Submission

Heavy Vehicle Access Policy

7/06/2024

Transport Workers' Union of New South Wales

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1. Summary of Recommendations

1.1 The Transport Workers' Union of New South Wales (TWU) (NSW) believes that the Heavy Vehicle Access Policy consultation, opened by the NSW Government, is a much-needed channel for feedback that provides an opportunity for the voices of transport workers to be heard.

1.2 Below is a summary of the TWU's recommendations, general thoughts, as well as points worth reflecting on part of the NSW Government – relevant to the draft NSW Heavy Vehicle Access Policy (the draft);

- The NSW Government should reflect on the adverse traffic impacts, and potentially negative safety consequences, in the transitional and mixed-autonomy stages of connected and autonomous vehicle (CAV) integration – as suggested by a collection of academic literature, along with other studies and reviews;

- In extension to the aforementioned, no autonomous trucks should be on NSW roads until there consistency in research, as well as a unanimous agreement between Government, operators, unions, workers and the community at large, that autonomous, self-driving trucks are appropriate and safe, especially in mixed-autonomy environments;

- There is an observable lack of consideration towards the transport workers who will be directly affected by the facilitation of Low Zero Emission Vehicles (LZEVs) and CAVs on NSW roads. The NSW Government must acknowledge the importance of consulting with transport workers, as well as the TWU, who represents tens of thousands of members. There are factors to consider beyond what is just for the benefit of transport operators and wealthy clients;

- Preparing the transport industry for CAVs is nothing short of a colossal task that absolutely requires proactive preparation. The NSW Government should give serious consideration towards working with the TWU on the development of educational and training standards for transport workers, relevant for CAVs;

- The NSW Government should not promote the use of telematics as a condition for access for high productivity vehicles, especially if the thought of telematics includes video-telematics, such as eye-tracking and inward facing cameras. Generally speaking, truck drivers do not hold a favourable opinion towards these kinds of systems, and tying them to access for road assets would be inequitable, especially without their input;

- The priority of policy should squarely be centered on safety and equitable outcomes, not the financial benefits of transport operators and their clients at the top of supply chains. The draft fails to consider any of the imbalances on economic structures that ultimately influence safety outcomes in the industry, and contribute to driver fatigue and behavioural practices. Propositions within the draft that would combat fatigue and improve safety outcomes are going to be limited in their effectiveness, as they do not address the root cause of the problem;

- The NSW Government should certainly continue their investments towards Heavy Vehicle Rest Areas (HVRAs), given the draft's reference to supporting the "*Heavy Vehicle Rest Stop Implementation Plan*"; and

- The NSW Government must recognise the importance of involving the TWU and its members in any heavy vehicle initiatives, such as this draft. Through consultation with the TWU, the NSW Government can work towards ensuring that policy is fit for purpose, and maintains outcomes that will not be to the detriment of transport workers.

2. About the TWU

2.1 The TWU represents tens of thousands of people in Australia's road transport, aviation, oil, waste management, gas, passenger vehicle and freight logistics industries.

2.2 With over one hundred years' experience representing the workers who conduct Australia's crucial passenger and freight transport tasks, the TWU has been proactive in advocating for the establishment and improvement of industry standards which advance the lives and safety of transport workers, their families and the community at large.

3. Introduction

3.1 The TWU welcomes the opportunity to contribute to the *Heavy Vehicle Access Policy* consultation.

3.2 By virtue of a long-standing representational history of heavy vehicle drivers, the TWU is uniquely positioned to provide feedback on the development of policy directly affecting road transport.

3.3 The TWU is in agreement that policy reforms must be made to facilitate "high productivity vehicles" on the NSW road network, as there have been long standing difficulties in access for such trucks.

3.4 However, the TWU is of the view that certain elements raised in the draft must be given further consideration. The draft and report summarising the 2022 consultation illustrate an initiative to facilitate the uptake of LZEVs and CAVs in the road transport industry. Pillar 2 within the draft centralises on encouraging the uptake of LZEVs and CAVs through facilitation of said technologies by way of policy.

3.5 Similarly, telematics is a notably significant topic in the draft, with specific implications that will also be addressed in this submission.

3.6 Unfortunately, both documents are absent of certain fundamental industry subjects and considerations. This is especially important in the context of the draft, as it outlines what is intended to come in the future. The TWU will provide perspectives and suggestions based upon both the material in the draft, as well as material that is absent, but should otherwise be raised for reflection.

