive different routes (82.2%) and (un)load at different destinations (81.6%) at least some of the time. More than half the drivers also reported driving different types of trucks (52.1%) and different trucks of the same type (62.4%) and carrying different types of freight (60.0%). Thus, for most drivers, multiple aspects of their work are often unfamiliar.

*“I work as a casual and nearly every task is my first time on a site or task, so much higher stress levels and also no structured time off. Would be many times where I drop everything to do a shift, so a day out with family gets canned or I have to knock back some work because I am already working. A full-time job allows guaranteed time off for keeping appointments and family events etc. Working casual is better than no work, but a wretched existence with different tasks and sites etc!”*

*“Every yard is totally different.”*

**Table 6.12: Task Variation for heavy vehicle drivers**

Work environment - variable	Owner drivers			Employee drivers		
	Rarely- Never %	Some- times %	Mostly- Always %	Rarely- Never %	Some- Times %	Mostly- Always %
Load and unload at different destinations	10	14	76	21	20	59
Drive different routes	14	25	61	19	27	54
Carry different types of freight	38	24	38	40	24	35
Drive different trucks of the same type	70	25	5	29	37	34
Drive different types of truck	74	21	5	41	38	21

Table 6.12 contrasts the experience of owner and employee drivers. Facing unfamiliar locations and tasks is more common for owner drivers than employee drivers. As Table 6.11 shows, 76% of owner drivers load and unload at different destinations most of the time and 61% of owner drivers usually drive unfamiliar routes (compared to 59% and 54% of employee drivers, respectively). Thus, to the extent that unfamiliar work presents its own WHS hazards, owner drivers bear more potential risk than employee drivers in the ordinary course of their work.

We then explored whether drivers who experienced greater variability in their work, were more likely to perceive a lack of familiarity with the work environment as a WHS risk factor. Table 6.12 suggests the more drivers are required to drive different trucks, whether occasionally or regularly, the more they perceive that a poor familiarity with the vehicle, poor maintenance and / or poor vehicle design poses a potential WHS risk. In contrast, drivers are generally aware of the potential WHS hazards associated with delivering to unfamiliar locations and there was only a slight increase in perceived risk among those who actually load and unload at different destinations.

**Table 6.13: Association between task variation and risk perception**

Drivers who: - drive different types of truck	Never (N=262)		Sometimes (N=187)		Usually (N=98)	
	% Unlikely	% Likely	% Unlikely	% Likely	% Unlikely	% Likely
Perceive injuries associated with:						
Poor vehicle maintenance	20	<b>37</b>	19	77	9	<b>87</b>
Poor vehicle design	25	<b>32</b>	19	72	20	<b>73</b>
Driving unfamiliar trucks	30	<b>23</b>	26	58	25	<b>67</b>

Table continued below.

Drivers who: - (un)load at different destinations	Never (N=100)		Sometimes (N=101)		Usually (N=342)	
	Unlikely	Likely	Unlikely	Likely	Unlikely	Likely
Perceive injuries associated with:						
Inadequate rest facilities	26	65	20	71	22	68
Lack of familiarity with the route	28	67	24	67	19	69
Poor or tight schedules	14	78	13	81	13	84

Highlighting the challenges that working across different, and often unfamiliar sites present for drivers, one respondent commented.

*Many, many instances of critical information required to safely perform various tasks are omitted.*

*Australian Standards [should] be approached for one set of line marking standards for logistics loading areas, park on the red cross hatched box, don't park on red cross hatch, yellow box, white box, green box at yellow line, white line etc etc with forklift designated zones, walk zones, and driver zones... **everyone has a different Picasso**, many make sense but some... you need a refresher course each time you visit. Qube at the port of Brisbane has many loading pads and no markings on the ground, resulting in new trucks to the yard driving around aimlessly, even through container stacks!!*

*The **painted Guide lines for reversing onto loading docks should be to a standard, width, length and locations...** everyone is different... some have two lines that you centre your truck between. Wheels can be 400mm away from the line. Other docks use one line down the drivers side, depending on the dock, wheels can be 200mm inside the line, kissing the line or covering the line (a variance of 350mm). Whilst many docks are forgiving of misalignment, for many the truck has to be within 75mm of perfect alignment. Damage to trailers, docks, air screens and lost time and disruption occur.*

#### 6.4.2. Access to appropriate rest facilities

For many respondents a particular concern was the issue of rest breaks, and in particular the quality of rest facilities. Overall, a majority of drivers perceived that inadequate rest time and rest breaks (77%) and inadequate toilets and rest facilities (68%) were likely or very likely contributors to injury. Accordingly, 67% of respondents indicated that they actively plan rest breaks to take advantage of good facilities on the road.

**Table 6.14: Task Variation for heavy vehicle drivers**

Statements about factors that contribute to injuries	Perceived likelihood				
	Very likely %	Likely %	Undecided %	Unlikely %	Very unlikely %
Inadequate rest times and breaks	40%	37%	5%	11%	7%
Inadequate toilets and rest facilities	32%	36%	10%	15%	7%

Many drivers raised concerns, however, regarding the availability and quality of rest facilities. Long haul drivers were most vocal, identifying not only general access issues but many also identifying

stretches of highway where inadequate rest areas were perceived to be particularly problematic. For example,

*“Driver rest facilities both on country and metro roads are severely lacking.eg : showers, toilets, shade, and when available dirty or unpleasant due to the general public accessing. Heavy Vehicle drivers, in particular interstate drivers should have exclusive access to these facilities.”*

*“There is never enough truck stops or safe zones on the side of long highways during long journeys.”*

*“Better rest area facilities needed - with more accessible healthy food options.”*

*“Facilities on the road can be very poor. There is a distinct lack of safe rest areas with basic facilities like toilets.”*

*“The parking areas – when found – are for pigs and the roads are in disrepair.”*

*“Hume Highway is atrocious: No toilet facilities (with showers inclusive) Parking Bays are too small There are too many caravans camping in the Bays (at truck stops)”*

*“We need more rest areas at the new bypass / and more rest places around and near Brisbane.”*

*“There are more facility for cars than trucks have you every tried to hold on to go to toilet when in traffic Welcome to a truckies day.”*

*“More shops needed on freeways - not drive off highway for rest breaks.”*

*“More parking bays needed. More free showers are needed.”*

*“There are fewer places to pull up now - it's an RMS and local government issue.”*

*“Focus on supplying proper rest stops along major highways is what is needed, take a look at some of the North American systems and you will find the best rest stops around the world for interstate long distance driving.”*

A small number of drivers also expressed frustration at the difficulty of parking legally in metropolitan areas. Comments included,

*“Need more rest areas. Port Botany needs No Stopping signs removed and portable toilets put back as TMA area can only be used one hour before slot.”*

*“I drive truck and dog in the metro area there is nowhere safe for me to have my breaks. Most of our truck stops have now been turned into RMS checking stations and fenced off so as we can't get in there and there is no breakdown lanes on most roads now.”*

*“The area around the Sydney waterfront is a no parking and no stopping area. We have paperwork to fill out and calls to make before leaving. Can someone tell me where the hell we are supposed to do this without an infringement?”*

### **6.4.3. Control over work (schedules)**

Driver’s **control over their work** is an important component of safe design. In Part 2 of this Report, we examined the major contribution that poor scheduling makes to driver fatigue, rushing and speeding; all of which are factors widely recognised to compromise driver safety. To that end, a number of respondents outlined, with specific examples, the implications scheduling had for their experience of life at work and home. These included,

*“To much pressure on drivers of Dangerous Goods Vehicles - Petroleum Fuels. There is a lot of onus and responsibility. Scheduling work deliveries from another state, example*

*Melbourne Victoria for Sydney New South Wales drivers. No understanding of programming what time to do certain load deliveries of the day because of traffic conditions, peak hour traffic, breaks and very restricted to park a Dangerous Goods vehicle in a public place or main road by law. Curfews on Harbour Bridge and tunnels morning and afternoons very restricted. The schedulers do not put in the factor for delays - it's very very tight."*

*"I was out of hours because of the log book, and had to stop less than 100km from home for seven hours."*

*"There is also the rotating shifts day then night you get used to one shift then you have to completely change your body clock to another time zone and the body says you should be in bed sleeping when you start the night shift from a day shift. It feels like jet lag all the time and not only working 12-hour shift that's not counting driving to and from work. A lot of drivers spend at least an extra one and a half hours extra driving to and from work. I personally all up have a 14-hour day or night five to six days a week and you only get one weekend off from your shifts a month this is too much fatigue. It does have repercussions with the driver that you don't hear about. Mixed products into underground fuel tanks costing hundreds of thousand dollars, truck accidents etc."*

The survey asked drivers several questions in relation to their experiences of scheduling including whether they can safely meet their driving schedules, whether legal requirements for driving times and rest breaks fit with their schedules, whether they have input into their schedules and whether they can refuse an unsafe schedule. Table 6.15, 6.16 and 6.17 report these findings.

The majority of drivers agreed or strongly agreed that they could refuse an unsafe schedule (75%) and they can safely meet their schedules (69%). In contrast, 15% of respondents indicated that they could **not** safely meet their schedules and more than one in eight (13%) indicated that they were unable to refuse an unsafe schedule. Together this suggests a very small percentage of drivers (2-6%) **could** refuse an unsafe schedule but do not do so. (See Tables 6.15 and 6.16). Drivers observed,

*"Within smaller interstate companies, ie with less than 50 trucks, it is normally the managers, supervisors and allocators that are the ones telling you to break the law and to rot the system to get the freight through on time."*

*"There are too many companies and drivers out there willing to bend rules and turn a blind eye just so the job gets done, so until we get rid of these unsafe practices and the people that are willing to do them there will always be that element of something going wrong."*

*[Company X] has put a lot of pressure on drivers to fork fast and unsafe, meet their targets. I was almost killed one time. Told my supervisor – not with [them] any more."*

The survey data also indicates that a majority of respondents (67%) agree or strongly agree that fatigue requirements fit with their schedules. However, poor alignment between routes/schedules and the legal requirements for driving times and rest breaks, mean driver schedules are imposing pressure to break the law for a significant minority (21%, or one in five drivers).



**Table 6.15: Driver control over work and schedules**

Statements about control over schedules	Owner drivers			Employee drivers			N=
	Always/often	Some-times	Rarely/ Never	Always/often	Some-times	Rarely/ Never	
Mandated rest breaks fit my schedules and routes	56%	9%	35%	72%	12%	16%	498
I can safely meet my schedules	66%	15%	18%	70%	16%	14%	498
I have input into my schedules	51%	22%	27%	42%	19%	39%	498
I plan rest breaks to take advantage of good facilities on the road	55%	23%	22%	72%	12%	16%	499

As with many of the findings of this research, owner drivers fared more poorly than employee drivers. Owner drivers are less likely than employees to agree that: they can refuse an unsafe schedule; safely meet their schedules; or that their schedules fit with legal requirements for driving times and rest breaks (see Table 6.15). In particular, the alignment between schedules and legal requirements was reported to be a substantial difference between owner (56%) and employee (72%) drivers, with 16% of employee drivers disagreeing with the statement that ‘legal requirements for driving times and rest breaks fit with their driving schedules’, compared to 38% of owner drivers.

This suggests that owner drivers are significantly more likely than employees to be under pressure to take legal and safety risks in the course of their work. Interestingly, owner drivers have slightly greater input into the schedules than employees, but this does not always carry over into a feeling of control and safety in their patterns of driving times and rest breaks. Drivers said,

*“As an owner-driver you can to a degree pick your work and its safety environment, however the general consensus is that ‘There is the work, if you don’t do it then someone else will...’ I have mouths to feed so I am responsible and therefore have to be responsible but practical.”*

*“Owner drivers are screwed and forced to work for stuff all as we usually have \$50,000-\$200,000 invested in business and can’t just walk away because we will lose everything.”*

Underscoring the mixed level of control drivers perceive they hold in regard to rejecting unsafe work, Table 6.16 reveals that a majority of drivers, both owner drivers and employees consider that they have the ability to refuse unsafe work. Yet almost one in five owner drivers feel they cannot refuse an unsafe schedule and one in six do not believe they can refuse an unsafe load. Employees are slightly more secure in their ability to refuse unsafe work.

**Table 6.16: Driver control over unsafe work**

Statements about refusing unsafe work	Owner drivers			Employee drivers			N=
	Strongly agree + Agree	Unsure	Strongly disagree + Disagree	Strongly agree + Agree	Unsure	Strongly disagree + Disagree	
I can refuse an unsafe schedule	68%	14%	18%	76%	10%	12%	501
I can refuse an unsafe load	74%	10%	16%	83%	8%	9%	392

Figure 6.1 provides additional information about these drivers, summarising various perceptions that were found to differ between those drivers who indicated they could, and could not refuse an unsafe schedule.

**Figure 6.1: Perceptions of those drivers who are unable to refuse an unsafe schedule**

An analysis of drivers who reported that they CANNOT REFUSE AN UNSAFE SCHEDULE revealed:

- More than half have no input into schedules for any trips (58% vs 32% of drivers who can refuse unsafe work)
- Most strongly believe that their schedules are poor or very tight (62% vs 32%), do not meet fatigue law requirements (68% vs 11%) and many drivers feel they cannot meet their schedules safely (55% vs 7%)
- Yet these drivers are unlikely to report (any) safety problems (49% versus 11%)
- They are twice as likely to feel regulators don't focus on important safety issues (49% vs 24%) and twice as likely to have been fined or warned for simple recording or spelling errors in work diaries (50% vs 22%)<sup>1</sup>
- They are also more likely to feel unable to refuse an unsafe load (54% versus 2%) and are less likely to believe manager encourage them to refuse an unsafe load (60% vs 30%)
- Drivers who cannot refuse an unsafe schedule are less likely to receive safety instructions from managers (55% vs 16%) or to believe that managers enforce their own safety rules (58% vs 15%), yet more likely to believe managers are only interested in ticking boxes (73% vs 40%) and are happy for drivers to bend the rules on the road (65% vs 25%)
- They derive more than 75% of their work from their main client (100% versus 61%)
- Are more likely to work longer hours (e.g. working >80Hrs, 19% vs 9%)
- Are less likely to record hours in their work diary (32% vs 66%)
- Earn lower average net incomes (over half 55% earned less than \$50,000 versus 12%)
- Are more likely to do unpaid (non-driving) work: (32% vs 15%), queuing (40% vs 19%), maintenance (48% vs 23%)
- Are more likely to report as a **very likely** cause of injuries:
  - o rushing (90% vs 49%), being distracted (72% vs 41%), being tired (78% vs 46%)
  - o other drivers on the road (70% vs 52%)
  - o poor vehicle maintenance (56% vs 35%)
  - o inadequate toilets and rest facilities (47% vs 28%)
  - o a lack of training (38% vs 21%)
- Are more likely to have no training (14% vs 3%) or informal training only (41% vs 23%)
- Are more likely to have recently experienced
  - o driving into a moving vehicle (39% vs 20%)
    - more likely to load and unload at unfamiliar locations (76% to 60%) and at higher risk sites such as commercial sites without loading docks (67% vs 43%) or residential or commercial construction sites (50% vs 30%)
    - less likely to deliver to sites designed safely with adequate room to manoeuvre (13% vs 46%)
  - o falling off the cab trailer or loading dock (29% vs 9%)
  - o falling or slipping out of the cab (32% vs 14%)
  - o being hit by a falling object (23% vs 7%)
  - o exposure to damaging levels of air pollution (54% vs 23%), perhaps because...
    - more likely to drive a rigid truck (32% versus 23%)

Of concern, further examination revealed the vast majority of those drivers who cannot refuse unsafe work are working greater than 40 hours per week (Table 6.17). Most were either working for a single employer (68%) or contracting to a single company (22%), which points to a level of coercion rather than choice accompanying safe work decisions. Almost one in five (19%) of the drivers who could not refuse an unsafe schedule reported to be working 80 hours per week or more. In contrast, for drivers who could refuse unsafe schedules, only one in 10 were working such long hours.

