

Chain of responsibility and the heavy vehicle freight industry: benefits, challenges and opportunities

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Abstract

Australia is largely unique in its approach to heavy vehicle regulation. It is one of the few modern democracies not to use operator licensing as a regulatory tool in the heavy vehicle freight industry. Instead, it uses the concept of "chain of responsibility" (CoR). CoR has been a feature of Australia's regulatory approach since the 1980s and is now embedded in the heavy vehicle national law (HVNL) on the eastern seaboard and in recently introduced Western Australian legislation.

Drawing on the experience of Australia's largest freight carrier, Toll Group, this session will explore the benefits, challenges and opportunities presented by CoR. Toll Group has embraced CoR as a key market differentiator and safety driver and is recognised as an industry leader in the promotion of CoR along the supply chain.

Questions tackled in the session include:

- *How is CoR changing the Australian freight industry?
- *What are the gaps, limitations and challenges in CoR as a regulatory and operational tool?
- *What do we need to drive the opportunities presented by CoR further?

Introduction

Australia is highly unusual in that it does not have an operator licensing system in road freight. Consequently, unlike air freight, shipping and rail freight, barriers to entry in road freight are quite low. Establishing a road freight business requires only a vehicle, an ABN and the requisite class of driver licence. Australia is in a minority of OECD countries in not having an operator licensing system, with such schemes operating in the United Kingdom, United States, Canada, New Zealand and several Scandinavian and Nordic countries including Finland.

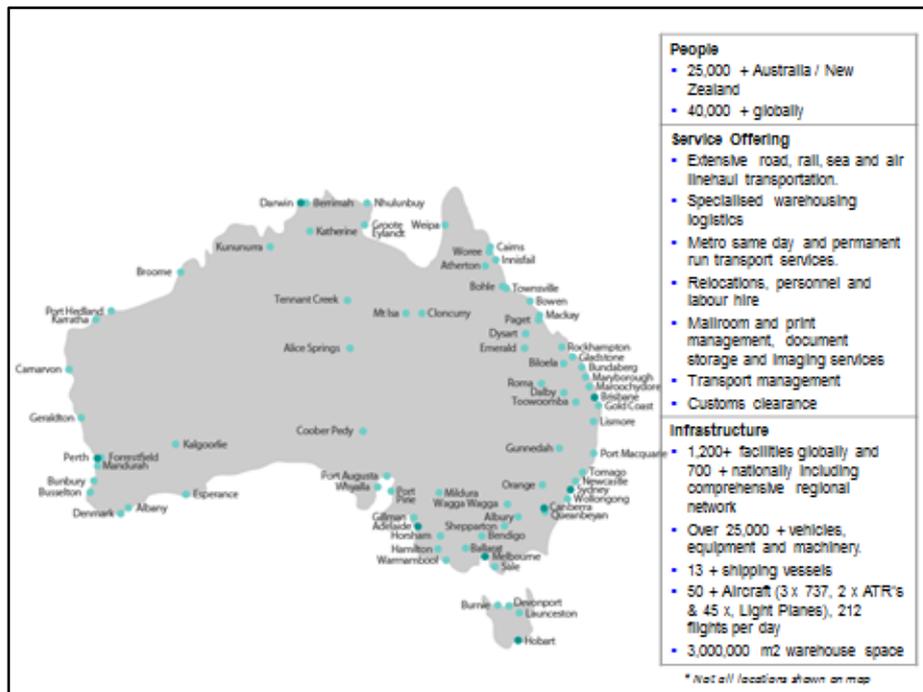
Rather than operator licensing, Australia has "chain of responsibility" (CoR). This legal concept is largely unique to Australia. It recognises that a driver's on-road behaviour can be influenced by off-road parties. Off-road parties can exert influence through inducing or coercing unsafe and non-compliant behaviour and by omitting or neglecting to do important safety related tasks. For example, an unscrupulous operator might offer a driver financial incentives to speed, or stipulate delivery times that effectively require speeding or flouting of the fatigue rules to meet. CoR works by identifying the parties in the supply chain with influence over drivers and on-road outcomes and making them visible and legally accountable.

This paper explores how CoR is intended to work, to what extent it has impacted road safety outcomes, how Toll Group has responded to the benefits and opportunities presented by CoR, and the limitations of, and tensions in, the current regulatory framework. The difficulties inherent in disaggregating the impact of CoR initiatives from other, concurrent safety and compliance initiatives (explored within the paper) mean that it is difficult to quantify the impact of CoR on safety outcomes. Of necessity, then, the paper is more speculative than scientific in its approach.