4. Future of Heavy Vehicles Access in NSW - LZEVs

4.1 LZEVs propose a "cleaner" future for transportation. However, there are unique risks involved with LZEVs, as well as broader contextual factors, that must be given serious thought. Naturally, there are industry elements that are of the utmost importance that must be acknowledged as well, but unfortunately, appear to be afforded very little consideration based on available material.

4.2 First and foremost, the batteries powering LZEVs are subject to distinctive phenomena that can lead to hazards and dangerous situations. Lithium-ion batteries, a common type of battery that powers electric vehicles, including trucks, are prone to a process known as thermal runaway. This process includes a set of exothermic chain reactions within a battery, an increase in internal temperature, and ultimately, degradation of the inner structures which results in complete failure[1].

4.3 Due to the thermal runaway process, fires caused by lithium-ion batteries are extremely difficult to extinguish. Water-based fire extinguishers will cool down the battery to help prevent the spread of the fire, but will not actually extinguish the fire on the battery until it has been entirely exhausted of its energy. Studies and real-life scenarios have recorded that lithium-ion battery fires can actually reignite, and even grow to full size again, due to self-oxidising lithium salts present in the battery itself[2][3].

4.4 Lived scenarios, as well as academic literature, consistently reflect that fires attributed to lithium-ion batteries are concerning in their effects. One particular individual study from 2020 determined that fire risk and hazards of lithium-ion batteries are very serious in electric vehicles specifically, because of "high demands in driving performance, charging speed, inevitable traffic accidents, and the increasing scale of energy density of battery packs"[4].

4.5 There have been records of electric trucks and other electric heavy vehicles catching fire and causing immense damage, as well as being destroyed themselves. In November 2023, an electric Cement Australia truck caught fire on the West Gate Freeway in Melbourne. It was determined that an internal short of a single battery cell caused the fire[5].

4.6 Internationally, there are other examples of electric heavy vehicles catching fire. In June 2021, an electric bus caught fire and triggered a blaze that quickly spread to four other buses in a Chinese depot. Four of the five buses were completely destroyed[6].

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[1] Shahid, S. and Agelin-Chaab, M. (2022). A review of thermal runaway prevention and mitigation strategies for lithium-ion batteries. *Energy Conversion and Management: x*, 16, p.100310.
[2] Cui, Y. et al. (2022). Full-scale experimental study on suppressing lithium-ion battery pack fires from electric vehicles. *Fire Safety Journal*, 129, p.103562.
[3] UNSW. (2023). Seven things you need to know about lithium-ion battery safety. Available at: https://www.unsw.edu.au/newsroom/news/2023/03/seven-things-you-need-to-know-about-lithium-ion-battery-safety#:~:text=The%20thermal%20runaway%20phenomenon%20means,until%20its%20energy%20is%20dissipated.
[4] Sun, P. et al. (2020). Correction to: A Review of Battery Fires in Electric Vehicles. *Fire Technology*.
[5] Big Rigs. (2023). *Why electric truck caught fire on the West Gate Freeway.* [online] Big Rigs. Available at: https://bigrigs.com.au/2023/12/18/why-electric-truck-caught-fire-on-the-west-gate-freeway/
[6] Anderson, B. (2021). *Electric Bus In China Erupts In Fire That Spreads To Four Others.* [online] Carscoops. Available at: https://www.carscoops.com/2021/06/electric-bus-in-china-erupts-in-fire-that-spreads-to-four-others/

4.7 Another example from September 2021, saw a fire was spread in a bus depot in Germany, believed to be derived from an electric bus charging procedure. Consequently, as the fire was fast-spreading, 25 buses were destroyed, and millions of dollars-worth of property damage was suffered. Additionally, six employees had to receive medical attention during the fire[7].

4.8 Though the aforementioned examples are just a few of many, the TWU would raise them to bring awareness to the very real reality of the unique safety hazards associated with LZEVs and related technology.

4.9 *The future of heavy vehicles industry consultation report* outlines that skills and training remains a theme under the barriers to the transition to LZEVs for the industry. Specifically, it notes driver shortages and maintenance staff trained to work with LZEVs, as well as actual opportunities for new education programs.

4.10 A number of points must be raised for consideration. Firstly, above all else, workers deserve to be consulted with on large-scale changes that will affect their industry and working environment. This, however, will be discussed further within this submission in greater detail. Another important fact to consider is that the truck driving occupation is an aged one. In Australia, the average age of truck driver is 47, which is above the all-jobs average of 40[8]. This is important because there will absolutely be barriers to general acceptance on the part of truck drivers, particularly those who have been in the industry for a long time; a temporal factor that is common in trucking.

