



Review of Regulatory Telematics
Appendices
March 2018



National Transport Commission

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Appendix A: Terms of reference for the review

Review of Regulatory Telematics

Terms of Reference

November 2017

Background

The Council approved the National In-Vehicle Telematics Strategy (the Strategy) in 2011. In addition, the Council approved the National Policy Framework for Land Transport Technology (the Framework) in 2016. In September 2017, the Transport and Infrastructure Senior Officials committee agreed that the NTC “*undertake a review of the regulatory arrangements and governance structures to assess whether the arrangements governing regulatory telematics use remain appropriate.*”

There are currently two regulatory telematics applications under the Strategy and Framework as part of the Heavy Vehicle National Law:

1. the Intelligent Access Program (IAP) that has been in operation since 2009;
2. Electronic Work Diaries (EWD) administered by the National Heavy Vehicle Regulator (NHVR).

In-vehicle telematics are also being used by individual jurisdictions for other regulatory purposes, e.g. monitoring of taxis, buses and the use of alcohol interlock devices. With the increased use of telematics for commercial purposes it is timely for the Council to consider the use of telematics more holistically and consider what arrangements will best support their use for regulatory and other government purposes.

Purpose of the Review

The purpose of the Review is to:

1. Review the role of regulatory telematics, including governance, to support the key objectives of Australian transport legislation, in particular safety, productivity, compliance, environmental outcomes and protection of infrastructure and to support regulatory efficiency.
2. Assess the currency of the existing strategies and whether any amended or additional policy statements should be considered by Council, including:
 - a. National Policy Framework for Land Transport Technology (Council, 2016)
 - b. National In-Vehicle Telematics Strategy (NTC, 2011)
 - c. Compliance and Enforcement Framework for Heavy Vehicle Telematics (NTC, 2014).
3. Recommend how widespread use of telematics could be adopted using systems currently available, at minimum cost to operators, to allow regulators to monitor compliance and enforcement in relation to:
 - a. Routes
 - b. Fatigue
 - c. Drug and alcohol
 - d. Speed and mass
 - e. Driver efficiency

- f. Emissions; and
 - g. Any other areas as identified by the review suitable for regulatory purposes.
4. Provide models for adoption.

The Review will also provide a consistent definition of telematics and a chronology of telematics use in Australia for regulatory purposes.

Conduct of the Review

The Review will be undertaken by the NTC, which will conduct research and analysis and targeted consultation with government bodies, industry peak bodies and other key stakeholders involved in the use and oversight of regulatory telematics in line with this Terms of Reference.

The NTC will prepare a draft report to be provided to TISOC in March 2018.

Appendix B: Stakeholder consultation

During the consultation process the NTC engaged with the following organisations either in person or via teleconference.

Date	Organisation
17 Nov 2017	Big Mate
23 Nov 2017	Trimble
23 Nov 2017	Transport Certification Australia
24 Nov 2017	The Crane Industry Council of Australia
24 Nov 2017	Main Roads Western Australia
29 Nov 2017	Livestock, Bulk and Rural Carriers Association
29 Nov 2017	Ron Finemore Transport
1 Dec 2017	Coretex
1 Dec 2017	Livestock and Rural Transporters Association of Queensland Inc
4 Dec 2017	Roads and Maritime Services
4 Dec 2017	Transport for NSW
5 Dec 2017	Simon National Carriers
5 Dec 2017	National Heavy Vehicle Regulator
5 Dec 2017	Department of Transport and Main Roads
6 Dec 2017	VicRoads
6 Dec 2017	Toll Group
8 Dec 2017	Transport Compliance Services
11 Dec 2017	Australian Trucking Association
11 Dec 2017	Australian Livestock and Rural Transporters Association
11 Dec 2017	Australian Logistics Council
13 Dec 2017	Department of Infrastructure, Regional Development and Cities
15 Dec 2017	Transport for Victoria
18 Dec 2017	Department of Infrastructure, Planning and Logistics
20 Dec 2017	Teletrac Navman
17 Jan 2018	EROAD
22 Jan 2018	Australia New Zealand Policing Advisory Agency

Appendix C: Consultation questions

C.1 Industry, association, service provider and operator questions

Part 1 – Opportunities

1. How is your organisation using telematics for commercial purposes? Examples may include fleet management and monitoring, or payroll.
2. Does your telematics device meet TCA's Telematics In-Vehicle Unit (IVU) Functional and Technical Specification?
3. If your organisation is not using telematics for commercial purposes, why is this?
4. How is your organisation using telematics for regulatory or compliance purposes? Examples may include the IAP, speed or fatigue compliance monitoring.
5. What were the key motivations to enrol in the IAP or to use telematics for other regulatory or compliance purposes?
6. What is working well with regulatory telematics? If your organisation is not using telematics for regulatory purposes, why is this?
7. Does your organisation use multiple 'black boxes' in vehicles, or do you collect telematics data once and use it for various purposes? What are the benefits of the approach you have adopted?
8. Thinking about IAP, are current governance arrangements working well?
9. Thinking about IAP and EWDs, are current legislative arrangements working well?
10. Do current governance and legislative arrangements allow for innovation? Why, or why not?
11. Are industry well-informed about the options and benefits of telematics technology?