**Table 6.17: Lack of control over unsafe work**

Characteristics of drivers who can NOT refuse unsafe work	I can NOT refuse an unsafe schedule N = 66	I can refuse an unsafe schedule N = 66	I can NOT refuse an unsafe load N = 39	I can refuse an unsafe load N = 322
Percentage of drivers (can vs can not refuse)	15%	85	10%	90%
<b>By total work hours</b>				
<20 hours per week	2%	1%	0%	1%
20-39 hrs/wk	9%	12%	10%	10%
40-59 hrs/wk	40%	46%	55%	48%
60-79 hrs/wk	31%	32%	32%	31%
80+ hrs/wk	19%	9%	3%	9%
<b>By employment arrangements</b>				
Working for/contracting to one company	91%	9%	89%	11%
<b>By vehicle type</b>				
Rigid truck	34%	23%	30%	23%
Semi-trailer	32%	39%	32%	35%
B-Double	27%	33%	38%	35%
Other (e.g. Road train)	6%	5%	0%	6%

#### 6.4.4. Loading and unloading

Drivers were then asked about their perceptions of safety practices at the locations at which they load and unload. The results revealed that basic safety provisions are not being made for many drivers and few have access to support services such as spotters and traffic management, steps or ladders for working at heights, or help with loading and unloading. For instance, Table 6.17 shows, more than 39% of respondents reported that there is never a competent spotter available to guide the driver into position and more than one third reported that there is never a competent person available to manage or stop other traffic. Importantly, this is even more pronounced at high-risk locations such as commercial and residential construction sites, rural properties and livestock yards and industrial sites including chemical, mining and forestry sectors. For these sites, drivers report that there is **never** or **rarely** (34%) or only **sometimes** (30%) room to manoeuvre safely (total 64%). Even so, 60.1% of these drivers report **never** or **rarely** having access to a spotter to help guide them into position (a further 21% **sometimes** have a spotter) and 58% **never** or **rarely** having access to personnel to help manage other traffic (a further 22% **sometimes**). Some sites do appear to actively manage traffic, however, given a small number of drivers reported to **always** or **quite often** have a spotter (13%) or traffic management personnel (13%) at hand.

Highlighting some of the difficulties encountered at different loading and unloading sites, drivers reported,

*"The newly built facilities of DP World and Hutchinson Wharf facilities both have large areas of step downs and trip areas in the truck module areas in excess of 200mm (only the drivers work in these areas). Standard hitching procedure, mandatory by some companies, involves, backing up to a trailer, hoping out of the cab and ensuring turn table and trailer are at same heights, climb back in cab, reverse and complete hitch, climb out and crawl under trailer to physically look up into turn table jaws to ensure they have locked. Cameras placed in positions would increase safety and reduce potential*

*injuries... A safer drivers' environment. Standardise the location of all truck to trailer air and power fittings to enable hitching connection without having to climb upon to the trucks back deck. Simple solutions that other industries resolved years ago to comply with WHS."*

Further, while more than one-half of drivers who are required to physically (un)load report that they do receive assistance with the task at least some of the time, assistance with loading and unloading is *never* provided to one in five drivers. As expected, drivers at sites with loading docks were more likely to report having assistance (43% versus 23%). In terms of implementation of safe site policies at loading and unloading docks, more than two thirds of drivers reported that formal instructions are provided about how to work safely at the sites and three in four reported that these policies or rules about working safely are enforced. Nonetheless, the survey shows that 15% of drivers are never provided with formal instructions about safe work procedures at sites and 9% claim that the policies are never enforced. This was suggested to be particularly problematic for drivers who load and unload at unfamiliar locations (see section 6.6).

Owner and employee drivers mostly reported similar experiences in terms of WHS controls at loading and unloading sites. The only significant difference was that, while 29% of employee drivers reported rarely / never being provided with safe steps or ladders when needed, 41% of owner drivers lacked these safe work provisions. In terms of the WHS controls at loading and unloading sites, therefore, owner and employee drivers appear largely to receive equitable treatment.

**Table 6.18: The work environment and WHS controls at loading and unloading sites**

Statements about controls at loading sites	Owner drivers			Employee drivers			N=
	Always/ often	Some- times	Rarely/ never	Always/ often	Some- times	Rarely/ never	
<b>A competent person (spotter) is available to guide the driver into position</b>	18	18	64	11	21	64	469
<b>A competent person is available to help manage/stop other traffic</b>	17	21	60	12	22	62	464
<b>Assistance with loading or unloading is provided</b>	38	21	38	33	25	39	458
<b>Sites are designed safely – with adequate room to manoeuvre and separate people and vehicles</b>	34	27	36	40	29	30	473
<b>Safe steps or ladders are provided where needed</b>	29	24	<b>41</b>	43	25	<b>29</b>	456
<b>Site managers ensure I check my load's dimension, mass and restraints</b>	40	19	28	47	20	26	115
<b>Site managers encourage me to refuse an unsafe load</b>	43	13	31	41	18	36	115

The pressure to transport unsafe loads was described by one owner driver who carried 'dangerous goods' and reported regular pressure to move incompatible freight,

*"I recently sold my truck and trailers after years of arguing with the freight company I was working for about this exactly. I came to understand that if I had stayed, it would only have been a matter of time before I was involved in an accident where my insurance would not cover me because I would have had incompatible freight on board which I was routinely expected to pick up. My truck and business could have burned to the ground outside the front gate of the depot, I would be bankrupt, owe the bank half a million for my vehicle, possibly damage roads, other vehicles and innocent people, end up in jail, but tomorrow morning the freight company would still open for business as usual. I loved my*

*job and took pride in the way I operated. I had to give this up and I consider myself lucky to have gotten out of this situation, but am still sickened, angry and bitter that such situations exist."*

Further analysis of survey data explored particular characteristics associated with those drivers who reported that they could not refuse an unsafe load (See Figure 6.2).

**Figure 6.2: Perceptions of those drivers who are unable to refuse an unsafe load**

An analysis of drivers who reported that they CANNOT REFUSE AN UNSAFE LOAD also revealed:

- More than half have no input into loading for any trips (54% vs 36% of drivers who can refuse unsafe work)
- They are twice as likely to feel regulators don't focus on important safety issues (55% vs 24%)
- They are also more likely to feel unable to refuse an unsafe schedule (77% versus 5%) and are less likely to believe fatigue laws fit their schedules (59% vs 14%)
- Drivers who cannot refuse an unsafe schedule are less likely to receive safety instructions from managers (62% vs 18%) or to believe that managers enforce their own safety rules (67% vs 15%), yet more likely to believe managers are only interested in ticking boxes (77% vs 44%) and are happy for drivers to bend the rules on the road (72% vs 26%)
- Are less likely to record hours in their work diary (31% vs 66%)
- Are more likely to do unpaid (non-driving) work, including loading (46% vs 16%), queuing (54% vs 21%), maintenance (56% vs 20%)
- Are more likely to report as a **very likely** cause of injuries:
  - o being distracted (66% vs 46%), being tired (74% vs 49%)
  - o poor vehicle maintenance (59% vs 39%)
  - o inadequate toilets and rest facilities (46% vs 28%)
  - o a lack of training (36% vs 21%)
- Are more likely to have no training (10% vs 4%) or informal training only (51% vs 26%)
- Are less likely to deliver to sites designed safely with adequate room to manoeuvre (13% vs 43%)
- Are more likely to have recently experienced
  - o falling off the cab trailer or loading dock (26% vs 10%)
  - o walking into objects (30% vs 16%)
  - o being hit by a falling object (28% vs 9%)

## 6.5. Influence of working hours and remuneration

Working hours and payment methods for heavy vehicle drivers have been contentious issues of late, particularly for owner and contract drivers. This was clearly reflected in both open and closed survey question responses. This section presents a summary of data on remuneration arrangements and correlations observed between these and hours worked, paid and unpaid work and perceptions and experiences of hazardous events.

### 6.5.1. Working hours

Consistent with broader evidence of long working hours among heavy vehicle truck drivers, 82% of our sample reported working more than 50 hours per week. This included almost two in five who report working over 60 hours per week. A number of drivers outlined their lengthy workdays,

*"I work eight days on, two days off - 14-17 hours per day. and hence over 100 hours per week."*

*“For instance, I can drive for 15 hrs a day for three days and that’s not including travel time to and from home. That’s usually a 3.30-4.00 out of bed time to start at 5.00am.”*

*“Most long distance truck drivers are running up and down the highway doing excessive hours that are not recorded in the log book.”*

And some reflected,

*“Sub contractors and drivers... in general have no savings and have been kept hungry (for a dollar) that they become so worried about their families they get distracted by it and that's when suicides and accidents happen. I know this as I have been there once or twice and have lost family due to my attitude brought on by working loony hours just to support them, only to lose them. No body in there chosen field needs to secome [sic] to long hours just to make enough money to give their family a life they deserve. Thank you”*

*“People before profits!! Please let the industry change for the better. I can't push any harder. I'm afraid of becoming the next statistic on our roads.”*

A minority reported a more positive experience,

*“The company I work for is most supportive”, and “My pay is OK and I enjoy my job”.*

In contrast, only 11.5% of drivers reported working 40 hours or fewer. Table 6.19 provides a summary of weekly working hours by employment arrangement. While it reveals some differences in average hours worked by employee versus owner drivers, these variations were not statistically significant. Note, a separate analysis of hours spent undertaking driving versus non-driving activities is provided in section 6.6.1.

**Table 6.19: Weekly working hours by employment arrangement**

Work hours per week	Owner driver (single company)	Owner driver (multi-companies)	Employee driver (single company)	Employee driver (multi-companies)	Average, all drivers
N =	79	18	350	49	496
<20 hours	1.3%	5.6%	1.1%	4.1%	1.6%
21-40 hrs	10.1%	16.7%	9.4%	10.2%	9.9%
41-60 hrs	38.0%	27.8%	49.1%	49.0%	46.6%
61-80 hrs	40.5%	38.9%	29.1%	30.6%	31.5%
81+ hours	10.1%	11.1%	11.1%	6.1%	10.5%
	100%	100%	100%	100%	100%

The survey data revealed a weak association between total work hours and years of driving experience, in that drivers with greater experience tended to work longer hours (Pearson’s R= 1.993, p<0.05). Unsurprisingly, the analysis also confirmed a significant relationship between total work hours and net income (Chi-square 37.276, p<0.05), whereby those who reported working the greatest number of hours per week received the highest reported net income.

### **6.5.2. Payment arrangements**

Respondents were also asked to indicate the method by which they are paid. Amongst our sample, the vast majority are paid in one of two ways: an hourly rate (60%), or a piece rate for each trip based on kilometres travelled or tonnage carried (32%). Most owner drivers (82%) were paid fixed, job-based rates, typically based on a flat rate per km, pallet or weight, rather than time-based pay. Those working for different companies are often remunerated in more than one way. Overall, owner

drivers were twice as likely as employee drivers to receive flat rate per km or tonnage or a flat rate per day or week, and five times as likely to receive a flat rate per load carried. In contrast, more than three quarters of employee drivers were paid rates that varied according to work done.

**Table 6.20: Remuneration of truck drivers**

Answer	Owner drivers	Employee drivers	All drivers
	<b>N = 114</b>	<b>N = 433</b>	<b>N = 547</b>
Flat rate per day or week	<b>10.6 %</b>	5.1 %	6.2 %
Flat rate per truck load carried	<b>20.2 %</b>	3.7%	7.1 %
Flat rate per km, pallets or weight	<b>50.9 %</b>	27.3 %	32.2 %
Day or weekly rate plus overtime	5.2 %	<b>9.7 %</b>	8.8 %
Hourly rate	36.8 %	<b>65.8 %</b>	59.8 %
Other (please specify)	0.9 %	1.2 %	1.1 %

\* Note > 100% as drivers working for multiple companies received different types of remuneration

The data analysis revealed a significant relationship between the non-driving proportion of total hours worked and remuneration arrangements, with those respondents engaging in non-driving work significantly more likely to be paid by the hour than by load-based methods (chi square = 101.695, p=0000). However, the study did not reveal an overall significant relationship between the different types of pay arrangement and total hours worked. This is likely to be due to the fact that few drivers were paid a flat wage or salary and the vast majority were paid some form of piece rate (a rate per hour, per trip, per km, or per tonnage), whereby working longer (more hours or more trips) brought about a higher income.

Notably, an extensive body of prior research discussed earlier in this report has shown that these time- and load-based remuneration methods incentivise longer working hours, fewer rests and faster driving and are consequently linked more strongly to adverse safety outcomes than daily and weekly rates of pay. This is consistent with the survey finding, noted above, of a significant relationship between total work hours and total income.

Nevertheless, a number of drivers expressed concern at the pay rates, including,

*“The rates we are paid are barely sufficient to cover the running costs and a decent hourly rate without being rushed to finish quickly. The rates are so low it makes me rushed and stressed.”*

*“Cheaper rates result in a fall in work standards.”*

*“There will always be a divide in the road transport industry until all drivers are paid a proper wage for all the work they do.”*

*“Drivers are not paid enough, their skills are not valued highly.”*

*“Get rid of the shonky operators so we can get better rates.”*

*“The award is too low. In most cases interstate drivers are simply not paid the award and entitlements.”*

*“My employer put me on an AWA where I lost all entitlements and was earning less than half the minimum hourly rate for a driver. This AWA was approved by the State Industrial Court of SA.”*

In particular, many expressed strong views against the payment of kilometre rates. These included,

*"In the heavy vehicle industry I strongly believe the kilometre payment method is extremely unsafe and promotes, speeding, recklessness and aggression on the road. Payment should be always by the Hour, which helps compensate for waiting, loading, rest breaks, etc. One other thing, owner driver rates in the majority are a stealthy way of an employer, dodging basic workplace entitlements and conditions, for drivers as well as underpaying with a flat rate which sometimes barely matches minimum wage , BUT less [than] the entitlements of a regular worker. Thanks."*

*"They should do away with kilometre rates and pay drivers hourly which will take the pressure off drivers to not put things in their books and get paid for the hours they actually work."*

*"Get rid of the kilometre rate," and*

*"Kilometrage - being paid by the kilometre it's the cancer in our industry."*

Some text responses pointed to the influence of market power over driver pay. These included,

*"Large customers seem to be able to dictate the rates they will pay & when their freight will be delivered without a thought for the person delivering the goods."*

*"There are good employers and some really crooked ones. Unroadworthy trucks, poor equipment condition. Crap working conditions and if you do not like it leave (try that if you are married with young children and a mortgage)."*

*"Companies are undercutting and passing it on to drivers - their profits are low - trying to squeeze it out of drivers to improve their profits."*

*"Pressure comes from customers screwing down. Transport to cheaper rates. The driver is the weak link as all other costs are fixed. So the driver gets screwed!" The industry is ripping of the little guys and some bigger trucking companies as well. Food chains are the worst of them all, especially when it comes to the line haulers/country runs."*

In an effort to tease out whether market composition (ie, market power) may explain the different ways owner drivers are remunerated, a question was added to the online survey asking owner drivers to identify the proportion of work undertaken for their main client (Table 6.21). This was answered by 42 of the 62 respondents who completed the survey after the question was added. The results suggest the more concentrated the client base, the more likely drivers are to receive time-based rates rather than job-based rates.