4.11 Truck drivers are the end-users of LZEVs. They possess invaluable firsthand, practical experience, with an understanding of the many nuances that comes hand-in-hand with the role on-road. If the NSW Government is adamant in facilitating the uptake of LZEVs by industry through policy, then the perspectives of drivers must be accounted for. The NSW Government would benefit from capitalising on the long-standing experience of drivers in the industry, as well as the TWU, who represents them.

4.12 Today, there are transport workers who operate LZEVs. However, for large-scale use, this is typically in the form of a delivery van or similar type of vehicle. Currently, LZEV trucks are few in number on NSW roads, and the typical outcomes and on-road experiences gathered through the usage of delivery vans cannot be considered equivocal to what may be expected of heavy vehicles. This is especially true given that LZEV trucks do not possess the ideal level of range capabilities for consistent, long-distance use.

4.13 The TWU would raise that further research needs to be conducted into the long-term, on-road effects of LZEVs, particularly given NSW's unique road conditions and geographical factors involved in long-distance and rural transport.

5. Future of Heavy Vehicle Access in NSW – CAVs

[7] Sustainable Bus. (2021). *Fire in SBB Stuttgart's depot 'could have been caused by e-bus charging'. MVG Munich takes 8 e-buses out of service.* [online] Available at: https://www.sustainable-bus.com/electric-bus/sbb-stuttgart-fire-electric-bus-depot/

[8] Truck Drivers. *Labour Market Insights.* [online] Available at: https://labourmarketinsights.gov.au/occupation-profile/drivers-truck?occupationCode=7331

5.1 Remarking about the broader potential of "modern high productivity vehicles", and by extension, LZEVs and CAVs respectively, the draft reads;

'We currently have a unique opportunity to improve the efficiency and utilisation of both the existing infrastructure and fleet which will help realise significant benefits to our economy and society in terms of cost savings, reduced congestion and improved public amenity and safety.'

5.2 Additionally, further detail specifies that LZEVs and CAVs *'provide us with an exciting opportunity to reconsider how freight is moved. We want to capitalise on the safety, efficiency and sustainability benefits of modern vehicles entering the market.'*

5.3 Proponents of CAVs commonly suggest that the technology will deliver a wide-range of safety benefits. However, the way in which these benefits are implied to come about can often be misleading, as research suggests that traffic flow and road safety may be subject to negative effects in the transitional and mixed-autonomy stages of CAV integration.

5.4 One of the ultimate goals surrounding CAVs and their integration onto public roads is to revolutionise traffic flow, and deliver greater safety outcomes. The same intention is attributed to autonomous and high-tech trucks specifically. Nevertheless, it is not expected for such an idealistic result to be achieved for a number of decades.

5.5 A specific piece of research into the relationship between automated vehicles and traffic flow has determined that an ideal level of "vehicle cooperation" is necessary for the proposed benefits to be realised. This can only be achieved once CAV penetration levels are at a high rate; meaning when CAVs have a significant road presence. In contrast, it is suggested that low-levels of CAV penetration will have negative impacts on both traffic flow and road capacity[9].

5.6 Similar conclusions have been reflected in other studies and reviews. One such literature review notes that the magnitude of infrastructure-based benefits is said to be highly dependent on the market penetration of CAVs, in addition to road configuration and traffic conditions[10]. Another study, using simulations, identified an increase in conflicting situations and traffic congestion in the low-penetration, short-term scenarios within its scope[11].

5.7 Broader benefits that are suggested to be brought about by CAVs have also been challenged. A review into systematic work on long-term implications of automated vehicles notes that there is evidence of automated vehicles contributing to more vehicle kilometres travelled, less use of public transport, less parking demand and further suburban development. However, these conclusions are, currently, little more than conjecture, as they are drawn from early estimate data. The long-term implications are simply uncertain in nature, and therefore, cannot reliably be guaranteed at this point in time[12].