About Toll Group

Toll Group commenced operations in 1888 and has grown to become Australia's largest freight company. It now operates nearly 3000 heavy vehicles in Australia. These vehicles travel around 300 million kilometres delivering 54 million consignments each year. Figure 1 below indicates the scale and spread of Toll's Australian operations. Its size makes it a-typical in the road freight industry which is dominated by small to medium enterprises. Approximately 70% of operators have only one truck, around 24% of operators have between 2 and 4 trucks and less than 0.5% of fleets have more than 100 trucks (NTI, undated). Owner/operators account for around 60% of the industry yet around 11% of the profit (Quinlan and Wright, 2008).

Figure 1. Toll Group operations in Australia



How Chain of Responsibility Works

CoR is a concept embedded in the Heavy Vehicle National Law (HVNL). The HVNL became operational in February 2014 and is administered by the national heavy vehicle regulator (NHVR) based in Brisbane. However, CoR is not new. It has existed on the eastern seaboard since the late 1980s and was “mainstreamed” through model laws in the 2000s. The HVNL now applies in all states except the Northern Territory and Western Australia. (Western Australia introduced its own CoR laws through a separate statutory instrument in April 2015. However, unlike the HVNL these laws do **not** apply to speed or fatigue, only to mass, dimension and load restraint).

Chain of responsibility works by imposing specific duties or obligations on parties in the supply chain. When specific duties are imposed, those parties are required to do (or not do) certain things. In some cases, evidence that a driver breached a road law can be taken to mean that off-road parties were also in breach. This is known as ‘extended liability’.

For example, if a driver of containerised freight is on a road without a complying container weight declaration (as required by law), then the consignor may be held liable. Similarly, where a load manager's estimates of when a vehicle will be unloaded are incorrect by more than half an hour, the driver must be able to take rest at that facility. The driver does not have to be charged with an offence for proceedings against other parties to be instigated.

Chain of responsibility obligations apply to vehicle operations involving vehicles over 4.5 tonne, except in the case of fatigue obligations which apply to vehicles 12 tonne and above. Obligations are placed on parties in the chain in relation to:

- mass requirements
- load restraint requirements
- dimension requirements
- speed management
- fatigue management
- heavy vehicle accreditation, and
- vehicle operations.

The law requires that supply chain parties use their influence to promote compliant, safe behaviour. However, the law also recognises that there are practical limits to the influence of even the most diligent individual. Despite best endeavours, mistakes can still happen and other parties may remain ignorant of their responsibilities or deliberately break the law. For this reason the HVNL provides a 'reasonable steps defence'. As far as the law is concerned, even if an accident or a breach occurs, if a party can demonstrate that they took all reasonable steps to prevent it, then they have fulfilled their responsibilities.

As a defence, reasonable steps only applies where:

You did not know, and could not reasonably have been expected to know, of the contravention concerned; **and**

Either

You took all reasonable steps to prevent the contravention; **or**

There were no steps you could reasonably have been expected to take to prevent the contravention.

The law requires all reasonable steps to be taken. Not some, but *all* reasonable steps. Ultimately, in the event of a breach, it is for a court to determine what is 'reasonable', and herein lies one of the limitations of the current regulatory framework. Presently, most CoR-related determinations are made at the magistrate or local court level. 'As these courts do not produce any systematic and frequent public reports there [is] little readily available guidance as to the way in which these courts will...consider the application of the taking of reasonable steps.' (Lord Commercial Lawyers, 2014). Unless the matter progresses to a higher court, the vast bulk of determinations about what is 'reasonable' are inaccessible to industry.

The HVNL has a reverse onus of proof, which means that the onus is on the defendant to prove they took reasonable steps rather than on the prosecution to prove they did *not*. This has been criticised, including by the Queensland Law Society, as contrary to natural justice and the principle of 'innocent until proven guilty' (Queensland Law Society, 2012). However, Toll's view is that the reverse onus gives industry the freedom to adopt the reasonable steps that work for its particular circumstance. Industry itself is best placed to articulate the case for why its systems and processes are appropriate.

What impact has Chain of Responsibility had on road safety?