**Table 6.21: Remuneration of owner drivers by client diversification**

Owner drivers	<50% with major employer/client	50-75% with major employer/client	75-89% with major employer/client	90-100% of work with one employer/client
	N = 4	N = 8	N = 5	N = 23
Flat rate per day or week	0	0	0	4
Flat rate per truck load carried	11	13	17	4
Flat rate per km, pallets or weight	67	75	50	39
Hourly rate	22	13	33	52

\* Note: the ability to compare these findings is limited by the small number of responses



### 6.5.3. Paid versus unpaid work

To gain an understanding of the type of work drivers do and the extent to which that work is remunerated, we asked respondents about activities undertaken other than driving and whether these activities were paid or unpaid. Table 6.22 shows that a relatively small proportion of respondents were not required to queue to get to a loading dock (14.2%); to load or unload freight (9.1%), or to wait to get loaded and unloaded (9.1%). For almost half the sample, vehicle maintenance and repairs were outside the job description, and one in five were not required to clean their vehicles.

For those who did engage in these activities, two thirds were paid for loading and unloading (where applicable) and more than one half were paid while queuing, waiting to get (un)loaded or waiting for vehicle repairs, or while (re)fuelling. At the same time, more than one-third of the sample were required to clean, wait, and (re)fuel but were not paid for these tasks.

**Table 6.22: Beyond driving - paid and unpaid work (all respondents)**

Non-driving task	Paid	Sometimes	Unpaid	N/A
Loading and unloading	72 %	8 %	18 %	2 %
Waiting to get loaded and unloaded	64 %	7 %	28 %	1 %
Queuing to get to the dock	63 %	12 %	22 %	3 %
Fuelling	62 %	4 %	32 %	2 %
Vehicle cleaning	49 %	15 %	32 %	4 %
Vehicle maintenance and repairs	37 %	32 %	27 %	4 %
Other activities around the yard or base	56 %	19 %	25 %	0 %

As summarised in Table 6.23, compared to owner drivers, employee drivers are significantly more likely to be paid for non-driving tasks. Comparison of drivers who were 'always' or 'usually' paid for non-driving work against those who were 'never' or 'rarely' paid, revealed that employee drivers were more than seven times more likely to be paid for time spent undertaking truck maintenance and repair tasks and three to four times more likely to be paid for refuelling and cleaning.

Perhaps surprisingly, the data also revealed that a significant number of employee drivers remain unpaid for many of the non-driving tasks they do, with up to one quarter of employed drivers not paid for driving-related tasks such as waiting or queuing. The situation was even worse for owner drivers in our sample: around half indicated they were usually not paid for activities such as queuing and waiting. For example,

*"Waiting time and breakdown time are important for long distance driver."*

*"DC's are the worst for delaying drivers for hours but if a driver turns up late (over 30 min) for a delivery time slot they are told to rebook the delivery. Companies like [these] (including all their subsidiary companies) attitudes for driver safety will only change when they are forced to be responsible for the delays and extra problems they cause. If these large companies had to pay for delays over 30 minutes they would have to employ more staff and drivers would be compensated for their delays."*

*"Trip rates are paid but not paid for anything else - Shit!"*

*"I waited 15 1/2 hours for load – unpaid."*

**Table 6.23: Paid and unpaid work (owner versus employee drivers)**

Non-driving task	Owner drivers N = 117		Employee drivers N = 440	
	Paid (%)	Unpaid (%)	Paid (%)	Unpaid (%)
Loading and unloading	57.8	42.2	86.0	14.0
Queuing to get to the dock	54.9	45.1	78.1	21.9
Waiting to get loaded and unloaded	45.1	54.9	75.9	24.1
Refuelling	23.2	76.8	75.6	24.4
Vehicle maintenance and repairs	10.2	89.8	73.3	26.7
Vehicle cleaning	17.0	83.0	72.7	27.3

Contrasting paid and unpaid work against data on trip lengths (Table 6.24), revealed that drivers who took shorter trips were more likely to be paid for non-driving work than those who tended to drive longer distances. That is, non-driving tasks were part of the ‘paid’ work of short(er) haul drivers.

**Table 6.24: Paid and unpaid work (trip distance)**

Typical distance per trip	Loading		Queuing		Waiting		Maintenance		Refuelling	
	Paid %	Unpaid %	Paid %	Unpaid %	Paid %	Unpaid %	Paid %	Unpaid %	Paid %	Unpaid %
0-100kms	91.5	8.5	91.5	8.5	87.8	12.2	72.8	27.2	81.8	18.2
100-500kms	85.2	14.8	82.8	17.2	76.2	23.8	62.0	38.0	71.2	28.8
<500kms	64.5	35.5	47.1	52.9	45.7	54.3	36.8	63.2	45.7	54.3

Pressure for unpaid work reflects issues of cost-cutting and tight margins. Again, free text responses gave insight into the impact of financial pressures on transport businesses. These included,

*“No matter how much you try to go forward there will always be under cutters and big transport companies will use them to save money and squeeze the owner driver out and send them broke”*

*“Every year I see that companies are squeezing more and more out of their operations by cutting costs and maximising efficiency. This has a direct impact on drivers 1) stress and pressure levels and 2) level of care for the companies they work for and level of care for OH&S and proper care for machinery.”*

*“Big companies/customers enforcing reduced rates which in turn ‘flow down hill’ to employees receiving less work & less pay, whilst our employer is looking for extra ways to reduce costs. This is one of the key issues behind work place accidents and job losses through either sackings or redundancies. Large transport companies reducing their price for tenders/contracts so they “win the job” which again effectively causes “cost cutting” in operations by reduced maintenance, less assistance in workplace environment, purchasing cheaper equipment to do the hard work (being penny wise & pound foolish).”*

*“Transport is hyper competitive has huge capital equipment outlays with small returns or high risk reward ratio poor cash flow due to lack of operating capital of most participants is a fundamental cause for problems. Then you have experience that needs*

*to be learnt over years is an added stress point. Fixed costs of state rego and insur is weighted to the big fleets as the cost recovery is spread across there vehicle usage putting owner drivers further behind as they are limited to double shifting there equipment regards to the poor rates high risk and lack of drivers, then the paperwork & compliance of employing a driver."*

A number of drivers raised regulation, assurance and safe rates as potential solutions,

*"I have worked for over 20 different companys and not one of them paid the proper award. They all rip off drivers for there own profit or competitive edge. Wage policy should be audited like all other compliance modules in the transport industry."*

*"Safe rates are a good idea/scheme that will minimise undercutting."*

*"Safe Rates should be applied to their full legislation as soon as possible."*

*"I strongly recommend getting out their and pushing [safe rates] to employers as well as sub contractors and drivers."*

*"The industry is rooted and needs a proper regulating body to enforce proper rates for owner drivers."*

Although not all drivers held those views. Two dissenting drivers stated,

*"This is game on if you wish to continue on your path of Rsrt and safe rates. The Road Safety Remuneration Tribunal should just piss off"*

*"Less influence from government authorities and unions when it comes to rates, safety and rules that can reduce companies from earning a dollar due to their size."*

## **6.6. WHS laws and policies**

### **6.6.1. Attitudes/perceptions toward safety management**

Respondents were asked about their level of agreement/disagreement with a series of statements regarding their perceptions of safety management in their industry and supply chain. First, drivers were asked about safety management practices of their employer (for employees) or primary contractor (for owner drivers). Table 6.25 reports the responses. These findings indicate a widely held perception that many employers and lead contractors are engaged in various safety practices and that the experience of owner and employee drivers with regard to management commitment to the communication and enforcement of safety rules is very similar. Some drivers spoke of experiencing well managed operations and systems, while others cited rogue drivers, and rogue operators as driving standards down and undermining the and safety of others.

*"Larger multi national companies that I have worked for monitor and carry out internal audits to ensure compliance to OH&S and statutory government regulations."*

*"The company I work for is at most supportive"*

*"Some drivers are their own worst enemy ,doing things under the radar gets them more work."*

*"There are too many illegal operators" and "Get rid of the shonky operators so we can get better rates."*

Table 6.25 shows that a substantial proportion of drivers either do not receive site-specific WHS instructions or do not consider these rules are enforced. Owner drivers were also less likely than employee drivers to receive specific safety information (50% versus 63%) or experience enforcement of safety policies at third party loading/delivery sites (57% compared to 64%). This suggests that, in some respects, owner drivers are slightly less likely to perceive that those who hire them have an active concern for their safety and for compliance with legal safety regulations. However, in terms of

enforcement of WHS policies by employers/lead contractors, employee and owner drivers had much the same experience (62% and 64%, respectively). Nevertheless, respondents highlighted the challenges of working with different employers, their different safety management systems, policies and approaches. Even within a business, dissimilar attitudes to safety can be experienced from different levels of management. In addition to examples cited in section 6.4, free text comments included,

*“Every yard is totally different, different managers also mean different habits, that are not necessarily good habits.”*

*“Usually when 'encouraged' to breach some rules it's by the immediate supervisor/s due to their schedules, whilst drivers are always told to follow the rules by 'higher up'. Fleet controllers, supervisors, etc. often seem to be the ones caught in the middle.”*

*“[Are] inductions and health and safety policies externally audited for relevance for the purpose used ? Many many instances of critical information required to safely perform various tasks are omitted.”*

**Table 6.25: Agreement with statements on safety rules**

<b>A: Owner driver responses to the statement:</b>	<b>Strongly agree %</b>	<b>Strongly agree + Agree %</b>	<b>Neutral %</b>	<b>Strongly disagree + Disagree %</b>	<b>Strongly disagree %</b>
The company/lead contractor gives formal instructions about how to work safely on site	22	50	12	38	20
The company/lead contractor enforces the rules outlined in their WHS training (& policies)	26	62	12	26	8 %
The company is more interested in ticking the boxes to look compliant than actively ensuring my safety	25	51	18	31	16
The company/lead contractor for is happy for drivers to bend the safety rules when they are out on the road	20	36	20	44	22
I am sent off-site to undertake dangerous tasks that are not permitted on the premises	10	13	13	76	73
<b>B: Employee driver responses to the statement:</b>	<b>Strongly agree %</b>	<b>Strongly agree + Agree %</b>	<b>Neutral %</b>	<b>Strongly disagree + Disagree %</b>	<b>Strongly disagree %</b>
The company/lead contractor gives formal instructions about how to work safely on site	22	63	15	22	7
The company/lead contractor enforces the rules outlined in their WHS training (& policies)	30	64	13	23	8
The company is more interested in ticking the boxes to look compliant than actively ensuring my safety	23	44	17	39	18
The company/lead contractor for is happy for drivers to bend the safety rules when they are out on the road	13	32	14	54	31
I am sent off-site to undertake dangerous tasks that are not permitted on the premises	7	15	12	73	59

To that end, the findings also revealed that employer/lead contractors were often perceived to be less interested in ensuring the safety of heavy vehicle drivers than in actively creating the **appearance** of compliance and safety (see Table 6.25). While safety rules were largely enforced on site, one third of drivers agreed that the company/lead contractor was 'happy for drivers to bend the rules when on the road' and almost half (51% of owner drivers and 44% of employee drivers) indicated that the transport company they worked for was 'more interested in ticking the boxes to look compliant than actively ensuring safety'. This was further confirmed in various free text responses with some drivers perceiving that managers care about safety, as long as it does not conflict with financial priorities. For example,

*"In 26 years of driving heavy rigid vehicles I have had numerous companies pretend to be safety conscious but in reality they only worry about the appearance of the company not the actual safety of the employees much less subcontractors."*

*"Rule are only rules when they suit management and customers. When these same rules don't suit management and customers they are discarded!!"*

*"I work for a large multi national transport company and i can honestly say that as long as the boxes are ticked and they appear to be compliant [sic] they do not care."*

*"My employer turns a blind eye to some drivers doing the wrong thing."*

*"Chain of command; safety rules and inductions are to cover their arses."*

*"A lot of companies talk oh &s but it will always be money first safety second."*

*"A company could NOT careless about its employees, only profits!!"*

*"I know a lot of things are being done illegally but to report them would mean I would lose my contract."*

As a result, many drivers reported that they document one set of practices on paper for management while engaging in different behaviours in practice – sometimes with the company's full knowledge and/or encouragement. This had subsequent implications for job security as it provided a justification for summary dismissal should drivers fall out of managements' favour. Pressure for such practices were particularly evident in relation to missed meal/rest breaks and longer driving hours (and haulage of incompatible freight as noted in section 6.4). One employee noted that his employer required him to undertake a formal driver training course every 12 months, toolbox talks every month and to sign a form each monthly confirming that if he breached the safety rules, he assumes full liability... yet also required him to work a roster of eight days on, two days off - 14-17 hours per day; hence over 100 hours per week in paid and unpaid work. Other cited examples included,

*The previous job I worked at consisting of local, intrastate and interstate duties, underpaid and expected all employees to sign off on all safety/OH&S etc but clearly expected all employees to work illegally in all circumstances."*

*"Owner drivers have been forced to become Pty. Ltd. companies so responsibilities shift from large freight companies, and they safe guard themselves from any blame for anything that may happen. Terms like Chain of Responsibilities, freight contracts, Fair work tribunal are bandied around but they mean next to nothing in reality. I have spent thousands and thousands of dollars ensuring my vehicle is state of the art, regularly serviced, cleaned and inspected for safety, compliant with all rules regulations(especially as i cart dangerous goods). This compliance is used as a selling point by freight companies when quotes are given to cart DG's, they are not passed on to me, and when unloading at freight depots, there is a complete disregard for safety and compliance. The laws are used to control me and threats of loss of work push me into a corner."*

*"At my employ we are told to take our 1/2 hr lunch break, but this can impact on your delivery times. If we get back with freight still on the truck we are often questioned - 'Why, you can take your lunch break at the end of the day?'. Not exactly fatigue management.*

*"Normal 12-hour shift requires us to do 3 metro loads loading and unloading meal breaks, checking truck every load. Drivers have been known to rush and put their meal break down as they are unloading to get the load delivered or use there meal break while waiting to get loaded behind the fuel depot gantry instead of taking there scheduled meal break 1/2 hour every five hours."*

*"This industry is primarily smoke and mirrors. I been asked to take containers out on skels or flat tops without the required number of operational twist locks etc. no speedos etc. Small operators are the most exposed as they are least able to maintain equipment."*

*"Most drivers have to do the work going by what the company wants regardless on safety as company places blame on driver."*