Part 2 – Challenges

12. Does your organisation have sufficient certainty around telematics policies to increase investment in new and existing telematics technology?
13. Are there barriers to your organisation increasing the adoption of telematics for regulatory or compliance purposes? If so, what are they?
14. What barriers are there to your organisation, if any, to using telematics across state and territory borders?
15. How does your organisation use IAP information for compliance and enforcement purposes? Specifically, what challenges, if any, have been identified when using IAP information as evidence of an offence in a prosecution?
16. Do you have any privacy concerns about how government is currently accessing and using IAP or other telematics data?

Part 3 – Solutions

17. Do you think that current governance arrangements for regulatory telematics, including TCA's role in IAP, needs to be changed? If so, how?
18. Do you think that current HVNL provisions for IAP and the EWD need to be changed to better meet the objectives of the Act? If so, how?

19. Taking into consideration this Questionnaire, what other information would you like to provide the NTC?

C.2 National Heavy Vehicle Regulator questions

Part 1 – Opportunities

1. What is working well with regulatory telematics?
2. Are current governance arrangements for IAP and EWDs working well?
3. Are current legislative arrangements for IAP and EWDs working well?
4. What are the key features of the proposed EWD deployment model?
5. What are the benefits of the proposed EWD deployment model?
6. What level of assurance (high, medium or low) do you believe is required for the EWD deployment model?
7. Has your organisation used the Data Dictionary contained in the *Compliance and Enforcement Framework for Heavy Vehicle Telematics* for the EWD technical specification?

Part 2 – Challenges

8. Are there barriers to industry increasing the adoption of telematics for regulatory purposes? If so, what are they?
9. Thinking about IAP specifically, what barriers are there to expanding IAP applications to other areas, such as dangerous goods, heavy tow trucks, over-dimensional loads, grain harvest or PBS vehicles? Why, or why not?
10. Thinking about EWDs specifically, what barriers exist in relation to the admissibility of evidence of uncertified EWD devices?
11. Thinking about EWDs specifically, what barriers exist around the accessibility of EWD data by transport operators, NHVR Authorised Officers and police?
12. How does your organisation manage non-compliance reports generated by the IAP?
13. Does your organisation use IAP non-compliance reports for related purposes, such as intelligence gathering and risk profiling, or to reward good behaviour?
14. How does your agency use IAP information for compliance and enforcement purposes? Specifically, what challenges, if any, have been identified when using IAP information as evidence of an offence in a prosecution?

Part 3 – Solutions

15. Do you think that current governance arrangements for regulatory telematics, including TCA's role in IAP, needs to be changed? If so, how?
16. Do you think that current HVNL provisions for IAP and the EWD need to be changed to better meet the objectives of the Act? If so, how?
17. Taking into consideration this Questionnaire, what other information would you like to provide the NTC?

C.3 Transport Certification Australia questions

Part 1 – Opportunities

1. What is working well with regulatory telematics?
2. Thinking about IAP specifically, what opportunities are there to expanding IAP applications to other areas?
3. Are the current governance arrangements for IAP working well?
4. What are the benefits of the current governance models used for IAP?
5. Are current legislative arrangements for IAP and EWDs working well and supporting the key objectives of Australian transport legislation?
6. Are current administrative arrangements for IAP working well?
7. What are the benefits of the current administrative arrangements for IAP?
8. What are the benefits of using regulatory telematics in taxis, buses and cars (specifically the use of alcohol interlock devices and usage based insurance)?

Part 2 – Challenges

9. Are there barriers to industry increasing the adoption of telematics for regulatory purposes? If so, what are they?
10. Thinking about IAP specifically, what barriers are there, if any, to expanding IAP applications to other areas, such as dangerous goods, heavy tow trucks, over-dimensional loads, grain harvest or PBS vehicles? Why, or why not?

Part 3 – Solutions

11. Thinking about telematics assurance and data integrity, are there low cost approaches governments could adopt to remove barriers to further uptake, while providing governments with sufficient information to undertake compliance and enforcement activities?
12. Do you think that current governance arrangements for regulatory telematics, including TCA's role in IAP, needs to be changed? If so, how?
13. Do you think that current HVNL provisions for IAP and the EWD need to be changed to better meet the objectives of the Act? If so, how?
14. Taking into consideration this Questionnaire, what other information would you like to provide the NTC?