[9] Calvert, S.C. et al. (2017). Will Automated Vehicles Negatively Impact Traffic Flow? *Journal of Advanced Transportation*, 2017, pp.1-17.
[10] Beza, A.D. and Zefreh, M.M. (2019). Potential Effects of Automated Vehicles on Road Transportation: A Literature Review. *Transport and Telecommunication Journal*, 20(3), pp.269-278.
[11] Guériau, M. and Dusparic, I. (2020). *Quantifying the impact of connected and autonomous vehicles on traffic efficiency and safety in mixed traffic.* [online] IEEE Xplore.
[12] Milakis, D. (2018). Long-term implications of automated vehicles: an introduction. *Transport Reviews*. 39(1), pp1-8.

5.8 It must be raised that safety, being a key element of focus in the promotion of "modern high productivity vehicles", particularly with CAVs, is also the subject of significant interest. The TWU is of the view that safety is the most important aspect in the road transport landscape, and in the broader NSW public road context. As such, the TWU holds the firm belief that safety cannot be subject to negative impacts under any circumstances, and by extension, is adamant that safety must not suffer in the pursuit of facilitating and implementing CAVs on NSW roads.

5.9 Acknowledging that a specific forecasted outcome of CAV integration includes a higher level of vehicle kilometres travelled, one particular literature review, that included 24 different studies within its assessment, considers that an overall rise in total vehicle miles travelled could have a negative impact on traffic safety, and also declares that evidence regarding the safety benefits of automated vehicles has not been systematically investigated and documented[13].

5.10 Furthermore, a comprehensive CAV-based safety assessment determined that crash rates involving conventional vehicles will not invariably reduce with increases in CAV penetration, specifically noting that this had been assessed through the lens of a "mixed-fleet' scenario, meaning one of mixed-autonomy. Moreover, the study goes so far as to suggest that the full-scale benefits associated with CAVs, including safety and improved productivity, can only be achieved at 100% CAV penetration[14]; an idealistic level that remains a distant reality, should it ever be achieved.

5.11 The existing research on CAVs overwhelmingly steers its attention towards standard passenger vehicles, or rather, cars. In comparison, the availability of similar, meaningful information for trucks is limited. Material covering cars do not account for heavy vehicles in general, and by extension, certainly do not account for the diverse types of trucks, with varying scales of size, weight and capability in freight loads. The safety outcomes associated with cars cannot necessarily be attributed to trucks.

5.12 It must also be noted that there is enough evidence in academic literature to suggest that there are negative effects associated with CAVs, particularly in mixed-autonomy scenarios (which is the current lived situation on NSW roads). With seemingly two schools of thought, it can therefore be concluded that more research into the on-road effects of CAVs, with specific reference to trucks, must be conducted to ensure the safest possible outcomes.

5.13 Currently, there isn't a universal agreement between Government, industry, workers and the community that CAVs are safe for NSW roads. As such, autonomous, self-driving trucks should not be facilitated, or introduced, onto NSW roads. Doing so before receiving approval from workers and the community cannot be viewed as being done in good faith whatsoever.

6. Perception of CAVs and LZEVs

[13] Tafidis, P. et al. (2021). Safety implications of higher levels of automated vehicles: a scoping review. *Transport Reviews*, pp.1-23.
[14] Sinha, A. et al. (2020). Comprehensive safety assessment in mixed fleets with connected and automated vehicles: A crash severity and rate evaluation of conventional vehicles. *Accident Analysis & Prevention*, 142, p.105567.

6.1 On top of the broader subject of CAVs and the puzzle clouding the matter, the perception of CAVs and related technologies must be addressed.

6.2 Transport workers and the community at large must be consulted with, should the NSW Government commit to facilitating the uptake of such technologies. It would be entirely inequitable should they be ignored, and the endeavours of the NSW Government in the partnership with industry could not be interpreted as being pursued in good faith.

6.3 The priority of policy should be fostering equitable outcomes, meaning that the perspectives of the workers who conduct NSW's critical freight task must be accounted for. A common barrier to the adoption of CAVs in general would be public opinion. Unsurprisingly, the same applies in the heavy vehicle context. The current lack of consultation with workers and the public suggests that the NSW Government and freight operators may be attempting to avoid receiving these perspectives, given that valid concerns may inhibit the adoption of CAVs on NSW roads.

6.4 TWU member and transport worker, Stephen Newton, shares his perspective on CAVs;

"I have been in the transport industry for 44 years, with the same company. As a long-time truck driver myself, I can tell you that none of us (truck drivers) *are enthusiastic about 'autonomous trucks'. Not a single soul in my yard* (workplace) *is, that's for sure.*

We're talking about a completely different animal here. You can't compare a truck, that can cause immense, large-scale damage, to something like a car. A truck is far more capable of bringing about a fatality, or several, than a car is. But they (NSW Government, Operators) *want to put that kind of capability in the hands of technology?"*

6.5 Presently, in relation to CAVs, there are too many questions and not enough answers when it comes to the future environment of road transport. Though there is a push for automation, the role of a truck driver will not disappear; it will evolve, and that subsequently demands appropriate action.