Further, respondents expressed disappointment at a lack of genuine consultation with drivers in the process of setting those rules, a lack of opportunity for feedback and review, and resulting frustration at being held to comply with rules that were, in their view, inappropriate or inadequate. Some processes were perceived as overly prescriptive and a number of drivers reflected on having offered suggestions for safety improvement only to find them fall on deaf ears. For example,

*"The employer basically pays lip service to suggestions for service improvement."*

*"The drivers are treated like idiots."*

*"Middle management that is briefed to talk the talk or tick & flick on workplace issues is more than likely why change is reactive not implemented."*

*"Drivers called for meetings with management to address [specific pressures to work illegally] which were met with an unsatisfactory resolution. I advised the employer in writing that I was contacting the TWU for representation and two days later was made redundant even though I was the third longest serving driver in the yard and they had ordered more vehicles to expand their fleet. This has always been a common practice within the transport industry. The current position I have is casual and still has faults the worst being lack of correct vehicle maintenance and lack of OH&S."*

Many of the desired improvements cited in the survey focused on design features such as consistent markings, layout and requirements for logistics loading areas; consistent step heights; improved camera placement; more timely repairs and maintenance; better scheduling; and improved training, education and (then) autonomy. These covered issues at all levels of WHS responsibility: supply chain; management and driver. For example,

Supply chain: *"Major companies need to apply more thought into outsourcing work to companies that comply with road laws as strictly as they apply to their company drivers."*

Management (purchasing policy): *"Building Code of Aust mandates a Step riser be 175mm maximum. This is strictly enforced as any higher is an unnatural height and a trip hazard. Our trucks are still being made with cab and deck steps made for giants and at times weird uneven spacings. Certainly not conducive for an aging population or a reduction in injuries."*

Employees (peers/colleagues): *"Drivers in companies need to be protected when employers do not do the right thing, I revert to Cootes and MONA Vale, all the senior drivers knew the faults with that truck and did fuck all about it, except to refuse driving it, so some newbie jumped in and not one Cootes driver pulled the key out of the truck! ...I wasn't there but sure as hell if I was that truck would have been disabled, or pulled up outside on road waiting for RMS to show up and inspect it. I have done it in the past. Drivers need to get some balls and start looking out for themselves. "*

In doing so, a number of respondents highlighted how the very policies adopted to improve safety at work sites, can sometimes present new and unanticipated safety hazards that should be open to review and, where necessary, policy revision. For example,

*"Being Qld- based, all sites require mandatory PPE which includes long trousers & long sleeved shirts. Have experienced heat stroke on many occasions when forced to work in sweltering conditions whilst the people who have implemented these PPE requirements, are sitting in air conditioned comfort. Have had a gut full of these unrealistic rules, that are the result of a thought bubble from someone who has never even sat in a truck let alone loaded or driven one."*

*"Professional drivers have enough common sense to stay safe, accidents occur when the driver chooses to ignore what they know is the right thing to do in any transport situation. Driver training is the key to licensing common sense drivers and allowing them to develop professional attitudes. Unions can lobby government and employers to play within the safe operating limits of workers abilities."*

It was also observed that management tools and directives produced polarising responses. This was particularly evident in regard to emerging technologies such as monitoring equipment. For example,

*"Large companies now including "in cab" equipment that invades privacy, that monitors every movement both vehicle & employee which contributes to stress & worry and therefore distracting the employee from doing the real job he/she was employed for in the first place."*

*"Company installing electronic monitoring devices in cabs, causing extreme anxiety to drivers, unableing them to complete there driving duties in a relaxing stage. i.e. Cameras pointing in and out of cab, overspeed buzzers, only allowing 3 seconds to slow down a heavy loaded truck, and eye movement detectors."*

Yet,

*"All heavy vehicles should have video surveillance on them because lowers drivers' mistakes and shows people that the drivers who cause problems are shit drivers, smart arses."*

Overall, drivers welcomed opportunities to genuinely improve safety in the industry and acknowledged the potential for effective safety management to eliminate 'shonky', 'rogue' and 'illegal' operators. Nevertheless, many remained frustrated by a perceived focus, in the name of safety, on issues that were unrelated, or poorly related, to safety outcomes.

### 6.6.2. Attitudes/perceptions toward legal compliance and enforcement.

Legal requirements for safe work were another issue on which drivers were keen to offer feedback. Drivers noted the plethora of regulation to which they were subject. One driver quickly sketched what he perceived as the regulatory burden (reproduced in Figure 6.3 below). He explained that he was regulated by his employer’s code of conduct, policies and systems - and again by numerous other employers when on their sites to load and unload; each with different rules, practices and expectations. Then there was a “whole range of Government regulation” which sat over the top.

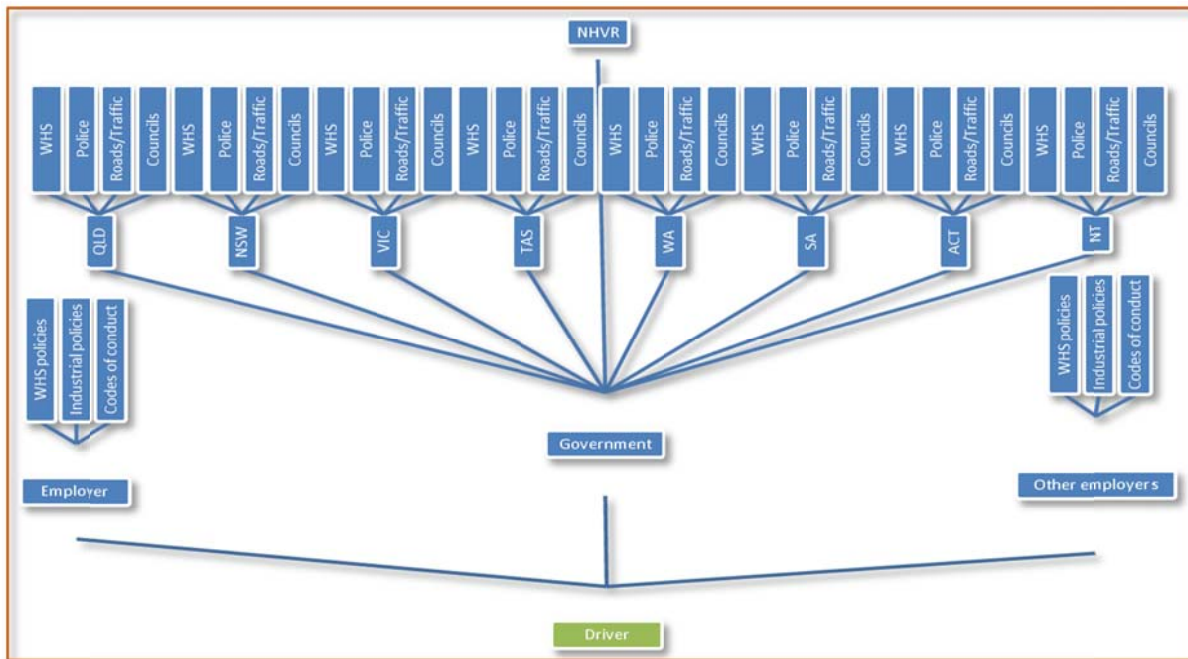


Figure 6.3: A driver’s perspective of the regulations affecting drivers

This comprised different regulators at local, State and Federal levels. Each council has its own rules for certain roads that were “closed” to heavy vehicles. The various regulators for health and safety, roads and transport enforce regulations that differs in each State and Territory, with an inspectorate that included WHS inspectors, road and traffic inspectors, ports and maritime inspectors and police. Sitting above was the National Heavy Vehicle Regulator. “You can’t keep up with the rules” he said.

Again the polarised results reflected different experienced of the responding drivers. When asked about the probability of detection, about one third of respondents agreed that truck drivers who do the wrong thing are unlikely to get pulled over by police (34%), with no significant difference between owner drivers and employee drivers on this issue (Table 6.26).

However, when asked whether they thought Roads and Maritime Services (NSW) (RMS) inspections focus on important issues, there was a significant difference between owner and employee drivers, with employee drivers (55%) more likely than owner drivers (37%) to view RMS inspections as genuinely targeting safety. One reason for this may be that the large trucking companies which employ drivers have often reached compliance arrangements with the RMS whereby drivers are waved through checking stations unlike owner-drivers, who are therefore more likely to be checked.



**Table 6.26: Agreement with statements on safety**

Question	Owner drivers			Employee drivers		
	Strongly/ agree	Neutral	Strongly/ disagree	Strongly/ agree	Neutral	Strongly/ disagree
RMS inspections focus on important safety issues	37%	14%	49%	55%	22%	23%
Truck drivers who do the wrong thing are unlikely to be pulled over by the police	29%	33%	38%	36%	23%	42%
I record queuing and waiting times in my log book	45%	17%	28%	62%	13%	25%

Regardless, this still indicates concerns that a significant portion of enforcement is focused on technical issues that are not critical to ensuring safety. For example, one casual driver of semis and heavy haulage vehicles reported being ‘knocked off’ because the handle on his spade was two inches shorter than the nominated equipment described in the Tow Truck Authority regulations. Other drivers revealed,

*“I was fined for over load. The load was sealed. I was not permitted to unseal it, yet had to sign for it.”*

*“Enforcement bodies who will fine you for an insecure load just for revenue raising.”*

On that note, drivers appeared to have been very receptive to the initial introduction of CoR laws and saw them as a positive move to improving employer safety practices and workers’ conditions across the supply chain. However, examples such as the above suggest drivers were angry that a lack of enforcement **up** the supply chain meant that little had actually changed and were becoming quite sceptical about its future. Typical of drivers’ comments were,

*“Owner drivers have been forced to become Pty. Ltd. companies so responsibilities shift from large freight companies, and they safe guard themselves from any blame for anything that may happen. Terms like Chain of responsibilities, freight contracts, Fair work tribunal are bandied around but they mean next to nothing in reality.”*

*“COR rules should be / applied to the top of Chain first so that they comply with the rules and regulations and their obligations. Instead its the little person at the bottom of the chain (ie. employees, drivers, owner drivers, forklift drivers etc) copping the full brunt of the laws. By the time it gets part way up the chain all is forgotten and the employers, companies and Government need to be held accountable.”*

*“Chain of Responsibility laws are never enforced!!”*

*“But [COR] rules haven't been implemented.”*

*“It's more about revenue making than safety.”*

Table 6.26 also revealed that employee drivers (62%) were also much more likely than owner drivers (45%) to record queuing and waiting times in their log books. This partly reflects the fact that employer drivers are more likely to be paid for time taken to complete these work activities and partly relates to the ‘workarounds’ said to occur under the fatigue management requirements.

Indeed, fatigue management elicited the greatest number of comments in driver feedback. While drivers recognised that fatigue management was important and better regulation was needed:

*“[fatigue] has "FINALLY" been accepted by the Law as an Actual Danger.”*

The highly prescriptive nature of fatigue/log book requirements garnered significant criticism. This centred around their inflexibility, and inability to support the variety of transport routes and range of individual 'body clocks'. Because schedules are then constructed around the prescribed driving hours, drivers are forced to try to sleep at particular times and then can be required to drive, when tired, in order to meet the delivery time. Typical of the comments were,

*"The Work Diary and rules that apply create more dangerous situations than it saves. How can a book tell when I am tired and need a rest? Need greater flexibility to manage our own fatigue levels. Currently you have to rest when you're not tired and then drive when you are feeling doughie because the book says its ok and you have k's to make up because of being parked on the side of the road trying to sleep."*

Other drivers commented:

*"Fatigue is a Personal thing that Occurs to each and Every Individual at Different Times and in Different ways, Its Like your Finger Print....Not One person has the same. With me...I sleep only 5-6 Hours a day.....I get my best rest when I ACTUALLY Need it and NOT when the Law tells me to.....And all my mates have different systems as well....It Boils down to the Fact that the Law is Killing People by refusing to allow us to drive when we can and rest when we can...That's a Fact".*

*"Unrealistic expectations of breaks - you are awake when you have to have a break and sleepy when driving."*

*"National work diary forces drivers to drive when tired not when body clock is rested."*

*"The 'fatigue' laws are killing us... They do nothing positive for us, they increase fatigue by forcing us to rest when we're OK to drive and drive when we want to rest.... We currently have no option but to obey these unsafe rules due to the heavy fines that we face if caught for non compliance... To make this industry safer there needs to be a major change in attitude by the authorities, they need to BACK OFF & let professional drivers do what we do best."*

*"We need to stop the Authorities and beaurocrats making unrealistic and unknowing guidelines in the transport sector especially our working and rest times that are only there for them to look like they are safeguarding the general public from rogue drivers and companies when really they do nothing for our health or wellbeing."*

*"Fatigue rules are a joke. Night sleeps in particular, might make sense to a driver living/sleeping in the truck, but the requirement for two night sleeps a week (seven hours between 10pm & 8am) do not take into account any time spent getting ready for work or travelling to work. Personally, a night sleep requires me to start 1 hour late one day per week. Still get up at the same time (2am) have time for an extra cup of coffee, then drive an hour to work. Add to that, changes to the clocks for day light saving, and it all becomes quite farcical in my book. Makes more sense to me to be able to get home earlier in the afternoon, so I can get stuff done that I need to do outside of work, & still get to bed at a reasonable time!"*

Some employee drivers were concerned at having to bear the cost burden of electronic 'safety' surveillance equipment and electronic log books. Other respondents expressed significant frustration at the level of prescription over specific times rather than the need for fatigue requirements per se. For them, there was an urgent need for greater input into the design of

regulation from experienced voices across the transport sector, including owner drivers and small and regional businesses.

*"Government fatigue rules that are exemplified as driving point a to b on the hume hwy does not reflect true real time journeys on other highways."*

*"Have had a gut full of these unrealistic rules who are the result of a thought bubble from some one who has never even sat in a truck let alone loaded or driven one."*

*"Let the drivers have input into the rules, not politicians who have never even sat in a truck !!!!"*

Highlighting the moderating role of infrastructure such as safety cameras, one driver described in detail how he "managed" his log book (Figure 6.4).

*Most long distance truck drivers are running up and down the highway doing excessive hours that are not recorded in the log book. What is in the log book, is recorded with due care and particular attention to being compliant with rules and regulations. The times do not reflect in any way what the driver has done for the day apart from specific geographic locations and times at those points. For example, if I arrive in [DC] at 0900. That is recorded. I then unload and depart for my loading destination. The unloading time is recorded as rest time in the log book. I am saying that the store men unloaded the truck. I then drive to pick up my load. If it is in the same or nearby suburb and I do not have to go through toll recorders or on main roads, the time is not recorded in the log book. I then load and depart for my home base. My departure time is recorded and then the remainder of my trip back to Brisbane is shown as per what really takes place. I stop and have my required rest breaks and I do not exceed my driving time. That way my log book looks perfect. All the rest breaks are entered, I do not exceed 14 hours driving time and I am at all the Safe T Cam sites as per the camera times and my log book times match perfectly. All of the work I do running around Sydney, Brisbane, Melbourne and where ever else is rarely recorded that way I have the maximum amount of driving time left in my log book each and every day. That is how we complete the impossible tasks given to us. It means many drivers are not getting much sleep but in the log book it looks like they are getting at least ten hours rest per day. It is a miracle there are not more fatalities on the highways. Possibly only due to the high standard of driving competency among many of the long distance drivers. Certainly not because they are well rested and fit for the tasks at hand.*

**Figure 6.4: A driver's perspective on log book management**

Respondents contrasted National fatigue laws against laws currently operating in Western Australia, with some arguing for, and others against, the latter, suggesting an examination of the advantages and limitations of each system is perhaps warranted.