It is difficult to precisely disaggregate the role that CoR plays in reducing road trauma from that played by improved vehicle design, better road systems and management, technological innovation and enforcement. Nonetheless, there is credible evidence that the regulatory framework is positively impacting on road safety in the heavy vehicle industry. A 2013 NTC report claimed that CoR

investigations are ‘the most potent instigator of structural and cultural change currently available’ in the industry (NTC, 2013). In support of this view is:

- a 10% reduction in fatalities involving heavy vehicles achieved between 2006 and 2012 (BITRE, 2012)
- a 35% improvement in the incidence of serious crashes involving a heavy vehicle, adjusted for inflation, since 2002 (NTARC, 2015)
- a reduction in fatigue as the cause of accidents from 20% in 2007 to 12.8% in 2013 (the fatigue CoR laws were introduced in the eastern states in 2008 so there is a correlation between the introduction of the laws and the reduction in fatigue-related accidents) (NTARC, 2015)
- Western Australia’s comparatively high rate of fatigue-related incidents. WA – which does not have a CoR approach to fatigue but instead manages fatigue through a code of practice – accounts for 30% of all fatigue-related incidents in Australia (NTARC, 2015). Western Australia moves around 19% of Australia’s domestic road freight. (BITRE, 2014).

However, there is also evidence that industry risks remain unacceptably high and that other regulatory frameworks are performing better, for example

- in the period that Australia achieved a 10% reduction in fatalities involving heavy vehicles, the United States (which has an operator licensing system) achieved a 26% reduction (Ferro, 2012) (Admittedly, the global financial crisis in the United States significantly affected the vehicle kilometres travelled).
- while heavy vehicle incidents involving a fatality are trending downwards, incidents involving hospitalisation are trending upwards (Department of Infrastructure and Regional Development, 2014)
- there is no industry more dangerous for an Australian to work in than transport and logistics (ABS, 2011)
- speed and fatigue continue to be significant factors in road deaths involving a heavy vehicle (Standing Committee on Transport, 2010; NSW Centre for Road Safety, 2014)
- the economic cost of road crashes in Australia is around \$27 billion per year (Department of Infrastructure and Regional Development, 2014). The human cost in terms of grief, loss and trauma is incalculable.

It is Toll Group’s contention that more can and should be done to reduce the social and economic cost of road-related injury and death (Toll, 2015).

Toll Group’s approach to Chain of Responsibility

Toll Group’s way of doing business is governed by a company philosophy or set of values called ‘the Toll Way’. The Toll Way includes that:

- all injuries are preventable and everyone has a right to go home safely
- how we go about achieving success is as important as success itself
- we must act ethically and within the law
- we will not always get things right and learning from our mistakes is part of our progress

The benefit of embedding safety in the corporate philosophy is that it has encouraged reporting and management attention on factors additional to more traditional industry KPIs, such as ‘delivered in

full-on time' (DIFOT). Toll's pre-existing emphasis on safety and compliance meant that the CoR concept was relatively easily absorbed within the corporate culture, rather than being in tension with it.

Toll Group consciously approaches CoR as an opportunity to demonstrate leadership in the industry, and as a market differentiator. Beyond this, Toll has adopted a stance that might be described as 'pseudo-regulatory'. That is, Toll is attempting to influence the supply chain towards compliance through a mix of persuasion, education and discipline; levers that are usually the preserve of regulatory bodies. The risk posed to Toll Group as a prime contractor, as well as the particular circumstances in which the national heavy vehicle regulator (NHVR) commenced, influenced the pseudo-regulatory stance.

As noted above, the bulk of the industry consists of smaller operators. Toll Group subcontracts work to these operators where it cannot manage demand within its own fleet. So, for example, Toll NQX has around 800 subcontractors on its books who may complete one or thousands of routes each year. This makes Toll a prime contractor as understood within the HVNL, with all the attendant obligations and duties. Subcontractors are vetted and audited by Toll to ensure they operate consistently with Toll's values and compliantly with the law. Such measures provide an incentive for industry compliance. After all, operators that wish to work for Toll must demonstrate that they can do so consistent with the law. This illustrates how a party – in this case a prime contractor - can exert its influence to promote change along the supply chain.

When the NHVR commenced operations in February 2014, the industry looked to regulatory bodies for guidance on how to comply with law. That this guidance is *supposed* to be provided is implicit in the responsive regulation model on which the *Compliance and Enforcement Bill of 2003* was based (NTC, 2013). However, the operational difficulties experienced by the NHVR when it commenced meant that resources were directed towards core functions like permitting. Educational material was a secondary consideration. This left Toll Group with a dilemma: to wait for the NHVR to build the capacity to produce the material, or to step into the breach and develop such material in-house?