6.6 CAVs may be considered a disruptive force in the transport industry, in that mass adoption will inevitably shake up the role of a truck driver. A driver in the cabin of a CAV would be operating the truck in a different manner to what is conventional, and there would be a need for new training initiatives in ensuring the road transport task is equipped with the appropriate skills and knowledge.

6.7 In a CAV, it may be fair to say that the role of truck driver could evolve into something more akin to an aircraft pilot; operating the vehicle in the cabin, with the primary inputs being reliant on buttons and switches, monitoring data and maintaining communication streams with the office, rather than manual steering and pedal interactions.

6.8 Furthermore, beyond merely operating the CAV, there are technical considerations that must be taken into account; drivers who operate these vehicles would require CAV-specific maintenance knowledge, and technical capabilities, that may be considered equivocal to what is expected in today's landscape. To put it simply, the training of transport workers will need a complete overhaul, as CAVs are, as described in the member statement above, *'a*

completely different animal'; the onboard systems are completely different, there are unique hazards that workers must be prepared for, and there would be new operational and maintenance-related elements that are entirely distinct from what is generally present today.

6.9 Endeavouring to prepare the industry for CAVs and similar technologies is a colossal undertaking that would most certainly require proactive action. The NSW Government should acknowledge that education and the development of training must be conducted prior to even just the facilitation of CAVs, as educating after the fact; i.e., once such vehicles are already rolled out on the network, is an entirely inequitable and unjustifiable scenario that would not only detriment transport workers, but would very likely serve to impede road transport operations all the same.

6.10 With such a complicated, yet important charge, the NSW Government must engage with the TWU in how to best develop training programs and systems that can prepare the industry. The TWU has a unique understanding of the needs of transport workers, and is well positioned to work in collaboration with the NSW Government in moving forward. The TWU urge the NSW Government to afford this genuine consideration, as there is no observed intention or implication to consult with workers, or their union, in regards to their perceptions on CAVs, as well as how to best prepare the road transport task for such technologies.

6.11 From a broader perspective, "*The future of heavy vehicles industry consultation report*" (the report) outlines that a significant factor in the fleet investment decision of operators was cost. Specifically, return on investment, vehicle efficiency, maintenance costs and resale value, in addition to other influences such as better safety features, vehicle dimensions, reliability and more.

6.12 The NSW Government would do well to acknowledge its responsibilities in maintaining safety and equity as its priority in policy. The TWU questions whether the NSW Government should be considering the profits of transport operators and clients at the expense of transparency with the very workers that will be directly impacted by the impending policy.

7. Telematics and Data

7.1 Pillar 4 within the draft describes telematics and data. There are details that raise a number of concerns. Typically, telematics technology is used as an avenue for vehicle surveillance, capturing data within a vehicle, and subsequently sending the data back to the office for information analysis and storage. In other respects, telematics can also be used to monitor data from outside the vehicle.

7.2 Essentially, telematics allows an operator to effectively monitor the entirety of a driver's journey, including everything they do and how they behave. With varying levels of telematics, information can be gathered on driving patterns, steering behaviour, breaking inputs, when the vehicle is sedentary, and so on.

7.3 Scope is listed under Pillar 4 in *Figure 7: Range of areas telematics can be used*. This range includes "Driver performance", listing the following as targets through telematics;

- Speed

- Fatigue
- Alcohol & drugs; and
- Driver efficiency e.g. braking

7.4 Mere surface-level assessment of this plan raises serious concerns. Perhaps most notable is the issue of privacy, which proves to be a very common cause of apprehension among TWU members who have historically been either directly exposed to telematics technology in their workplace, or have simply been exposed to the potentiality of such technology being introduced to their working environment.

7.5 Though it isn't explicitly stated, the scope of "Driver performance" monitoring implies the use of in-cabin cameras. The TWU believes this is a reasonable assumption, as such surveillance systems are common for the monitoring of driver fatigue, as well as alcohol and drug use. Furthermore, camera systems can be considered a form of "telematics"; or "video telematics", specifically.