*"Look to WA for a work hour system that actually works."*

*"In WA we have fatigue management and not log books thank goodness. I spent 3 years in QLD and log books were painful."*

But then,

*"The fatigue laws in Western Australia are seriously ridiculously inadequate. All the times i have been pulled over by Police, Traffic inspectors, or anyone else i have never been asked to show my fatigue sheet in Western Australia and i drove roadtrains for 25 yrs Perth to Darwin NOT ONCE."*

Other legal requirements that garnered attention from survey respondents centred primarily around rest stops and the inadequacy of rest facilities (as was noted in section 6.4), driver education (also discussed in section 6.4) and the enforcement of laws relating to illegal substances. Comments relating to the latter were mixed,

*“Employers used to supply drugs. One employer put shit in fridge. Had to throw it out.”*

*“RTA and police need to back off truck drivers and focus on car drivers as far as drug abuse goes.”*

*“I would like to see more frequent drug testing across the industry. One reason is for safety. Another reason would be to tidy up the industry. All truck drivers are tarnished with that same brush in regards to drug abuse.”*

In contrast, some drivers recognised and acknowledged an improvement in their engagement with regulators over recent decades. For example,

*“30 years has seen improvements, e.g. RTA.”*

### 6.6.3. Attitudes toward reporting unsafe practices

Given that accidents and injuries are widely experienced among the respondent population and the view is widespread that regulatory compliance is not a priority for employers and contractors, it is critical to identify the extent to which drivers consider feasible the making of formal complaints about WHS breaches. The survey asked respondents to whom they would report specific types of breach of WHS policy and law.

**Table 6.27: Reasons why owner drivers and employee drivers are reluctant to report breaches**

A: To whom do <u>owner</u> -drivers report... ?	N =	Nobody	Employer/ contractor	Union	DC/Vendor Customer	Government
Poorly loaded ‘ugly’ freight	89 (75%)	10.1%	59.6%	3.4%	39.3%	5.7%
An unsafe site	96 (81%)	11.5%	61.5%	8.3%	35.4%	7.3%
An unrealistic schedule	95 (81%)	14.7%	65.3%	4.2%	28.4%	6.3%
Being pressured to do unsafe work	90 (76%)	16.7%	48.9%	15.6%	25.6%	13.4%
Being pressured to falsify a work diary	86 (73%)	18.6%	40.7%	16.3%	25.6%	16.3%
Being underpaid	88 (75%)	17.0%	46.6%	19.3%	25.0%	13.7%
B: To whom do <u>employee</u> drivers report...?		Nobody	Employer/ contractor	Union	DC/Vendor Customer	Government
Poorly loaded ‘ugly’ freight	57 (13%)	1.8%	89.5%	8.8%	28.1%	8.8%
An unsafe site	61 (14%)	1.6%	86.9%	19.7%	26.2%	9.8%
An unrealistic schedule	62 (14%)	1.6%	85.5%	24.2%	9.7%	12.9%
Being pressured to do unsafe work	59 (13%)	1.7%	72.9%	40.7%	8.5%	11.9%
Being pressured to falsify a work diary	46 (10%)	6.5%	63.0%	45.7%	6.5%	17.3%
Being underpaid	59 (13%)	3.4%	64.4%	50.8%	8.5%	10.2%

Significantly, some respondents noted a reluctance to report specific breaches to anybody (Table 6.27). In this regard, owner drivers are much less likely than employees to report breaches. A negligible proportion of employee drivers claimed a reluctance to report the surveyed breaches to anybody (1.6% - 1.8%), except in the case of ‘being pressured to falsify a work diary’ (6.5%) or ‘being underpaid’ (3.4%). In contrast, with owner drivers, between 10% and 19% claimed a reluctance to

report the various breaches. Interestingly, the breach that both owner s and employee drivers were most reluctant to report was ‘being pressured to falsify a work diary’ (18.6%, 6.5%). One suggested,

*“An APP that can be accessed via mobile phone to tip off or report anonymously would be of real benefit and in real time!! It will save lives as drivers will not be targeted orf looked down upon when reporting problems.”*

Employee drivers overwhelmingly responded that they would report ‘an ugly load’ and ‘an unrealistic schedule’ to their employer or direct supervisor (89.5%, 85.5%). Three quarters of employee drivers claimed they would report ‘being pressured to do unsafe work’. Employee drivers are less likely to report ‘being underpaid’ than any of the other breaches, but nonetheless, two thirds would report this to their employer or direct supervisor, and half to their union. ‘Being underpaid’ was the issue that employee drivers were most likely to report to their union (51%), with ‘being pressured to falsify a work diary’ the second most likely issue they would report ((46%) and ‘being pressured to do unsafe work’ the third. More than a quarter of employee drivers also claimed they would report an ‘unsafe load or site’ to the relevant distribution centre/vendor/customer.

With owner drivers, there was much greater reluctance than with employee drivers to report breaches involving unsafe practices. Among owner drivers, the most likely body to whom a report would be made was the contractor, followed by the distribution centre/customer/vendor. Owner drivers were much less likely than employee drivers to report issues to the union, but much more likely to report breaches to the relevant distribution centre/vendor/customer. Thus, where 51% of employee drivers would report ‘being underpaid’ to their union, and 46% would report ‘being pressured to falsify a work diary’ to their union, with owner drivers the proportions were 19% and 16% of owner drivers respectively.

Few drivers, whether employed or owner drivers, would report these problems to a government authority, either on or off the record. The issue that drivers are most likely to claim they would report to government is ‘being pressured to falsify a work diary’, including 17% of employee drivers and 16% of owner drivers. More than one in ten owner and employee drivers indicated they might report ‘being pressured to perform unsafe work’. ‘Being underpaid’ is another issue that drivers are less reluctant to report: including 10% of employee drivers and 14% of owner drivers. They were least likely to report an ‘ugly load’ or ‘unsafe site’ to a government agency.

**Table 6.28: Reasons why owner drivers are reluctant to report unsafe practices.**

Respondent	Owner driver N=86 (73%)	Employee drivers N=231 (52%)	Total drivers N=317 (57%)
<b>Fear of retribution</b>	33%	75%	64%
- No work/being black-banned	42%	63%	58%
- Reduced work opportunities	35%	33%	34%
- Less desirable work/conditions	34%	24%	27%
- Fear of teasing, harassment or assault	10%	19%	16%
No point, no one listens	24%	17%	19%
Fear of being dragged into legal processes	11%	10%	10%
Drivers don’t care/don’t have time	8%	11%	10%
Fear of looking like a trouble-maker	-	3%	2%

Table 6.28 records reasons owner drivers gave for not reporting breaches. By far the most common reason was fear of retribution (64% of drivers). Curiously, drivers who had undertaken formal training (only) were less likely to identify a fear of retribution for reporting unsafe practices, but significantly more likely to have personally experienced this (20%), or be aware of it happening to others (80%) than drivers who had only experienced informal training (10%), or a mix of formal and informal training (22%). Retribution is clearly a phenomenon in the industry, with 81% of drivers reporting either first- or second-hand knowledge of cases of retribution against drivers who had reported safety concerns.

*“I have in the past reported very serious safety incidents and vehicle conditions and in the past it has cost me my employment. Regardless of the company or size as a driver reporting any breaches of law or safety will see you black listed in the industry. I have even told various government agencies about when and where these breaches will occur only to have them notify the company to tell them that they are going to be doing a check. It is absolutely rife in both industries but no one really cares and all that happens is I get a horrible name in the industry and don't get work.”*

*“I am currently suspended because I told a manager that a supervisor made me cry because of his unfair demands of who I am forced to work with.”*

*“Trust me I have lost a lot of jobs due to me speaking up to management on safety of loads and equipment. As well as work conditions. Fired as spoke to union or government body. Sacked within 6 hours [after reporting work-related injury].”*

**Table 6.29: Experience of retribution for reporting breaches.**

<b>Respondent</b>	<b>Owner driver N=86 (73%)</b>	<b>Employee drivers N=231 (52%)</b>	<b>Total drivers N=317 (57%)</b>
I have personal experience of retribution	36%	32%	34%
I have not experienced it, but I am aware of it happening to others	48%	47%	47%
I am not aware of it happening	12%	21%	18%
I don't believe it happens	3%	-	1%

Open responses to the survey provided a more detailed picture of why drivers eschew complaints (Table 6.29). Among drivers the perception is widespread that a range of adverse repercussions might follow complaints. The consequences include that they will suffer loss of their job or a loss of shifts, financial injury, and bullying, intimidation and victimisation, not only from employers/lead contractors but also by other drivers on the road. Other significant reasons for driver reluctance to report unsafe practices included the uselessness of making complaints and the fear of being caught up in legal proceedings (Table 6.29).

**Table 6.30: Reasons why owner drivers do not report breaches (Free text responses).**

<b>EXAMPLES OF RESPONSES ABOUT JOB INSECURITY AND WORK AND LOST INCOME</b>			
Scared of losing their job (x36)	Threat of termination (x3)	No job security (x 11)	Fear becoming unemployed (x4)
Fear being sacked (x19)	These drivers are usually sacked	Companies will either sack you or make it very hard on you	
You can not report unfair behaviour by supervisors or you get suspended."		You speak out you don't work	
Get dismissed if they complain / Dismissal (x4)		If drivers report these things they usually get less work	
Do it or no work for you tomorrow!!		If you report then the work dries up	
Because they will lose work or be given crappy loads		Do not get picked to do any more loads	
We get poor loading	Don't want to be slowed down	Time off road is not paid ( get on with next load )	
Loss of income (x4)	Financial injury	Having a job is more important	
Cowboy employers that threaten employees with the sack if they report issues that will effect their loads		We need the work – and [if you report] they will just give the job to someone else	
If there were laws protecting us we would obviously speak up, and sometimes even if clear laws exist, its to easy for large companies to bankrupt an owner driver long before legal proceedings or court rulings are finalized.			
<b>EXAMPLES OF GENERAL RESPONSES RELATING TO RETRIBUTION</b>			
Fear of reprisals / fear of repercussion (x 12)		You WILL be targeted by management!!	
So the boss doesn't crack the shits	Payback	Get hard time off management	
Get victimized and bullied	Vindictive backlash	Fear of intimidation and risk of termination	
Becoming a target for middle management		Shit lifestyle [due to reporting]	
Complainers and troublemakers get sidelined, or sacked on dubious grounds		Drivers are ignored or told to deal with it or find another job	
The despatcher can make you or break you so consequentially you toe [sic] the line		Harassment and workplace bullying by employers is the worst in this industry	
We in the transport that work within the law are the ones that go back of the list to get a job			
<b>EXAMPLES OF RESPONSES ABOUT INADEQUATE RESPONSE TO SAFETY CONCERNS</b>			
Nobody cares [or] No one listens (x6)		What is the point?	No action taken
Falls on deaf ears	No one gives a shit.	Waste of time	Not taken seriously
Nobody wants to know as it becomes there [sic] problem		Lack of support from employers	
Nothing is done when it is reported. The company don't really want to know. They just want the job done and you back on the road doing more work		Employers do nothing about them [reported breaches], and don't really care	
<b>EXAMPLES OF RESPONSES ABOUT DRIVERS' PERSONAL FEARS</b>			
Being told 'your week' [sic] by your peers		Threatened, bullied, sexually harassed, assaulted	
Being abused by other drivers		Discrimination	Intimidation
Being victimized and bullied	Harassed	Shit work, no holidays when asked for	
Most drivers just want to get the job done		Not to cause problems	[or] Look like a troublemaker
I was bullied and sexually harassed that often, I attempted suicide on the job			
[Drivers are reluctant because ...]	No balls	No guts	To impress the boss
<b>EXAMPLES OF RESPONSES ABOUT LEGAL CONCERNS</b>			
If we do [report], then the RTA might find fault with us and we cop a fine!		RTA, police and law harassment	
Not industry educated. Most truck drivers just want to get a job done		The old saying - if you do not like it leave.	

## 6.7. Summary of findings

This Section has reported the findings of the survey in relation to the safety of heavy vehicle truck drivers at work and the links between this and different employment arrangements, remuneration methods, working hours and other factors. More broadly, this Section has also explored both drivers' perceptions and experiences with WHS regulation and the impact of current regulation on their work and work environment. In relation to **experiences of hazardous events** and **levels of risk perception** among drivers, the findings established that:

- Most drivers have experienced at least one of the hazardous events common in this industry. More than half of surveyed drivers have experienced either falling or slipping out of the truck cabin, or falling off the cab, trailer or loading dock. Curiously, employee drivers are far more likely to experience particular hazardous events than owner drivers, including driving into a moving vehicle or stationary object and being hit by a moving vehicle or by falling object.
- Drivers tend to underestimate the extent to which they are at risk of experiencing the serious injuries most common to the industry. Those with less exposure to WHS training are even more likely to underestimate these risks.
- Personal experience contributes strongly to levels of risk perception: that is, specific experiences of accidents and injuries are linked more strongly with accurate driver perceptions of risk than general experience in the driver population. Drivers who commonly are required to drive different trucks, also have higher levels of risk awareness.

The survey findings also establish the pervasiveness of **WHS training** and significant implications of this training for hazardous experiences and risk perceptions. Specifically,

- Almost every driver has undergone at least one form of WHS training, and most, multiple forms. However, unless drivers work for a single organisation, WHS training generally is given little attention.
- Drivers who have undertaken formal, external WHS training report lower rates of hazardous events and are more likely to recognise major WHS risks to do with organisational issues such as scheduling and workplace design than those who have engaged only in informal, employer-based training.

In terms of **management commitment** to WHS and the prevalence of **safe working practices at worksites**, the survey demonstrated the following:

- For most drivers, safe practices are present at loading and unloading docks – in terms of formal WHS instructions, spotters and traffic management, assistance with (un)loading, adequate room to manoeuvre, and safe steps and ladders.
- A small majority of drivers are given formal WHS instructions on work safety and believe their company/contractor enforces WHS policies at worksites.
- Most drivers generally experience safe scheduling and an overall management commitment to OHS policies. Nonetheless, there is also widespread scepticism among drivers about company commitments to WHS in practice, with a large minority claiming their employer/contractor is happy to bend the rules and more interested in ticking compliance boxes than genuine enforcement.
- That a significant proportion of drivers work more than 80 hours per week illustrates that a substantial pocket of noncompliance remains.



- That drivers who are highly dependent on one employer or company appear most commonly to experience unsafe scheduling, unsafe worksite practices and poor management commitment to WHS.

In relation to **remuneration** arrangements, the survey revealed the following:

- Most of the surveyed owner drivers were paid job-based rates and employee drivers, hours-based rates, both of which incentivise longer working hours. We found no significant difference in the relationship between either of these specific types of pay arrangement and total hours worked.
- Many drivers are not paid for substantial components of their work: more than one third are not paid for waiting to get (un)loaded, and refuelling and cleaning their vehicle; more than one quarter are not paid for time spent (un)loading, queuing to reach the dock and other activities around the yard or base. This included a surprising number of employee drivers on hourly rates.