Ultimately, Toll elected to develop guidance material. This material is both in-house for Toll staff, and external for customers and clients along the supply chain. The internal material includes a *Guide to CoR for Toll Managers*, a quarterly *Road Transport Compliance Newsletter* (which includes analysis of CoR court cases) and modularised online training. This training was developed by Toll in partnership with an online training provider. The external material includes brochures designed to promote customers' understanding of their obligations in the supply chain. Figure 2 illustrates the brochures, one for the HVNL states and one for Western Australia. The brochures have proven popular and have been acknowledged by both the NHVR and the NTC as filling an information-void.

Figure 2. CoR material for external stakeholders



The decision to provide CoR guidance to external parties was the subject of some debate within Toll Group. After all, assuming the role of ‘expert’ assumes that one’s own house is in perfect order. Yet Toll can, and does, make mistakes. These mistakes can be amplified by Toll’s pseudo-regulatory posture. Toll finds, for example, that when it hosts CoR customer information sessions it subsequently receives calls from stakeholders who were in attendance and who, on reflection, feel that Toll could have handled particular situations better. Rather than being defensive about this feedback, Toll tries to approach it as CoR in action: an exchange of information along the supply chain which, properly handled, leads to better outcomes for all parties.

An example of the way in which Toll pulls the ‘pseudo-regulatory’ levers available to it is through rating its subcontractors on the basis of audit results. Subcontractors that do not meet the standards Toll expects are placed on a ‘do not use’ list until the identified issues have been rectified. Many subcontractors are equipped with the speed-detection and GPS tracking systems utilised by Toll to track and manage speed and fatigue events. Recently, Toll made the difficult decision to cease servicing a customer whose pallet stacking practices were deemed to pose a risk to the safety of Toll staff. After several months, this incident ultimately resulted in a change of practice at the customer site and a re-forming of the relationship – a good example of how ‘holding the line’ on safety can yield positive results.

It is difficult for Toll Group to precisely quantify the impact its approach to CoR has had, and is having, on its road safety record. As with the transport system generally, it is difficult to disaggregate the impact of CoR compliance initiatives from technological and other innovations. Further, Toll’s business units often operate fleets consisting of both light and heavy vehicles, only the latter of which fall within the CoR framework (except in WA). Nonetheless, there is solid evidence for safety improvements being delivered at Toll Group that correlate with its approach to CoR. For example:

- In 2001 Toll Group's lost time injury frequency rate (LTIFR) was 50 per million hours worked. In 2014, the LTIFR was 1.81
- Toll's externally detected road transport breaches for heavy vehicles fell by nearly 340% between 2013 and 2015
- The most recent reporting period saw only one internally detected mass breach across Toll
- Toll NQX (one of Toll's business units operating exclusively heavy vehicles) experienced a reduction in internally detected speed events of 570% between June 2013 and June 2015 following the instalment of in-vehicle cameras. Motor vehicle incident frequency rates nearly halved between December 2011 and April 2015 (Smith and Jones, 2015)

Limitations and Challenges of CoR

Safety and Price

As noted in the section above, Toll Group has made considerable investment in CoR initiatives. It also deploys monitoring and reporting systems for speeding, fatigue and driver distraction (Law, 2015; Smith, 2015). Theoretically, this investment should make Toll and other similarly-minded operators an attractive choice of carrier in the marketplace. After all, the HVNL implies, though does not explicitly state, that parties looking to transport goods via road must make their choice of carrier on factors other than price alone. For example, consignors and consignees are required to make 'reasonable inquiries' of the scheduling process to ensure that drivers are not incentivised to speed, drive while impaired by fatigue or otherwise act in ways that might compromise safety.

But how many of them do this? Sharon Middleton, the President of the South Australian Road Transport Association (SARTA) expressed a view that customers may 'go for the cheapest rates, often regardless of quality and even despite poor compliance and safety of the truck operator' (Middleton, 2014). This may be a financially "rational" decision from the customer's perspective, albeit it contravenes the spirit and the letter of the HVNL. For CoR to effectively embed cost of compliance and safety into price two things would need to happen: consumers need to be in a position to make sound choices, and enforcement needs to tackle that segment of the industry that cannot or will not comply, and accrues a competitive advantage as a result.

The United States has creatively solved the former problem by arming customers and stakeholders with credible and sufficient data to make informed decisions. The United States Department of Transport collects and analyses operator performance-related data and hosts it on their website. In 2009 this data was viewed in nearly four million user sessions and is credited with producing the most dramatic improvement in non-compliance ('violations') in the last decade (Ferro, 2012). Australia attempted to do something similar with the Five Star Trucking initiative (now disbanded) but was stymied by (among other things) the partial and incomplete nature of the data. Not having an operator licensing system, Australia collects little to no information about operators at point of entry. What data is collected derives from vehicle registration, enforcement activity and periodic surveys conducted by peak bodies and regulatory authorities.