7.6 Driver anxiety over telematics, and surveillance technology in general, certainly does not go unfounded, nor is it unjustified. As a matter of fact, this concern can be attributed to multiple different reasons. Simply put, the first cause for concern is that operators will use surveillance technology to unjustly abuse their authority and target their truck drivers for no good reason. This may seem unlikely, but it is already a lived scenario in the transport industry faced by employees of large operators. Another key contributor to concern is the way in which operators go about introducing such technology.

7.7 In 2017, the TWU encountered a situation where a major transport operator, contracted to a large retail client, attempted to introduce driver monitoring technology in the cabin of their trucks overnight, with no prior consultation with their workers. Specifically, the operator installed retina-scanning devices in their trucks. In the morning, the elected Health and Safety Representative (HSR) directed all workers to cease unsafe work, to which they agreed due to their own apprehension over the technology, as well as confusion. Not a single driver was willing to get behind the wheel of the trucks.

7.8 After ceasing unsafe work, the HSR called upon SafeWork to physically send an inspector out to the worksite and assess the situation. SafeWork quickly determined that the operator had demonstrated unacceptable behaviour, and had failed to consult workers and initiate the necessary processes for introducing such transformative technology. It was so black and white that everything was finalised within the day, and the TWU had no need to get involved or escalate the matter further.

7.9 TWU NSW State Secretary, Richard Olsen, provides his thoughts on the aforementioned scenario;

"Installing driver monitoring technology with no prior consultation with workers is simply egregious. Regardless of that, truck drivers aren't exactly fans of being monitored constantly. There are a number of things to consider.

Drivers have expressed feeling a lack of respect or value for the work they do, and it can make them feel demeaned in their role. Some drivers who have been subject to such monitoring

technology in their vehicles express that it can actually be distracting, which seems to go against the intended purpose of "safety" and performance. If something keeps beeping, or shaking the chair to alert them, then it makes it sense that a driver would lose concentration, and perhaps feel frustrated if anything."

7.10 With the exhaustive scale of information that can be tracked using telematics, the likelihood of drivers being admonished due to perceived issues in driving patterns, fatigue or other characteristics reaches an uncomfortable level. This is particularly important as misinterpretation of data is likely, given that telematics systems may not always provide a complete picture of driver's performance. Factors such as on road conditions or other external influences may not be accurately reflected in the data, leading to unfair judgements or disciplinary actions.

7.11 Moreover, based on the description that the leveraging of telematics should provide *"greater certainty to industry to invest in technologies and solutions that improve their productivity and efficiency"* suggests that the key focus of this initiative is just that; to benefit operators.

7.12 Additionally, the draft reads;

"We will continue to promote the use of telematics as a condition for access for high productivity vehicles, particularly for access to sensitive road assets by larger and heavier vehicles, and increasingly link it to access arrangements under notices and schemes."

7.13 Further, *Figure 7.* also notes the scope of telematics in the context of heavy vehicles access, specifically listing;

- High Productivity Vehicle/PBS Vehicles
- Mass Limits
- Oversize Overmass (e.g. SPVs)
- Dangerous Goods
- Autonomous vehicles

7.14 What can be inferred from this is that the NSW Government and transport operators intend to make telematics and surveillance technology mandatory in heavy vehicles if they want access to whatever will be deemed "sensitive road assets", as well as broader access arrangements. If this is the direction of policy, then it seems to ignore any practical human factors, with a narrow overemphasis on metrics.

7.15 For drivers, this is completely inequitable, as it would facilitate the compulsory introduction of telematics into vehicles without prior consultation. As many drivers would likely resist the implementation of video telematics systems, it seems convenient that there is no mention or implication to consult them beforehand, as any resistance could therefore be avoided, and drivers would be put in a situation where they would effectively have to comply.

7.16 The TWU would raise that, generally, heavy vehicle drivers do not have a favourable view of surveillance technology. Introducing these systems and making them mandatory for access, without consultation, will only lead to resentment, amplified distrust, as well as create further stressors to an already overburdened task.

7.17 Notably, it is stated that "driver safety" is a factor within the coverage of telematics technology. Unfortunately, the plan to use telematics to combat elements such as fatigue and driver behaviour is fundamentally flawed, as no amount of surveillance, retina scanning, warnings or in cabin alerts addresses the fundamental, industry-wide pressure that influence driver fatigue and behaviour.

7.18 Some drivers are of the view that certain types of telematics systems can actually be distracting and invasive on a physical level. Additionally, video telematics can cause drivers to be stressed, and feel uneasy.