The survey also found that while most drivers are empowered to use the **enforcement** arms of WHS regulation, a retribution culture among employers/contractors/major clients discourages drivers reporting breaches of WHS legislation.

- A substantial number of drivers are sceptical about whether roadside inspections by regulators genuinely target safety issues, and are similarly sceptical about the likelihood of detection.
- The vast majority of drivers consider that they would report breaches of WHS laws, although there is considerable variation in terms of the body to whom they would notify. Owner drivers, for instance, are much less likely to take such concerns to a union. Very few drivers would report breaches of law to government agencies.
- For those drivers reluctant to report regulatory breaches, key reasons are fear of retribution, fear of being caught up with legal proceedings, and the belief that complaints would fall on 'deaf ears'. Many drivers described retribution culture in terms of employers and other clients terminating the employment / contracts of drivers, inflicting financial injury, bullying, intimidating and victimising drivers for speaking up about safety concerns.

While the number of employee drivers and total drivers completing the survey was statistically sufficient to provide a representative sample of all heavy vehicle drivers, generalisability of the survey findings with specific regard to owner drivers is limited by the relatively smaller number received from owner drivers. Despite eliciting responses from a sizable number of owner drivers, 118 in total, this reflected a significant under-representation of the owner driver population. We note that recent consultative efforts by the Road Safety Remuneration Tribunal (RSRT) and the Australian Small Business and Family Enterprise Ombudsman (ASBFEO) to engage with owner drivers also acknowledged the difficulty of attracting feedback on work health and safety issues from this segment of the workforce. Nonetheless, where this has made a difference to results, we have highlighted the distinctions in perceptions and experiences of owner and employee drivers.

Significantly, some of the findings demonstrate that owner drivers fare more poorly than employee drivers in terms of safety at work. This is particularly the case regarding WHS hazards associated with unfamiliar routes and (un)loading locations, perceptions of the safety and legality of their schedules, safe practices at (un)loading sites, and the lack of remuneration for essential work activities other than driving. What the findings also clearly show, however, is that a small number

of drivers perceive improvement in the regulation and management of work-related safety, a greater number are more pessimistic about their work environment.

In particular, there is a segment of both owner and employee drivers who share similarly poor experiences, and for whom management commitment to safe practices is lacking. These drivers are distinguished in the high extent to which their income is dependent on **one** employer/lead contractor or client. Their associated vulnerability is reflected in the tendency of this segment of drivers to be unable to refuse an unsafe load or an unsafe schedule or to ensure that these comply with legal requirements. Consequently, this group held negative views about their work.

*"[The industry has] changed in last 30 years. More cutthroat, less mate-ship/help.*

*"Nothing is changing, its getting worse not better."*

*"The industry has become shit over the years."*

*"This Industry is fucked."*

Drawing on the survey findings presented in this Part, and other material discussed earlier in the Report, the final part of this Report examines the implications for the complex WHS regulatory system which applies to the heavy vehicle road transport industry in Australia.

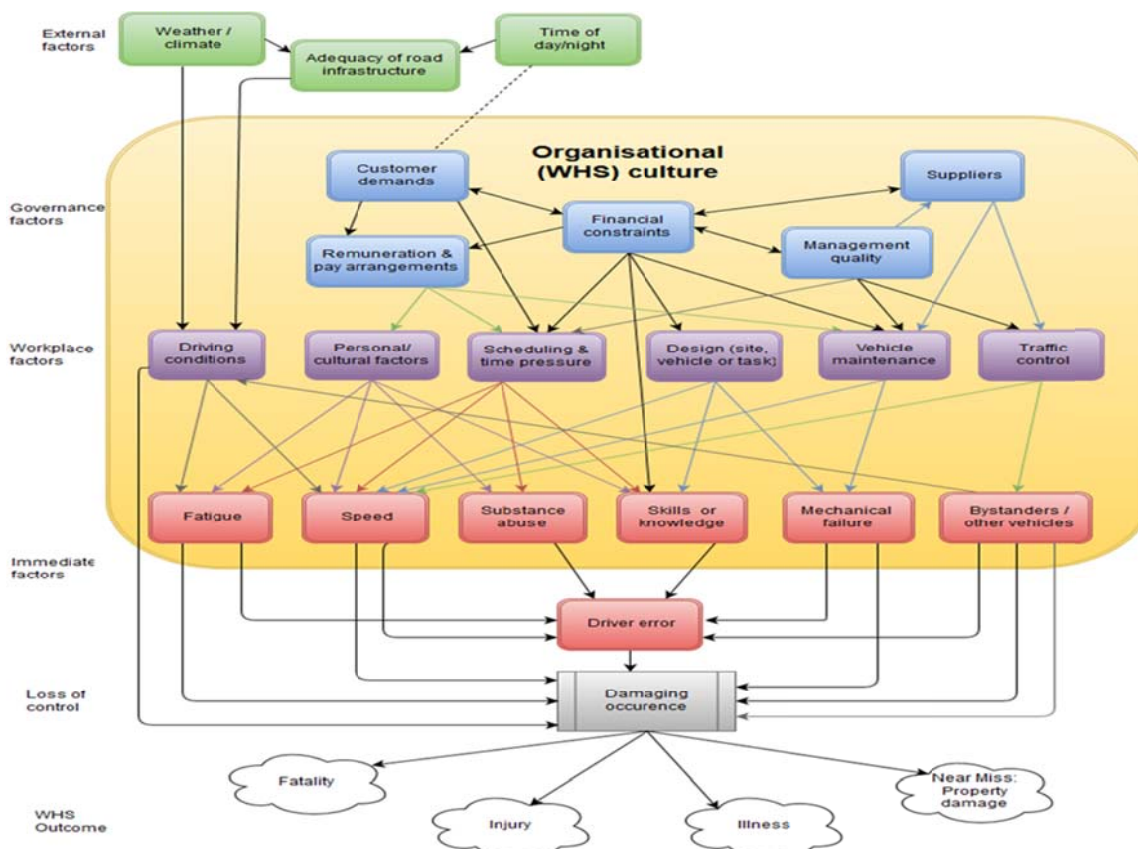
## 7. CONCLUSIONS

Efforts to ensure healthy and safe workplaces in the heavy vehicle road transport industry involve a complex mix of regulatory mechanisms which provide a range of compliance and deterrence measures. Together, these mobilise various strategies to incentivise attitudinal and behavioural change in this competitive industry environment. The mix includes several forms of regulation with a potential to reach all levels of the CoR. These market, industrial and statutory mechanisms have improved WHS for many heavy vehicle truck drivers. However, significant gaps and limitations remain in both approach and enforcement. Previous sections have analysed the WHS risk factors which truck drivers face in this industry, conceptual approaches to regulation, the features, strengths and limitations of the six main forms of WHS regulation on which this project has focused, and the findings of a survey with 559 respondent truck drivers. This Part discusses the major findings with a particular focus on their implications for the efficacy of WHS regulation in the sector.

### 7.1. WHS risk factors

WHS regulation in Australia seeks to ensure the health and safety of workers. Patterns of injury and illness for workers in the heavy vehicle road transport industry, reveal that despite continued improvements in WHS over time, the sector continues to produce a disproportionately high number of fatal and very serious but non-fatal injury and illnesses compared to other industries in Australia. As discussed in Section 3, and depicted in a causal map in Figure 3.7 (reproduced below), the analysis of literature and WHS data for the road transport industry points to a collection of highly interdependent WHS risk factors. Unfortunately, efforts to focus attention on eliminating individual risk factors often appear undermined by the competing influence of other decisions and risk factors.

**Figure 3.7: Mapping risk factors for injury and illness to road transport industry workers**



Interestingly, this research found that, despite legal requirements for ensuring workers are trained about WHS matters, truck drivers tend to underestimate the extent to which they are at risk of experiencing those hazardous events that result most frequently in work-related fatality and serious injury in the heavy vehicle sector. In many cases, even their own injury experience of a similar event did not lead them to perceive common hazards as a likely WHS risk, although both specific experience and WHS training were associated with stronger and more accurate risk perceptions.

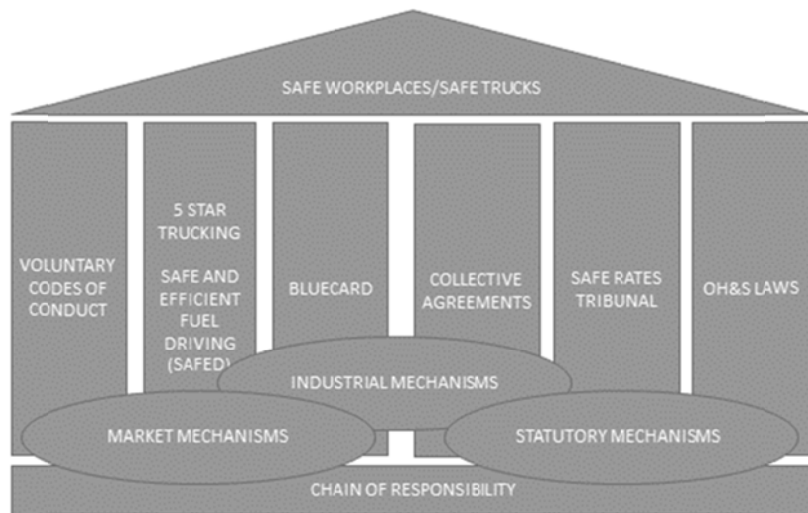
The complexity of the causal map illustrates why WHS legislation requires those in control of work to exercise due diligence with regard to the health and safety of workers engaged by the business and along its supply chain. Among other things, the WHS Act, for example, requires the officers of a business to:

- a. gain a general understanding of the work of the business and the risks and hazards involved;
- b. take steps to obtain, consider and act on the WHS data needed to inform business decisions;  
and
- c. ensure adequate resources and processes are provided (and used) to ensure safe, healthy and productive work.

Importantly, this first step seeks to ensure that decision-makers have adequate understanding of the drivers of WHS risk and the process by which disparate financial and managerial choices can impact, ultimately, on the health and safety of transport workers along the CoR. Management is then in a superior position to take advantage of opportunities to eliminate or control risk *at source*, which means control efforts are likely to be more effective in safety outcomes as well as more cost-effective. However, the findings also demonstrate how managements' efforts can be undermined by the decisions of supervisors and lower level managers if faced with conflicting performance goals.

## **7.2. The mix of WHS regulation in the heavy vehicle road transport industry**

Of the Six Pillars of WHS regulation specified in the model, four currently operate in Australia's heavy vehicle road transport industry. These are state and federal WHS and road transport laws, collective agreements and awards, Bluecard and voluntary codes of conduct including both organisational and industry codes. Each mode provides for different aspects of WHS for truck drivers through different forms of regulation. Hence there is a mix of market, industrial and statutory mechanisms in place as depicted in section 1 in Figure 1.1 (reproduced below). The Road Safety Remuneration Tribunal, another statutory mechanism, was abolished in April 2016. The five star trucking rating system, a market mechanism, has been proposed but not introduced. However, extensive research on similar schemes such as SAFED in New Zealand and the United Kingdom have indicated the roles these accreditation schemes play (see Mooren and Grzebieta 2012).



**Figure 1. -1: A model of WHS regulatory mechanisms in the Australian heavy vehicle road transport industry**

### **7.3. The effectiveness of the regulatory mix**

As Reason (1997) argues, the purpose of WHS mechanisms is to maximise resistance to risk. In considering how the current regulatory mix meets this objective in the Australian heavy vehicle road transport industry, our research indicated five key issues. These relate to the structure of the regulatory system and the way in which it impacts on the health and safety of drivers.

**First, the regulation is too complicated.** It is not surprising that, given the way in which WHS regulations in this industry have developed incrementally over time, the current mix of regulations is too complicated. There is considerable actual and perceived overlap in the current mix of regulations both between methods and across different legal jurisdictions. Yet, at the same time, each type of regulation performs a valuable role, relying on a variety of compliance incentives and sanctions to encourage safer workplaces for truck drivers. The current regulatory structure means no single measure has sufficient scope to 'cover the field'. The complicated mix of regulations, however, raises a particular policy problem: how to simplify WHS regulation in the sector, without jeopardising WHS outcomes.

The overlaps also present challenges for enforcement with regard to WHS breaches in the sector. This is highlighted by the overlapping jurisdiction of agencies that investigate and enforce safety breaches associated with a major truck crash; including state government agencies such as Police, Road Transport Departments and Worksafe, as well as national bodies such as NHVR and Comcare.

**Second, significant regulatory gaps remain.** At the same time as the regulatory mix is too complicated, significant gaps in regulation remain. For example, since the RSRT was abolished, there has been no regulatory mechanism that can eliminate existing incentives for overly tight scheduling, unpaid work, and rates that are below cost recovery, for owner drivers. It is these scheduling and payment characteristics that incentivise excessive driving hours and speeds, and, for owner drivers, reduce time and resources for fleet maintenance. Another gap is the lack of universal formal training for truck drivers. Our findings have established that, although informal toolbox training and inductions can add value in terms of raising drivers' general WHS risk awareness, these are insufficient. In contrast, formal driver training can not only improve driver quality but also reduce actual experience of high-consequence hazards.

**Third, some regulations are proving more problematic in practice than perhaps anticipated.** Fatigue laws provide an example of the problematic nature of some regulations in practice. The HVNL requires drivers to comply with maximum work and minimum rest limits during journeys, and also imposes on CoR parties a responsibility to take all reasonable steps to prevent drivers exceeding these limits. This has reduced the number of drivers reporting fatigue (NTC, 2012a). However, this research suggests the fatigue laws, and in particular, the regulation of rest breaks during journeys, is proving too prescriptive, and not taking individual needs sufficiently into account. In addition, there is a mismatch between the regulatory requirements around rest breaks and the provision of adequate rest facilities on the roads. Many of the surveyed drivers raised concerns about the poor quality and inadequate availability of rest facilities.

**Fourth, WHS regulation increasingly prioritises bureaucratic forms of safety system assurance over an assurance of safety in practice.** This is particularly the case where forms of accreditation are based on documentary evidence that employers, contractors and other supply chain organisations have implemented particular WHS policies and practices. Typically, an accrediting body conducts audits over time to ensure continued compliance, and regulatory concessions and other economic incentives follow accordingly. However, these systems are weighted towards those who can afford bureaucratic compliance. The danger is that this advantages larger companies with the resources to meet the documentary assurance process. However, research has not shown that accredited operators necessarily have better safety performance than others (Mooren and Grzebieta, 2012: 9). According to many respondents, both ‘good companies’ and ‘shirkers’, appear able to achieve accreditation, consequently devaluing accreditation schemes. An additional limitation with voluntary industry codes are the conflicts of interest that exist for industry bodies such as the Australian Logistics Council and Australian Trucking Association between promoting safety and representing members’ broader commercial interests.

To reassure industry participants that compliance is maintained in practice, more independent processes of assurance are needed. What form might this take? Specific suggestions from drivers include having inspectors follow trucks from loading yards from time to time, and ensuring that companies do not receive advance warning of inspections.

