

**Transport for NSW submission in response to
The National Transport Commission
'Developing a heavy vehicle fatigue data framework' Discussion Paper
public consultation.**

October 2015

Transport for NSW (TfNSW) welcomes this consultation on "Developing a heavy vehicle fatigue data framework".

Fatigue has been shown to be a behavioural issue that contributes to road crashes. This project will improve road safety through a better understanding of fatigue and develop new policies to address the impact of fatigue.

Improved data on fatigue in the heavy vehicle industry will provide an opportunity to review and reform fatigue legislation. Since the introduction of the 2008 heavy vehicle fatigue laws, there has not been a comprehensive review or evaluation of these laws.

The project provides the opportunity to develop the fatigue data framework; gather evidence, define the problems and develop a research agenda to inform fatigue policy development

The project will lead to better understanding of how fatigue is being managed by the industry, and gathering evidence, to better inform the development of fatigue management policy to improve road safety.

Transport for NSW supports the collaborative approach the NTC is taking in this project. Improved fatigue management will be best achieved through a collaborative policy development approach including industry, the NTC, NHVR and jurisdictions. Obtaining industry, drivers, inspectors and police support for the framework is crucial to ensure the data collected is comprehensive.

While Transport for NSW supports the principle of developing a heavy vehicle fatigue data framework, the proposal is complex and requires sufficient resources, efforts and commitment from industry, police and authorities over a period of time. Its success is subject to many challenges and risks.

The requirements to introduce the desired data capture into existing jurisdictional systems will need to be fully scoped and may be challenging.

The collection of fatigue data, especially in relation to crashes, should be consistent for both light and heavy vehicles. Crashes which involve light or heavy vehicles undergo the same police investigation process and are captured in the same data systems. The fatigue data framework has the potential to inform research into other road user groups. Considering light vehicle fatigue in designing the fatigue data framework is important to ensure that any changes to systems are consistent for all road users.

Transport for NSW has provided its responses to the Discussion Paper's questions below. It is noted that some parts of answers may relate to multiple questions.

1. Do you agree with the fatigue issues identified in the discussion paper? Are there other issues that should be included?

Transport for NSW agrees that the eight fatigue issues identified in the discussion paper are important and should be included in the fatigue data framework project.

NSW requests that research into the duration and frequency of short rest breaks be included as a ninth issue. The duration of short rest breaks needs to be assessed for whether they are effective for managing fatigue. For example, are 15 minute breaks an appropriate length to address fatigue?

2. What is your view on the proposed prioritisation of fatigue issues identified in the discussion paper?

The criteria for prioritisation of the fatigue based issues (page 24) could be strengthened. It is important to acknowledge that these criteria seek to capture the contribution of fatigue to road safety risk.

- We suggest Criteria 5 “Data collection and research activities could be undertaken to demonstrate measurable and validated relationships between regulations and provisions relating to fatigue alertness and the degree of alertness impairment” be reframed to note that the data collection and research is to provide an evidence basis to understand the level of impairment and develop controls and countermeasures as part of fatigue management, especially for BFM, AFM and Chain of Responsibility. The level of impairment can be expressed and analysed in terms of fatigue alertness.

Transport for NSW considers that the priorities should be as follows:

- Transport for NSW agrees that **Nose-to-tail schedules** are the first priority.
- The next priority is the issues related to rest breaks. These should be grouped together to take advantage of the aspects that overlap (**Insufficient sleep, including quantity and quality of sleep attained in major rest breaks; Continuous hours of work – including Basic Fatigue Management (BFM) and Advanced Fatigue Management (AFM) options; Minimum rest times for BFM two-up drivers**). Transport for NSW proposes the “duration and frequency of short rest breaks” be included in this group.
- **Impact of local work** is probably of next importance, especially with the high levels of infrastructure development being undertaken in Sydney over the next decade.
- **Driver well being and fitness to work** should be increased in importance
- Given the significant research already undertaken on **Night time driving and ending shifts in the early morning**, this topic is probably of lower importance.
- **Threshold application of fatigue laws and work diary record-keeping** is less important than those that address an existing road safety risk.

Transport for NSW proposes the amended priorities be:

1. Nose-to-tail schedules
2. Insufficient sleep, including quantity and quality of sleep attained in major rest break
3. Duration and frequency of short rest breaks
4. Continuous hours of work – including Basic Fatigue Management (BFM) and Advanced Fatigue Management (AFM) options
5. Minimum rest times for BFM two-up drivers
6. Impact of local work
7. Driver well being and fitness to work
8. Night time driving and ending shifts in the early morning
9. Threshold application of fatigue laws and work diary record-keeping

3. What other data collection activities exist in government or industry that the data framework should consider?

The fatigue data framework should take into consideration the use of findings from Police forensic studies where available.