As argued in Jones (2015), consistent, visible and effective enforcement of the law is essential to address systematic non-compliance. While it may appear odd for industry to lobby for more enforcement, this is essential if those operators that cannot or will not comply with the law are to be forced out of the system. While they are allowed to operate, they have a competitive advantage over organisations that take safety and compliance seriously.

CoR enforcement varies widely across Australia. Although CoR investigations are acknowledged as drivers of cultural change in the industry (NTC, 2013) they are also expensive and high risk when compared to more traditional forms of enforcement such as on-the-spot fines. A successful CoR

prosecution against supply chain parties can take years, and requires the prosecution to prove that the defendant did not take ‘reasonable steps’ to prevent a contravention. At the time of writing, there was only one CoR investigation ongoing by VicRoads (Skinner, 2015). In the entire time that CoR has been operational in Victoria, there has never been a successful CoR prosecution for fatigue (Skinner, 2015). In such circumstances, the deterrence effect of the law is questionable.

Roadworthiness

It is counter-intuitive that a business that relies on its vehicles to transport freight would neglect the maintenance of those vehicles. However, transport freight is an industry in which margins can be tight and most costs (such as labour and fuel) are fixed (Mayhew and Quinlan, 2006). One of the few expenses that can be ‘cut’ is vehicle maintenance. Taking vehicles off the road for servicing carries an opportunity cost: while off the road that vehicle is non-productive. Reactive maintenance (including recovery) is often at the most inconvenient times and can incur financial penalties from the client if delivery is not completed within quoted schedules. For these reasons, operators may run vehicles beyond manufacturer specifications.

The data suggests that some operators are not appropriately investing in the care and maintenance of their vehicles. The proportion of heavy vehicle inspections that find major defects is estimated at between 0.46% and 9.75% (NTC, 2015). It is very difficult to extrapolate from defects to crash risk, and Toll believes that the case for a strong link hasn’t been made (Toll, March 2015). However, where mechanical defects do contribute to accidents, the results are often catastrophic and highly visual; generating public and political attention. The National Truck Accident Research Centre estimates that mechanical issues cause accidents in about 5% of cases (NTARC, 2015).

Operators have a legal obligation to maintain their vehicles to a roadworthy standard, which means that the vehicle must be compliant with the Australian design rules and the Australian vehicle standards regulations. However, there are no CoR obligations attached to roadworthiness. Thus, there is no obligation in the HVNL for parties in the supply chain who influence/effect roadworthiness (such as mechanics and vehicle modifiers) to take reasonable steps to ensure vehicles are well maintained.

Nor are operators required to demonstrate the financial capacity to maintain vehicles *before* the vehicle is on the road. Even the maintenance module in the national heavy vehicle accreditation scheme (NHVAS) only requires an operator to demonstrate that they have maintenance *systems*, not maintenance *liquidity*. This is in contrast to the United Kingdom, where operators must demonstrate their ‘financial standing’ before they are permitted to operate. Operators must demonstrate that they have £7400 (AUS \$13,894) for the first vehicle and £4100 (AUS \$7,698) for each additional vehicle (UK Traffic Commissioner).

In Australia, financiers are not recognised parties in the chain. Banking and credit institutions that lend funds to businesses to purchase trucks are under no obligation to ensure that the cost of maintenance is factored into the lendee’s capacity to service the loan. If vehicle safety is brought under the CoR regime (which seems likely) questions remain as to how, or if, it can compel fleet managers to spend what is required on vehicle maintenance. An idea mooted by the Technical Working Group on Roadworthiness was that financiers be named as parties in the chain; the rationale being that the finance arrangements between lenders and truck purchasers should go beyond interest repayments to include vehicle maintenance.

Conclusion

CoR has been operational in large parts of Australia for more than two decades. There is sound evidence that it has, and is, making a positive impact on the safety of the Australian road freight industry. Toll Group has embraced the opportunities afforded by CoR and adopted a ‘pseudo-regulatory posture in relation to CoR. This posture arose from an aspiration to be recognised as a leader in the industry, because it was consistent with Toll’s philosophy and safety culture and to redress an information vacuum. Nonetheless, important questions remain as to the capacity of the current regulatory framework to prompt consumer decisions on factors other than price and to ensure vehicle roadworthiness. The inaccessible nature of court decisions about what is ‘reasonable’ is a further limitation.

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