**Fifth, the complex array of enforcement measures could be rationalised.** As Table 5.3 indicated earlier, while education and persuasion form the base of the enforcement pyramid, and criminal penalties sit at the apex (but apply only to the WHS Act), multiple measures have accumulated in the pyramid’s mid-section. Table 5.3 charted the sanctions available in this mid-section for each form of regulation are examined. Sanctions include: suspension and revocation of licences, accreditation and regulatory concessions; potential adverse economic, market and informational / reputational impacts; supervision through orders, notices and enforceable undertakings; and of course, an array of fines. Sanctions have been added to the mix over time in an effort to reach different members of the supply chain, and particularly those towards the top of the CoR. However, policymakers could consider a rationalisation of these sanctions, and the regulation strategies that underlie them.

**Sixth, difficulties with enforcement are an issue that spans the regulatory mix.** Different forms of regulation are designed to change attitudes and behaviour in different ways, enabling diverse paths for enforcement (see Table 5.3). Yet, as Sections 4 and 5 discuss, there are also enforcement deficiencies with each mechanism. This research has established, for example, that despite employers having legislated responsibilities to create and maintain safe workplaces, many drivers

continue to experience unsafe practices. A large minority of drivers also consider that employers view WHS compliance as an exercise in ticking boxes rather than a genuine commitment to improving safety at work. The relatively recent introduction of the *National Heavy Vehicle Law*, with its emphasis on the CoR, may prove a game changer in this space, but its success will hinge on its ability to enforce safe work practices and safe design principles across the supply chain. At present, and because of the relative simplicity of imposing fines compared to the investigatory requirements for most other forms of enforcement, drivers appear to bear a disproportionate burden of sanctions for WHS breaches. Finally, the research revealed a paradox: **many drivers feel over-regulated but, at the same time, are calling for more inspections**. This is linked to the fact that many drivers consider that regulators are concentrating on enforcing trivial issues and failing to enforce the critical factors that routinely contribute to poor safety.

#### 7.4. Compliance and enforcement

This research has established that there is a substantial degree of regulatory compliance in the Australian heavy vehicle road transport industry. Almost every driver has undergone some form of WHS training at least once in their career, and most drivers have experienced safe practices at large loading and unloading docks, safe scheduling and management commitment to safe work systems. At the same time, however, as Table 7.1 illustrates, a significant proportion of drivers report that scheduling arrangements and workplaces at which they (un)load remain unsafe. There also appears to be a widespread view among drivers that employers and other parties in the CoR are more concerned with the **appearance of compliance** than entrenching safe work practices.

**Table 7.1: Drivers’ perceptions of employer/contractor WHS commitment and compliance**

<b>64 %</b>	of drivers consider their employer or lead contractor enforces the rules outlined in WHS policies and training.
<b>46 %</b>	of drivers agree that their company is more interested in ticking boxes to look compliant than actively ensuring safety.
<b>32 %</b>	of drivers agree their transport company is happy for drivers to bend the safety rules when on the road.
<b>15 %</b>	of drivers consider they are unable to safely to meet the schedules they are given
<b>13 %</b>	of drivers perceive they are unable to refuse an unsafe schedule
<b>21 %</b>	of drivers find it difficult to comply with legal requirements regarding driving times and rest breaks
<b>61 %</b>	of drivers who (un)load at sites without loading docks report that there is never or rarely a competent spotter available to guide the driver into position
<b>58 %</b>	of drivers who (un)load at sites without loading docks report that there is never or rarely a competent person available to help manage other traffic
<b>39%</b>	of drivers report that assistance with (un)loading is never or rarely provided
<b>15 %</b>	of drivers consider that formal instructions about how to work safely on (un) loading docks is never or rarely provided
<b>31 %</b>	consider that the layout of the (un)loading area is not designed to provide sufficient room to manoeuvre safely
<b>34 %</b>	of drivers consider that truck drivers who do the wrong thing are unlikely to be pulled over by police
<b>19%</b>	of drivers who cannot refuse an unsafe schedule work more than 80 hours per week

The results also suggested that the perceptions and expectations of employee and owner drivers in respect to the reality of safety management are very different. Owner drivers are much less likely to agree that certain safety requirements are provided. Table 7.2 lists those issues about which owner drivers’ responses significantly departed from those of employee drivers.

**Table 7.2: Owner drivers were less likely to have the following experiences than employee drivers**

• I can refuse an unsafe schedule
• I can safely meet my schedules
• Legal requirements for driving times and rest breaks fit with my schedules/routes
• Formal instructions are provided about how to work safely at the site
• There is a competent spotter available to guide the driver into position at (un)loading docks
• The layout of the (un)loading area is designed safely
• There is a competent person available to help manage/stop other traffic
• Assistance with loading and unloading is provided
• Policies or rules about working safely on the site are enforced
• I report an 'ugly load'
• I report an unrealistic schedule

While the results confirm that some companies are actively working to ensure the health and safety of their , it has also established that there is a substantial segment of truck drivers that effectively forms an under-class of neglected drivers in the industry. For this group, management lacks an effective commitment to health and safety. The survey revealed that a substantial number of owner and employee drivers share similarly poor safety conditions at work, characterised by unsafe loading sites, unsafe schedules, unsafe loads, a lack of remuneration for work activities other than driving and longer working hours than other drivers. Common to these drivers is an almost complete dependence on one employer, contractor or client which renders them vulnerable and consequently, also, unable to report to a third party when their employer, contractor or major client breaches WHS laws and other regulations. A retribution culture in the industry exacerbates this vulnerability, reinforcing the reluctance of drivers to complain.

As Saurwein (2011) noted, this industry is particularly susceptible to regulatory non-compliance. The OECD (2005) identified three main reasons for non-compliance; lack of knowledge, ability and willingness. During our interviews with key stakeholders at the higher levels of the CoR, a view commonly expressed was that the complexity of the regulatory systems in operation inhibited knowledge and impeded the ability of parties to comply because of the myriad of precise rules and monitoring and reporting requirements. Yet, when we consider that, while the precise details of regulations might vary substantially, the essential norms and expectations are fairly standard across them, the significance of *knowledge* and *ability*, particularly for those at the higher levels of CoR may not be so great.

In the Australian heavy vehicle road transport industry, the most crucial reason for non-compliance would appear to be **willingness**. Research suggests that the WHS regulations have varying levels of acceptance, with some supply chain participants, for example, considering WHS regulation to be in direct conflict with market incentives. Willingness is also reflected in the risk calculations which supply chain parties make concerning the likelihood of detection and the severity of sanctions. Our research suggests that the calculated probability of being reported, and of inspection, detection and sanction (to which the Dutch Ministry of Justice refers in its *Table of Eleven* - see Table 4.5), all play important roles in participants' willingness to comply.

Also contributing to noncompliance are aspects of the enforcement pyramid. First, regulators face considerable difficulties attributing liability, proving criminal fault and dealing with recalcitrant operators (Gunningham 2001). Investigations of potential breaches of legislated regulations tends to require substantial resources in terms of people, time and money. This makes it difficult for



regulators to sanction the supply chain participants who effectively control the parameters of work in the industry. Essentially, it is easier to impose sanctions at the lower end of the supply chain – particularly on drivers. It is not surprising, therefore, that fines are overwhelmingly the most commonly imposed penalty, and it is drivers who bear the brunt of fines for regulatory infringements. Second, arguably, the ultimate penalties are too low to incentivise parties at the top of the CoR to change their behaviour. For those at the top of the chain, the maximum fine (for a Body Corporate) is \$1.5 million for each breach under the WHS Act. Possible fines under the HVNL, at \$21,320 for each conviction, are substantially lower. Third, evidence suggests courts tend to impose fines much lower than those available and that they are making little use of other financial sanctions such as commercial benefit penalties, compensation orders and publicity orders.

Ayres and Braithwaite (1992) and Gunningham (2007) caution that tough sanctions should operate as a benign big gun and be used only with the most recalcitrant of actors. Indeed, prosecutions can be counter-productive with firms that consider themselves to be ‘good guys’, leading to resentment and resistance. However, risk and the probability of sanction are critical to a deterrence effect. In this regard, specific deterrence is more effective than general deterrence. Moreover, as the research of Purse (2010) and others has demonstrated, enforcement must impact those directly responsible for breaching regulations to be effective. For senior executives and managers, personal liability is a major motivator of compliance. Yet enforcement systems are rarely reaching them directly.

## **7.5. Issues for regulatory policy attention**

Our findings point to six aspects of WHS regulation in the heavy vehicle road transport industry which need urgent policy attention. These include the complexity of regulation, perceptions and level of understanding as to the risk factors that contribute to injury, effectiveness of enforcement and accountability mechanisms, and gaps in regulation. This Report makes the following key policy recommendations to improve WHS regulation in the heavy vehicle truck driving sector

### **7.5.1. Improve knowledge of WHS risk and injury causation through the CoR**

Immature perceptions concerning the reasons injuries occur are undermining attempts to make workplaces safer. Despite all the evidence on fatal and disabling injuries and illnesses in this industry, a sizeable portion of industry participants lack an adequate understanding of WHS risk identification and mitigation. Many also fail to appreciate the multi-factoral dynamics of causation both within organisations and across the supply chain. Moreover, some employers/employees and policymakers continue to reject available evidence and cling to voluntary regulation and administrative controls and simplistic views that essentially ‘blame the victims’.

### **7.5.2. Improve data collection to inform evidence-based policy**

To facilitate evidence-based policymaking on WHS in this industry, there is an urgent need for the longitudinal collection of comprehensive, consistent and more nuanced data on the WHS experiences of both employee and owner/contractor drivers, the incidence of injury and illness in the sector and the causative factors. Three elements that have traditionally been neglected are particularly important here. First, data is needed to address the existing lack of information about the injury experience of owner drivers and sub-contractors, two groups generally excluded from workers’ compensation datasets. Second, a more thorough and consistent/comparable collection of data across jurisdictions is urgently required. Third, comprehensive longitudinal data on prosecutions and other enforcement, including administrative arrangements and orders, is needed. Further, this data needs to be accessible to researchers and key data must be publicly available.

### **7.5.3. Address the complexity of WHS regulation in this industry.**

The complexity of WHS regulation in this industry impedes understanding of rights and obligations and potentially muddies the waters in relation to compliance and enforcement. While well-resourced organisations can afford legal and administrative expertise, for smaller participants in the supply chain it can be difficult to stay well informed. For wilfully noncompliant and/or recalcitrant operators, the complexity is also used to excuse the neglect of WHS. A clearer picture of the demarcations between different mechanisms would facilitate comprehension and compliance, and the identification and monitoring of non-compliance.

### **7.5.4. Improve enforcement and accountability.**

Regulation is only as valuable as its enforcement and the accountability of parties. Improving the willingness of CoR participants to comply with the regulations must be a policy priority. This Report addresses three areas for further policy development to improve enforcement and accountability. First, more consistent and regular enforcement of regulations on parties at all levels of the CoR is required. This also requires a review of resources currently available to enforcement agencies. Second, whistleblower and industrial protections must be made available to truck drivers to facilitate the reporting of regulatory breaches. Third, retention of a range of regulatory mechanisms and sanctions remains critical, including those schemes designed to change attitudes and behaviour through strategies other than legislation. Examples include *structural* regulation such as ‘point to point’ cameras, appropriately assured *certification* and *accreditation* systems, and *informational* mechanisms which provide adverse publicity to recalcitrant parties. Here, further consideration of regulatory schemes operating in other western countries, such as safe driver licensing systems and market-oriented star rating systems, is recommended.

### **7.5.5. Close the significant gaps in regulation.**

The competitive nature and cost structures of this industry are such that, in the absence of regulation, positive safety outcomes for drivers are extremely unlikely even with the most enlightened employers. This means that gaps in regulation almost inevitably will lead to accidents, injuries and disease. The critical present gap requiring policy development is the lack of regulation which places responsibility on those higher in the CoR to ensure safe remuneration of truck drivers. With the RSRT’s abolition, the first attempt to address this issue systematically ended. Nonetheless alternative mechanisms have also demonstrated substantial success in addressing certain types of dangerous driving. The NSW Roads and Maritime Services has pursued an integrated strategy in administering the HVNL which has included adoption of a Joint Taskforce approach to speed enforcement, Zero Tolerance on truck modifications, and installation of weighbridges to enforce mass limits on repeat offenders and point-to-point cameras and other screening mechanisms on the roads. Further, while currently, there are no WHS mechanisms in Australia's heavy vehicle road transport sector which advance or limit market opportunities to CoR participants based on their compliance histories, this strategy has been pursued elsewhere. The strategy has been highly successful in the United States, albeit that it concentrates only on restricting access to government contracts.

### **7.5.6. Ensure drivers have appropriate levels of WHS and Driving skills**

Both formal driver training and formal WHS training of drivers is essential to improving driving skills, risk perception and hazard prevention. While informal forms of WHS training within organisations, including regular toolbox talks raise awareness, it is formal, external training in WHS and driving skills by competent providers that reduces hazardous incidents in this sector. We recommend that a

review of the training and licencing of drivers be conducted, with consideration given to the implementation of compulsory training prior to occupational entry.

### **7.5.7. Address the segmentation in the safety experience of drivers**

Reaching the long tail of 'neglected drivers' identified in this Report must become an urgent policy focus. It is not sufficient for employers, contractors and client organisations to display WHS accreditation under law and codes of practices if, simultaneously, a substantial minority of their drivers are excluded from safe work systems and practices. For some truck drivers, particularly those for whom a clear WHS duty of care is immediately obvious and indisputable, such as full-time employees, safety has improved considerably in recent years as legislation and other regulatory mechanisms have commenced operation. Management provisions for their safety have become more comprehensive, pervasive and entrenched.

Other groups, however, in particular owner drivers, casual/contractor drivers and a small but significant portion of employee drivers, have profited far less from WHS regulatory initiatives. Rather than benefiting from overlapping WHS responsibilities of organisations along the supply chain, these workers are falling through the gaps. Less attention is paid to their safety by participants across the CoR, and accordingly they encounter significantly more risk at work. Policymakers must continue to build the focus on regulatory mechanisms that reach most effectively across the CoR to influence the design and delivery of safe, healthy and productive work for all drivers and thus provide the most just solutions.

### **7.6 Final Conclusion**

In sum, despite significant advances in WHS in this industry in recent decades, substantial segments of its workforce remain at considerable risk of serious injury and illness. This risk is linked to a range of features of the work and the labour market – including employment arrangements, remuneration systems, working hours, task variability, control and autonomy, access to training, and management policies and practices. This is a complex phenomenon. So too, existing models of regulation and enforcement are complex and overlapping. While the regulatory mix presents a heavy regulatory burden for truck drivers, accountability and enforcement of compliance across the supply chain, particularly for those at higher levels of the CoR, remains inadequate. Moreover, even as some companies are actively working to ensure WHS, a substantial underclass of employee, owner and contracted drivers continue to experience poorer safety conditions. These include unsafe loading sites, schedules and loads, longer working hours and lack of payment for work activities other than driving.

There are strong arguments that specific experience of regulatory enforcement, whether through fines, adverse publicity, revocation of accreditation or other methods, has a strong impact on those in the supply chain who are responsible for ensuring safe workplaces. Enforcement, accountability and the careful but strategic use of sanctions within enforcement pyramids are crucial, particularly in the heavy vehicle road transport industry, due to its extremely competitive nature.