Police undertake a more detailed assessment of contributory factors in fatality crashes which could provide valuable data.

Governments are moving to data visualisation for the presentation of information. Typically these should be interactive with the ability to filter the data by fields such as location, industry and types of location. Consideration to presenting collected data in this manner should be given to allow its wider use.

4. Do you agree with the need for more comparable and accessible fatigue data to underpin future reforms? If not, what alternative approach do you propose?

Transport for NSW agrees that there would be significant advantages in more comparable and accessible fatigue data to underpin future reforms. The fatigue law should be grounded in evidence based policy which requires appropriate research and be reviewed and evaluated to ensure that it is meeting its safety and productivity objectives.

5. Do you support an open data approach to fatigue data? Consider in your response the benefits and challenges of open data compared to other data handling procedures?

In principle, Transport for NSW supports an open data approach subject to appropriate privacy safeguards. NSW Government policy requires its agencies to make "Open Access Information" (or OAI) publicly available, unless there is an overriding public interest against disclosure.

6. What is your view on the proposed framework methodology relating to proposed terminology and coding, proposed system changes and proposed process changes?

Transport for NSW agrees in principle with the proposed framework methodology. However, it is unclear at this stage what the impacts will be on jurisdictional data collection and IT systems. Further detail will be required to understand how the methodology will work in practice.

7. What is your view on the validity and characteristics of a fatigue likelihood scale?

Unlike drugs and alcohol, fatigue is not able to be measured or detected objectively in the body through a simple test. Fatigue is a cognitive and physical state which is difficult to measure.

Fatigue will need a different approach. The provision of the example fatigue likelihood scale (Table 4) provides a good starting point.

Further supporting evidence will be required to develop a valid and reliable fatigue likelihood scale. If this or a similar scale has been used previously in other settings, how was each of the elements within the 'Fatigue Likelihood Scale' derived and how valid is each of the elements? Another issue is how jurisdictional crash data will be collected at the roadside. For example, does the recording of "possibly fatigue" from the likelihood scale mean the crash is recorded as a fatigue crash?

The scale should also be able to be linked to the definition of fatigue in the Heavy National Law:

223 What is fatigue

(1) Fatigue includes (but is not limited to)—

- (a) feeling sleepy; and
- (b) feeling physically or mentally tired, weary or drowsy; and
- (c) feeling exhausted or lacking energy; and
- (d) behaving in a way consistent with paragraph (a), (b) or (c).

(2) The national regulations may contain provisions supplementing, clarifying or providing examples for any of the provisions of sections 223 to 226.

Many crashes have multiple factors that contribute to their occurrence. The scale should perhaps include a way of recording fatigue as a possible contributor, even when other causes are demonstrated and corroborated to have caused the crash. However, it is acknowledged that this may be difficult to achieve and may cause additional complexity at the roadside.

The characteristics described in the scale have similarities to the outcomes of other factors such as distraction. How would the investigator differentiate between the two? Will records of sleep taken prior to journey be sufficient to differentiate?

8. What is your view on the proposed framework principles?

Transport for NSW agrees in principle with the proposed framework principles. However, there are a number of aspects that should be strengthened.

The principles need to be linked back to the Safe System approach which acknowledges that a crash is never caused by a single factor and all contributing factors need to be considered. On this basis the last dot point of page 45 may be better phrased as "establish as causal chain of **factors** that are consistent with fatigue".

The framework should comment on how to manage data sharing / linking possibilities and limitations between different data collection agencies. Personal and confidential information collected by agencies across different jurisdictions are protected by various laws and regulations. The required ethics and data custodian approvals may well be challenging to establish.

9. What is your view on the data collection and research activities proposed in the discussion paper?

Challenges:

- Pre-determined questions are not always able to be used in a crash investigation, regardless of whether the vehicle is light or heavy. Their use is dependent on factors such as the severity of injury to the driver, severity of the crash and the driver's emotional state.

Enforcement and investigation officers are reluctant to agree to use standard questions, especially given the limited circumstances that they can be used.

- It needs to be acknowledged that roadside questioning is only one source of data capture and needs to be complemented by others..
- There may be significant impact on State and Territory Police Agencies to make changes to crash reporting systems and injury surveillance systems. In particular changing the manner in which the seriousness or severity of a crash, and/or of resultant injuries, is categorised by jurisdictions.
- The impact of changes to jurisdictions' data gathering and recording systems is likely to be complex and costly.
- While it is not difficult to make the case that consistency is a good thing, it is important to also recognise that achieving the desired level of consistency will impose significant costs to all.
- An alternative approach to obtaining the standard information recorded in every crash would be to conduct a research project in a specific time period with involvement from enforcement agencies.
- Achieving comparable data on fatigue is challenging as data collection systems are different between jurisdictions.

