# Government Access to Vehicle-Generated Data

*The following is informed by research undertaken as part of the Sustainable Built Environment National Research Centre.*

**Question 1: Do our problem and opportunity statements accurately define the key problems to be addressed, and do they capture the breadth of problems that would need to be addressed?**

Opportunity Statement

There is an opportunity for stakeholder collaboration on exchange or sharing of vehicle data for road safety purposes to understand:

* what vehicle-generated data can be used to support road safety in Australia.

[KH] I recommend that the full set of opportunities be listed from the November 2019 meeting, namely: "*network operations, investment, maintenance, planning and road safety*" otherwise it may signal that a wider set of opportunities from access to vehicle generated data is not being considered.

* what an appropriate framework and forum might look like to support such an exchange.

[KH] This is a pretty generic area which is probably ok, perhaps it could be refined a little to say something like "*what an appropriate framework and forum might look like to support such an exchange in a manner that protects security and delivers multiple benefits.*"

Problem statements

1. Vehicle-generated data is currently not provided to transport agencies for purposes that may have publicly beneficial outcomes. This is due to current vehicle capabilities or a lack of incentive or reason for industry and road users to provide the data (the exception to this being heavy vehicles enrolled in a current regulatory access or compliance schemes).

[KH] It is clear that the problem you are highlighting is very important, well done. Here are a few suggested tweaks and a revised version.

It might be worth revising the language so it's not quite so absolute; pointing out the need to deliver value to the public is a good thing, but typically data exchange these days needs to deliver more specific value to get peoples attention; although vehicle generated data is valuable it may not be the big barrier as we can access quite a bit of vehicle related data from roadside/infrastructure sources[[1]](#footnote-1); and perhaps it is the lack of understanding of the value that can be created rather than the lack of incentives that is holding up data exchange? How privacy is dealt with is also likely to be a big reason for the reluctance to share data. Something like:

*Vehicle-generated data is currently not made accessible to transport agencies for purposes that stand to have mutually beneficial outcomes. This is largely due to a lack of: clarity around the value that can be created through the exchange of such data; how the data will be used i.e. will it be used for punitive purposes; and how privacy will be assured.*

1. There is a lack of a data access framework to provide the necessary trust, data exchange systems, data standards/definitions, understanding of data needs, and governance to establish data access and use (the exception to this being heavy vehicles enrolled in a current regulatory access or compliance schemes).

[KH] At first look it appears this way but actually many of these components exist however they have yet to be brought together given the concerns in point one above. As part of this we feel that a key element is to ensure that the data is appropriately used, and this can be done using something like a 'Vehicle Data Observatory', much like the TCA.[[2]](#footnote-2)

1. The level of uptake and penetration of connectivity across the Australian vehicle fleet may delay the benefits of vehicle-generated data, particularly related to safety-critical events.

[KH] This is a little cryptic and as mentioned before there are a number of ways to gather data on vehicles other than vehicle generated data. Perhaps clarify that the intention of this point is as it’s a little unclear.

Question 6: Is there value in establishing a national data aggregator or trust broker? Could good data definitions, practices and cooperation between entities achieve the same outcome?

[KH] The core issue here is how the data will be used. If a vehicle releases the data say to be used by the traffic management system to improve trip conditions but it is then used to trigger a speeding find that would not have otherwise been detected then there will be reluctance to share data. Our research suggests that a data observatory is a critical part of vehicle data exchange, especially for commercial and freight vehicles.[[3]](#footnote-3)

Question 8: Are there relevant international standards that should be adopted for vehicle generated data? Are there any standards that could be locally developed?

[KH] There are numerous options that would require careful review and consideration and it is likely that local standards would be the preferred outcome, standards that align to selected international standards.

Question 9: Have we accurately described the key barriers to accessing vehicle-generated data? Are there additional barriers?

[KH] The typical barriers expressed in the literature are captured well on Page 11. However again rather than say 'no compelling reason or incentive' perhaps phrase it as a lack of understanding of the benefits? It may also be useful to differentiate between private and commercial vehicles as it is pretty well accepted for Google to use data on the movement of private vehicles however this same data is not provided directly to traffic agencies and they have to pay third parties to access it.

Question 10: Do you agree that road safety data should be considered the priority purpose for which we seek to exchange data with industry?

[KH] Yes, especially related to heavy vehicles that are well equipped with on-board data collection, especially hazardous loads.

Question 11: What are the key data needs of transport agencies beyond those already Identified?

[KH] Our research suggests that at a minimum there are three types of data that provide value for traffic management, 1) vehicle real time location, 2) vehicle intended destination, and 3) vehicle class.

Question 12: What further benefits from vehicle-generated data should be considered?

[KH] As mentioned above benefits beyond road safety (with a key benefit for safety being the quick identification of vehicles posing a safety risk) are likely to be needed to encourage greater sharing of vehicle generated data. Benefits like reduced trip time, reduced road user charging in the future (if a blanket charge is applied compared to actual use charging), implications for insurance premiums from frequency of trips etc, location of stolen vehicles, accurate trip length estimations, live trip recommendations, etc…

Question 13: We contend that a prioritised starting point should be established from which data for other purposes can be further developed. Are there other approaches that could achieve this?

[KH] This question is unclear.

Question 16: Should road safety be adopted as the priority for developing use cases for government use of vehicle-generated data? If not, what other approach should Australia take?

[KH] This is a great question, although road safety is in everyone's interest asking people and companies to release data that can potentially be used against them in the cause of 'safety' will be a hard sell, perhaps focus on two areas, a) mandated data sharing for core safety controls, and b) voluntary data release for additional value creation.

Question 18: Does the NTC’s preferred approach (option 2) best address the problems we have identified? If not, what approach would better address these problems?

[KH] Perhaps it’s a combination of Option 2 (offer value from sharing) and Option 3 (mandate sharing that has a direct implication for road safety), both using an intermediary like TCA.

1. See Hargroves, K., Tze Wei Yeo, J. and Loxton, R. (2020) Overview of Options to Link Freight Vehicle Data with Traffic Management Systems, Sustainable Built Environment National Research Centre (SBEnrc), Curtin University. [↑](#footnote-ref-1)
2. See Hargroves, K. (2020) Introducing the FreightSync Roadmap: A Pathway to Linking Freight Vehicles and Traffic Management Systems, Sustainable Built Environment National Research Centre (SBEnrc), Curtin University. [↑](#footnote-ref-2)
3. See Hargroves, K. (2020) Introducing the FreightSync Roadmap: A Pathway to Linking Freight Vehicles and Traffic Management Systems, Sustainable Built Environment National Research Centre (SBEnrc), Curtin University. [↑](#footnote-ref-3)