Ayres and Braithwaite (1992: 5) claimed that 'for the responsive regulator, there are no optimal or best regulatory solutions, just solutions that respond better than others to the plural configurations of support and opposition that exist at a particular moment in history'. Currently, in the Australian heavy vehicle road transport industry, for those at the bottom of the chain, the sanctions are very substantial, but their level of dependence on those higher in the chain limits the deterrence effect. The conclusion of this report is that, it is those regulatory solutions that reach most deeply across the layers of the CoR that will provide the most just solutions.

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## APPENDICES

### APPENDIX 1: List of key stakeholder interviews.

	Date	Whom	Position and organisation
1.	14 Sept 2015	Richard Johnstone	Professor, Queensland University of Technology Conducting ARC Discovery Project: <i>Australian Supply Chain Regulation: Practical Operation and Regulatory Effectiveness</i>
2.	16 Sept 2015	Sarah Jones	Toll Group Manager Road Transport Compliance Health, Safety and Environment
3.	16 Sept 2015	Tony Wilks	Toll General Manager Industrial Relations
4.	16 Sept 2015	Marcus Burke	NTC Project Director – Heavy Vehicle Compliance and Technology
5.	16 Sept 2015	Paul Davies	NTC Project Director – Maintenance
6.	21 Sept 2015	Kym Farquhason-Jones	NHVR Senior Advisor, Chain of Responsibility Regulatory Compliance
7.	21 Sept 2015	Karen Bow	NHVR Manager, Safety Promotions, Training and Education
8.	24 Sept 2015	Arthur Banos	TEACHO Bluecard Administrator
9.	25 Sept 2015	Michael Aird	TWU NSW NSW State Secretary
10.	28 Sept 2015	Paul Ryan	VTA Industrial Relations Advisor
11.	1 Oct 2015	Wayne Forno	TWU Retired NSW State Secretary
12.	1 Oct 2015	Tony Sheldon	TWU

			National Secretary
13.	1 Oct 2015	Michael Kaine	TWU
			Assistant National Secretary
14.	15 Oct 2015	Steven Ronson	Fair Work Ombudsman
			Executive Director – Dispute Resolution and Compliance
15.	20 Oct 2015	Ron Finemore	Ron Finemore Transport
			Director
16.	13 Nov 2015	Sean Minto	Woolworths
			National Safety Health and Environment Manager
17.	13 Nov 2015	Robert Agnew	Woolworths
			National Logistics Transport Contracts Manager
18.	23 Nov 2015	Peter Wells	RMS
			Director Safety and Compliance
19.	23 Nov 2015	Paul Endycott	RMS
			General Manager Compliance Operations
20.	22 Aug 2016	Paul Ryan	VTA
			National Industrial Officer
21.	22 Aug 2016	Peter Anderson	VTA
			Chief Executive Officer

**APPENDIX 2: Survey instrument**

**TRUCK DRIVER SURVEY**

Good morning/afternoon/evening. My name is .... from Macquarie University.

We are conducting a survey with truck drivers on behalf of TEACHO Ltd (Transport Education Audit Compliance Health Organisation) and Macquarie University. We are keen to understand how all the different laws that regulate truck drivers, actually make a difference to truck drivers' health and safety at work.

**NOTE: ASK QUESTION 1 HERE TO CONFIRM THAT DRIVER DRIVES A TRUCK OF MORE THAN 4.5 TONNES GROSS VEHICLE MASS**

Please be assured that your responses will be kept anonymous. We will not tell anyone your name, the names of companies you work for or any information that could be used to identify you or your employers. The information you give me will only be reported as part of a group of truck drivers and will not be shown to any authorities or companies in the transport industry.

**Location of survey completion (interviewer to complete) .....**

**DEMOGRAPHIC QUESTIONS**

This survey is restricted to drivers of heavy vehicles. Is the size of truck that you drive over 4.5 tonnes gross vehicle mass? Circle NUMBER for response

- 1. Yes
- 2. No (If no, interviewer to close survey)

**2. How many years have you been driving a heavy vehicle for a living?**

Record as whole years unless under 1 year: then record months

.....

**3. Could you tell me which of the following age groups you fall within:**

**Would you be ...**

	Under 25		45-54
	25-34		55-64
	35-44		65 +

**4. Which one of the following trucks do you usually drive?**

READ OUT – single response – circle NUMBER for response

- 1. rigid truck
- 2. semi trailer
- 3. B-double
- 4. B triple or Road Train
- 5. DO NOT READ OUT: Other (specify).....

**5. And which of the following best describes you...**

READ OUT – single response – circle NUMBER for response

- 1. An owner driver working for a single company
- 2. An owner driver working for various companies
- 3. A driver employed by and driving for 1 company
- 4. A casual / labour hire / contract driver - driving for multiple companies
- 5. DO NOT READ OUT: Other (specify) .....



**6. Now I would like to ask you some general questions about your work. How many hours a week do you work? (if driver seeks clarification, note that this would include driving, waiting, loading, cleaning up and other parts of the job)**

RECORD NUMBER OF HOURS AS A WHOLE NUMBER – IF RESPONDENT GIVES A RANGE TRY TO GET A TYPICAL WEEK OR PUT LOWER END OF RANGE, D/K = DON'T KNOW.

No. of hours.....

**7. In which state is your driver base?**

DO NOT READ OUT – tick single response

<input type="checkbox"/>	NSW	<input type="checkbox"/>	South Australia	<input type="checkbox"/>	ACT
<input type="checkbox"/>	Victoria	<input type="checkbox"/>	Western Australia	<input type="checkbox"/>	NT
<input type="checkbox"/>	Queensland	<input type="checkbox"/>	Tasmania	<input type="checkbox"/>	Refused
<input type="checkbox"/>	Other	<input type="checkbox"/>	Please explain -		

**8. What are the main types of freight that you are involved in transporting? Would it be ....**

READ OUT - May be MULTIPLE responses – circle NUMBER for response(s)

1. Livestock / farm produce
2. Refrigerated / groceries
3. Bulk material
4. Dangerous goods
5. Machinery / vehicles
6. Building materials / construction
7. General or mixed freight
8. **DO NOT READ OUT: Other (specify) .....**

**9. We would like to find out a bit more about the types of freight trips you do. How many of your freight trips would be ...**

**CARD 1**

	All trips	Most trips	Some trips	No trips
1. More than 100km from base				
2. More than 500km return trip				
3. Interstate				
4. Metropolitan				
5. Covered by Safe Rates				

**10. The next couple of questions are about how you get paid.... In which of the following ways are you usually paid**

READ OUT - May be multiple responses - circle NUMBER for response(s)

1. Hourly rate
2. Daily rate (no overtime)
3. Daily rate with overtime
4. Weekly rate
5. Weekly rate with overtime
6. Flat rate for every truck load carried
7. Rate for each trip based on kilometres travelled or tonnage carried
8. Other (Specify) .....
9. **DO NOT READ OUT: No response**

**10. If you undertake the following activities is your time paid or unpaid?**

Interviewer: Tick the boxes that apply

ACTIVITY	Paid	Unpaid	N/A
Queuing to load or unload			
Loading and unloading			
Waiting while being loaded and unloaded			
Vehicle cleaning			
Vehicle maintenance and repairs			
Refuelling			
Other activities around the yard or base (eg cleaning)			

**11. Thinking about your trips and schedules. On how many trips would you personally have input in determining your schedules and delivery times?**

Would it be .....

Circle NUMBER for response

**CARD 1**

1. All trips
2. Most trips
3. Some trips
4. No trips
5. DO NOT READ OUT: Don't know

**12. How often do you use a work diary ( ie log book)?**

Circle NUMBER for response

**CARD 1**

1. All trips
2. Most trips
3. Some trips
4. No trips
5. Not applicable
6. DO NOT READ OUT: Don't know

**13. How often do you do the following things?**

Interviewer: TICK the boxes that apply

**CARD 2**

Work patterns	Never	Rarely	Sometimes	Quite Often	Very Often	Don't Know
Drive different <u>TYPES</u> of truck						
Drive different trucks of the same type						
Drive different routes						
Load and unload at different destinations*						
Carry different types of freight**						

*Note for interviewer. \* instead of the same destination all the time*

*\*\*Instead of same type of freight all the time*

We would like to focus in on health and safety now... by asking you some questions about safety issues.

**SAFETY ISSUES**

**14. We have a list of the most common accidents experienced by truck drivers. In your view, how likely are these to happen to drivers?**

**CARD 3**

	Very unlikely	Unlikely	Undecided	Likely	Very likely
Falling <u>off</u> the cab, trailer or loading dock.					
Falling or slipping <u>out</u> of the cab					
Being hit by falling objects					
Being hit by moving vehicles					
Driving into a moving vehicle					
Driving into a stationary vehicle					
Driving into a stationary object other than a vehicle (eg barrier)					
Roll overs					
Exposure to damaging air pollution					
Walking into things					

**15. How many of the following incidents have you personally experienced as a truck driver?**

	In the past 12 months	More than 12 months ago	Never
Falling <u>off</u> the cab, trailer or loading dock			
Falling or slipping <u>out</u> of the cab			
Being hit by falling objects			
Being hit by moving vehicles			
Driving into a moving vehicle			
Driving into a stationary vehicle			
Driving into a stationary object other than a vehicle			
Roll overs			
Exposure to damaging levels of air pollution			
Walking into things			

**15. How important are each of the following factors for causing driver injuries?**

**CARD 2**

	Never	Rarely	Sometimes	Quite Often	Very Often	Don't Know
Poor or very tight schedules						
Lack of health and safety training						
Lack of familiarity with the route						
Inadequate rest time and rest breaks						
Inadequate formal truck driver training						
Inadequate toilets and other rest facilities						
Driving unfamiliar vehicles						
Poor maintenance of vehicles						
Lack of familiarity with cab design						
Driving different routes						
Strapping difficult loads						
Poor truck design (eg steps and handrails)						
Other drivers on the road (eg cars)						
(Un)loading at different destinations						
Carrying different types of freight						
Being tired						
Being distracted / not concentrating						

**18. Can you tell us what OHS training you have had as a truck driver and who provided it?**

May be MULTIPLE responses – tick all that apply

<input type="checkbox"/>	Employer instructions/ inductions	<input type="checkbox"/>	Formal driver training course
<input type="checkbox"/>	Bluecard	<input type="checkbox"/>	Toolbox talks
<input type="checkbox"/>	On the job training	<input type="checkbox"/>	Union training

**19. Please indicate the extent to which you agree or disagree with the following statements.**

**CARD 4**

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
I can refuse an unsafe <u>load</u>						
RMS inspections focus on important safety issues						
My transport company or lead contractor enforces the rules outlined in their health and safety training (and policies)						
Truck drivers who do the wrong thing are unlikely to be pulled over by police						
Drivers who hold Bluecards are safer than those who do not						

Most companies where I load and unload give formal instructions about how to work safely on their site						
The Transport Company I work for is happy for drivers to bend the safety rules when they are out on the road						
Since safe rates were introduced, I now get paid in 30 days						
The Company is more interested in ticking the boxes to look compliant than actively ensuring my safety						

**20. Turning to the issue of driving schedules, could you please indicate the extent to which you agree or disagree with the following statements.**

**CARD 4**

	Strongly agree	Agree	Neither agree / disagree	Disagree	Strongly disagree	N/A
I can refuse an unsafe schedule						
Legal requirements for driving times and rest breaks fit with my driving schedules / routes						
I can safely meet my schedules						
I record queuing and waiting times in my log book/work diary						
I plan rest breaks to take advantage of good facilities on the road (ie toilets and other rest facilities).						

**21. How often do you load or unload at the following kinds of sites?**

**CARD 2**

	Very often	Quite often	Sometimes	Rarely	Never
Shipping container terminals and specialist distribution centres					
Commercial properties with loading docks (such as shopping centres)					
Commercial sites without loading docks (eg. offices, shops)					
Industrial, chemical, mining, forestry and large construction sites					
Farms or livestock yards					
Residential properties or building sites					

**22. At the places where you go to load and unload, how often do the following occur?**

	Very often	Quite often	Sometimes	Rarely	Never	N/A
There is a competent person (spotter) available to guide the driver into position						
There is a competent person available to help manage / stop other traffic						
Assistance with loading or unloading is provided						
Formal instructions are provided about how to work safely at the site						
Policies or rules about working safely on the site are enforced						
The layout of the space is designed safely, with sufficient room to manoeuvre and separation of people and vehicles						
Safe steps and/or ladders are provided						
I am sent off-site to undertake dangerous tasks that are not permitted on the premises						

Now we have a couple of questions on the issue of loads....

**23. Thinking about loads that are not properly restrained, have you received any of the following in the last 12 months?**

May be MULTIPLE responses – CIRCLE all that apply

1. Fine
2. Warning
3. Court appearance
4. Loss of licence points

**24. Who was most in control over how that load was restrained? NB If multiple incidents, ask: on the most recent occasion who had most control over how that load was restrained?**

SINGLE answer – circle the response that applies

**CARD 5**

1. Driver
2. Employer
3. Customer/vendor
4. Direct supervisor
5. Distribution centre
6. Lead Contractor
7. DO NOT READ OUT: Other (specify) .....

**25. If the penalty was a fine, who paid it?**

SINGLE answer – circle the response that applies

CARD 5

1. Driver
2. Employer
3. Customer/vendor
4. Direct supervisor
5. Distribution centre
6. Lead Contractor
7. Don't know

**26. Have you received a fine or warning for breaching work diary (log book) requirements in the last 12 months?**

Circle the response that applies

1. Yes
2. No
3. Don't know

**27. If yes, what were the circumstances?**

Circle the response that best applies

1. Failed to use the log book for a relevant trip
2. Failed to take a rest break on time
3. Exceeded maximum driving hours in 24 hour period
4. Recording error (eg incorrect spelling or addition error)
5. Other (please explain)

**REPORTING PROBLEMS**

**If respondent is an employee driver ask Q 27. If an Owner driver, skip to Q 28**

**28. If you are an employee, who would you report the following problems to: CARD 6**

	Nobody	Your Employer / your direct supervisor	The Union	Distribution Centre/ Customer or Vendor	Government authority* – <b>off</b> the record	Government authority* – <b>on</b> the record	N/A
An 'Ugly' load (eg oversized, poorly weighted or poorly restrained)							
Not being paid a safe rate							
An unrealistic schedule							
Being told to change your work diary so it is incorrect							

*\*Government authority includes Fair Work Ombudsmen, Fair Work Commission, RMS and SafeWork NSW.*

**Now employee drivers skip to Q30**

**29. If you are an owner driver, who would you report the following problems to: CARD 6**

	Nobody	Lead contractor / customer	The Union	Distribution Centre/ Customer or Vendor	Government authority* – <b>off</b> the record	Government authority* – <b>on</b> the record	N/A
An 'Ugly' load (eg oversized, poorly weighted or poorly restrained)							
An unsafe site							
An unrealistic schedule							
Being pressured to do unsafe work							

*\* Note – Government authority includes Fair Work Ombudsmen, Fair Work Commission, RMS and SafeWork NSW.*

**30. If (for Q28 or 29) the answer for 1, 2, 3 or 4 is 'nobody', then ask: What is the main reason drivers are reluctant to report these problems?**

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**Thank you for completing this survey.**

**Do you have any other comments?**

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