Data collection

- Despite the challenges with data collection after crashes, the aim to keep data collection simple is worthwhile.
- To build a comprehensive picture, information will need to be collected from a wide range of sources. The project will be most efficient and effective if it is able to distinguish what information is best obtained from the different sources. For example, collection and analysis of work diary records is best for recorded information, while industry surveys will be best for information that cannot be more objectively collected such as management practices, driver attitudes and behaviours while off-duty.
- There are various forms of self reporting described in the document, including near misses, the three questions asked at the site of a crash and industry surveys. Drivers may be worried that reporting could risk making admissions of breaches, drivers may not be prepared to answer questions. This will be addressed through depersonalised data and guaranteed anonymity.
- There may be a need for a more objective method of data collection. This data collection may entail requesting documents from companies outlining systems, policies and practices and how they meet and monitor compliance requirements.
- Written work diaries do not fully capture unlawful behaviours, including the concealment of local work by 100+km drivers. Addressing this aspect is important to ensure data collected is accurate and meaningful.
- Data on driver fatigue, usually based on police data, needs to truly reflect work and rest hours for a comprehensive analysis to take place. Comparable and available data across jurisdictions would support improved decision-making on policy, ensuring that regulations mitigate the safety risks whilst providing flexibility for the industry.
- When determining the most appropriate data collection, consideration should be given to driver distraction, which may, in some cases, be confused with fatigue.

Group 3 Activities: periodic industry surveys

- The surveys should be maximised, such as including attitudes and behaviours while off-duty, etc. There may be benefit in reviewing Group 3 Activities on this basis.

10. How best should the data framework be funded and governance arranged? Consider in your response organisations that could be best placed to undertake responsibility for the framework?

No particular funding and governance arrangements are proposed in the Discussion Paper.

The NTC will need to drive the project as part of its annual program of work.

Previous projects suggest that this project should be based in an existing agency or organisation with multi-jurisdictional oversight or a steering committee.

Options should be developed for consideration by ministers at the Transport and Infrastructure Council. Options will need to take into account the likely cost to jurisdictions to modify their practices, procedures and systems to integrate with the fatigue data framework.

Transport for NSW would like to see proposals for the arrangements before providing detailed comments.

General Comments

Refining the definition of fatigue

- Page 15 raises the possibility of refining the ATSB definition of fatigue. It is essential to emphasise that any proposal to make changes to the definition of “fatigue” in the HVNL be carefully considered. The ability of the Regulator and road authorities to manage heavy vehicle driver fatigue and enforce the general prohibition against driving while impaired, and breaches of the work and rest requirements of the various fatigue management options, must not be adversely affected by reworking the definition of fatigue.
- In the driving context, fatigue has been taken to mean that a driver, through either working long hours or having little sleep (or both), is drowsy and unable to properly concentrate on the driving task.
- The HVNL defines fatigue as:

223 What is fatigue

(1) Fatigue includes (but is not limited to)—

- (a) feeling sleepy; and
- (b) feeling physically or mentally tired, weary or drowsy; and
- (c) feeling exhausted or lacking energy; and
- (d) behaving in a way consistent with paragraph (a), (b) or (c).

(2) The national regulations may contain provisions supplementing, clarifying or providing examples for any of the provisions of sections 223 to 226.

- It would be a significant change to fatigue management to introduce other concepts that to the definition of fatigue (eg. weariness), especially if they require a solution other than taking a rest break. If the intention is to broaden fatigue to include new concepts, it would be best done in a very clear and explicit manner.
- The points raised at the Alertness Summit should be used to assist drivers, operators and other parties in the chain of responsibility to understand and better manage the various aspects of fatigue.

- Any refinement of the definition of fatigue could be implemented using HVNL subsection 223(2).
- Alertness should not be introduced as a regulatory concept. It is useful as another descriptor for fatigue, but not a regulatory concept to be assessed by police or enforcement officers.
- Refinements to the ATSB definition should be considered, but it is secondary to improving the collection and categorisation of data.

It is noted that in Appendix B some details of databases are incorrect:

- NSW Centre for Road Safety – CrashLink. In “Notes” column, “Oracle Discover database” should be replaced with “CrashLink”.
- The Heavy Vehicle Rating System belongs to Roads and Maritime Services rather than the Centre for Road Safety.