7.19 TWU Delegate, David Andrew, shares his perspective as a truck driver whose vehicle is equipped with in-cabin video telematics;

"I've got a bit of a history with in-cabin cameras. In 2007, they (major transport operator) *brought in a camera that was both outward and inward facing. We* (truck drivers) *weren't fans – it felt quite invasive. We were good with the outward, but the inward felt like an invasion of our privacy. We engaged the Industrial Relations Commission to resolve the issue in regards to Drivecam* (camera)*, and on 22/02/2007, it was determined that both inward and outward would go ahead without audio on 27/02/2007. There was a policy formulated between the TWU and the company in how the vision* (camera) *was to be used. The vision was not to be used punitively, but for safety, training and proof of accidents.*

Today, we have three different cameras in our vehicles. One outward facing, that admittedly, we don't have any real problem with. It is essentially a dash cam that watches the road ahead. The second is known as a 'Guardian' camera, that faces inward, and tracks eyelid closure and head orientation using infrared. This Guardian system also shakes the seat with an audible alarm when it feels you are fatigued. The third camera is on the passenger side of the cabin, and is also used whenever the Guardian triggers, allowing a better view of the entire interior, and the driver themselves.

Initially, we were told by management that the Guardian wouldn't be used as a punitive method, or for any terminations. Well, so far, we've had a number of terminations, through footage picked off the third camera when triggered by the Guardian. There are a lot of ways for them to skew information to justify what they do. They can say what they want from a 'safety' perspective, but tracking us and shaking our seat when fatigued will only go so far. If the fatigue event is considered serious enough, the company will contact the driver and tell them to have a fatigue break.

*The shake might put some kick back into you, but it doesn't fix the actual problem. And aside from that, drivers in the yard have had concerns over the long-term effects of the infrared on the eyes. Management says *their* doctors and scientists say it's fine, but we don't know how it will be measured in the long-run. There has been some debate on this.*

What's more? Well, there's the obvious concerns on privacy. At the end of the day, the cabin is our office. Our workplace. We don't see the managers being watched 24/7. They also say that no voice recording happens, but based on certain interactions with them, we suspect that's not true. We're concerned they can hear our conversations, which in some cases may

be sensitive or private; particularly when we're within our rights to do so, if, say, our devices are hands-free, or if we are parked and sedentary. And yes, this technology can kick in when stopped. Drivers have been parked, and been on their phones, as they rightfully can be, and have been shaken by the seat, and alerted by the system.

We are all for safety. But we have to question these systems."

7.20 Despite being a critical piece of the puzzle that is the NSW economy, it is the industry clients and those at the top of supply chains who possess all of the power. Pricing, unrealistic demands and deadlines, poor working conditions, and many more intricate factors all come together to present a deadly package that is hurled towards truck drivers. The telematics debate is misdiagnosing the problems at hand; unsafe road behaviour is not attributable to poor driver behaviour, but rather, finds its roots in the downward pressures caused by wealthy clients at the top of the supply chain.

7.21 Many of the pressures suffered by heavy vehicle drivers are out of their control, and are typically born from the superfluous demands of management. Examples of this include direction skip breaks, work longer hours (despite fatigue), take faster routes, or cut corners (impacting safety), among many others. It is no exaggeration to say that many of the safety issues plaguing road transport and road safety can find their origin traced back to the boardrooms of retailers and those who have an iron grip on contracts.

7.22 Currently, there is a lack of suitable HVRAs on the NSW road network; an issue that the TWU has long been vocal on, and an issue that the NSW Government itself has acknowledged. Based on reference to the heavy vehicle rest stop implementation plan, though the NSW Government intends to make improvements to rest areas, at this point in time, any telematics with the intention to combat fatigue would prove limited in its capabilities if drivers do not have access to the appropriate avenues to actually practice fatigue management.

7.23 Irrespective of the context between telematics systems, the TWU is a long-standing advocate for the improvement of NSW's HVRAs, and the development of new ones. As such, the TWU can wholeheartedly recommend the NSW Government continue to invest in their heavy vehicle rest stop initiatives.

7.24 Again, no amount of surveillance will address the core elements that contribute to fatigue and driver behaviour. They do not resolve the issues at hand. The TWU would recommend that the NSW Government avoids making video telematics mandatory in any way shape or form for the sake of network access, as implied by the draft.

7.25 In the case of owner drivers who operate their own heavy vehicle, consideration must be afforded to the idea of how mandated telematics would interact with costs for the owner driver. For example, if a client were to mandate the use of certain telematics in vehicles within their supply chain, would owner drivers be required to upgrade their vehicles, and subsequently, would there be cost recovery for this?

7.26 This should be planned out and conveyed with transparency. The aforementioned scenario would ultimately serve as yet another cost pressure on the transport industry if the pricing is slugged onto owner drivers and operators. Too often, heavy vehicle drivers struggle, or are

entirely unable to cover their costs, which further exacerbates safety issues when they have no choice but to operate unsustainably.

7.27 Furthermore, if the NSW Government considers fatigue management and reduction, as well as overall road safety for truck drivers a priority in its policy-making, then it should very-well consider direct consultation with the TWU as the representative for tens of thousands of transport workers. Assessing the industry landscape, with all of its intricate nuances, and realising practical solutions that do not undermine the workers themselves, is a multi-layered process that would require proper collaboration.

8. Strong Partnerships

8.1 Pillar 5: Strong partnerships suggest the NSW Government seeks to collaborate with stakeholders to support and improve heavy vehicle access.

8.2 Under the actions of this pillar, there is specific mention of collaborating with local councils, and assisting land-use planners. There is no implication that the Government would seek to consult with the transport workers. In the absence of this intention, the draft fails to consider the need to consult with workers, and understand their perspectives, as well as what impacts they may face, in relation to the influences this policy would have on their working lives.

8.3 The TWU would urge the NSW Government to consider the need to consult with workers, and the TWU as their representative, as part of their partnership initiative. Drivers are, for lack of a better descriptor, quite literally the people in the cabin of the truck, who are physically dealing with access in real-time. The propositions in the draft directly impact them. It stands to reason that the NSW Government should open lines to partnership for causes beyond simply benefiting operators and planners.

9. Conclusion + Recommendations

9.1 The TWU would like to thank the NSW Government for the opportunity to provide feedback on the draft NSW Heavy Vehicle Access Policy.

9.2 Below is a summary (also present at the start of the submission) of the TWU's recommendations, general thoughts, as well as points worth reflecting on part of the NSW Government – relevant to the draft.

- The NSW Government should reflect on the adverse traffic impacts, and potentially negative safety consequences, in the transitional and mixed-autonomy stages of CAV integration – as suggested by a collection of academic literature, along with other studies and reviews;

- In extension to the aforementioned, no autonomous trucks should be on NSW roads until there consistency in research, as well as a unanimous agreement between Government, operators, unions, workers and the community at large, that autonomous, self-driving trucks are appropriate and safe, especially in mixed-autonomy environments;

- There is an observable lack of consideration towards the transport workers who will be directly affected by the facilitation of Low Zero Emission Vehicles LZEVs and CAVs on NSW roads. The NSW Government must acknowledge the importance of consulting with transport workers, as well as the TWU, who represents tens of thousands of members. There are factors to consider beyond what is just for the benefit of transport operators and wealthy clients;

- Preparing the transport industry for CAVs is nothing short of a colossal task that absolutely requires proactive preparation. The NSW Government should give serious consideration towards working with the TWU on the development of educational and training standards for transport workers, relevant for CAVs;

- The NSW Government should not promote the use of telematics as a condition for access for high productivity vehicles, especially if the thought of telematics includes video-telematics, such as eye-tracking and inward facing cameras. Generally speaking, truck drivers do not hold a favourable opinion towards these kinds of systems, and tying them to access for road assets would be inequitable, especially without their input;

- The priority of policy should squarely be centered on safety and equitable outcomes, not the financial benefits of transport operators and their clients at the top of supply chains. The draft fails to consider any of the imbalances on economic structures that ultimately influence safety outcomes in the industry, and contribute to driver fatigue and behavioural practices. Propositions within the draft that would combat fatigue and improve safety outcomes are going to be limited in their effectiveness, as they do not address the root cause of the problem;

- The NSW Government should continue their investments towards Heavy Vehicle Rest Areas (HVRAs), given the draft's reference to supporting the "*Heavy Vehicle Rest Stop Implementation Plan*"; and

- The NSW Government must recognise the importance of involving the TWU and its members in any heavy vehicle initiatives, such as this draft. Through consultation with the TWU, the NSW Government can work towards ensuring that policy is fit for purpose, and maintains outcomes that will not be to the detriment of transport workers.