C.4 Road transport agency questions

Part 1 – Opportunities

1. How is your agency using telematics for regulatory purposes?
2. What is working well with regulatory telematics?
3. What approach has your agency adopted to encourage take-up of in-vehicle telematics? For example, policies and strategies to encourage non-intervention into the market, partnering with industry or mandating telematics use.
4. Would your agency benefit from greater uptake of regulatory telematics by industry, including IAP and the EWD? If so, how?
5. What criteria is used in making the decision to apply the IAP as a condition of access on a specific application type?
6. How does your agency manage non-compliance reports generated by the IAP?
7. Does your agency receive incorrect or inaccurate non-compliance reports? If so, how does your agency deal with such reports?
8. Are there opportunities for government to use telematics to underpin intelligent risk-based enforcement, audit-based compliance or accreditation approaches to regulation? If so, how best would telematics be used in these approaches?
9. Does your agency identify and pursue opportunities to integrate additional applications into the IAP? For example, transport of dangerous goods, heavy tow trucks, over-dimensional loads, grain harvest or PBS vehicles.
10. Thinking about IAP specifically, what opportunities are there to expanding IAP applications to other areas in your jurisdiction?
11. Are current governance arrangements for IAP working well?
12. Are current legislative arrangements for IAP and EWDs working well?
13. If your agency has developed new specifications for regulatory telematics since 2014, how have you used the Data Dictionary contained in the *Compliance and Enforcement Framework for Heavy Vehicle Telematics*? Has the data dictionary been useful to your agency?
14. How has your agency used the *National In-Vehicle Telematics Strategy* (2011) for heavy vehicle telematics?
15. How has your agency used the *Compliance and Enforcement Framework for Heavy Vehicle Telematics* (2014)?
16. How does your agency ensure the benefits of regulatory telematics outweigh costs to industry and the community? Do you have examples of how such benefits are being achieved?
17. How has your agency used in-vehicle telematics in taxis, buses or cars (specifically the use of alcohol interlock devices)?
18. What are the benefits of using regulatory telematics in taxis, buses and cars (specifically the use of alcohol interlock devices)?
19. Does your agency have a technical standard for regulatory telematics, such as alcohol interlock devices, taxi specifications for GPS or fare devices?
20. What role has TCA played in developing any technical standards?
21. Has your agency used in-vehicle telematics information as evidence in a prosecution?

Part 2 – Challenges

22. Are there barriers to your agency increasing the use of telematics for compliance and enforcement purposes? If so, what are they?
23. Are there barriers to your customers or partners increasing the adoption of telematics for regulatory purposes? If so, what are they?
24. Thinking about IAP specifically, what barriers are there, if any, to expanding IAP applications to other areas, such as dangerous goods, heavy tow trucks, over-dimensional loads, grain harvest or PBS vehicles? Why, or why not?
25. Does your agency use IAP non-compliance reports for related purposes, such as intelligence gathering and risk profiling, or to reward good behaviour?
26. How does your agency use IAP information for compliance and enforcement purposes? Specifically, what challenges, if any, have been identified when using IAP information as evidence of an offence in a prosecution?

Part 3 – Solutions

27. Thinking about telematics assurance and data integrity, are there low cost approaches governments could adopt to remove barriers to further uptake, while providing governments with sufficient information to undertake compliance and enforcement activities?
28. Do you think that current governance arrangements for regulatory telematics, including TCA's role in IAP, needs to be changed? If so, how?
29. Do you think that current HVNL provisions for IAP and the EWD need to be changed to better meet the objectives of the Act? If so, how?
30. Taking into consideration this Questionnaire and the Terms of Reference for the Review, what other information would you like to provide the NTC?

Appendix D: International standard ISO 15638 – TARV

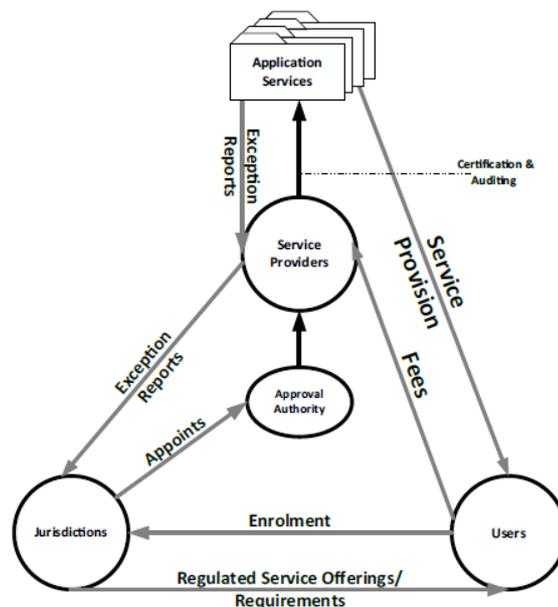
In 2012, the International Organisation for Standardisation (ISO) published ISO 15638-1 *Intelligent transport systems — Framework for cooperative telematics applications for regulated commercial freight vehicles (TARV): Part 1: Framework and architecture*. The TARV seeks to support commercial and regulatory functions within a single platform that can operate through open standards and in a competitive market. The TARV uses commercial system providers, a wireless interface medium and remote connection access. Data is not held by governments, but is held and managed by commercial service providers. The overall objective of the TARV is the assessment and monitoring of regulated commercial freight vehicles to meet the requirements of the jurisdiction that it is operating within, using telematics.¹

The TARV adopts the following set of definitions for the four key actor classes:

- **Approval authority (regulatory):** an organisation (usually independent) which conducts approval and ongoing audit for service providers²
- **Jurisdiction:** government, road or traffic authority which owns the regulatory applications³
- **Service provider:** a party which is certified by an approval authority (regulatory) as suitable to provide regulated or commercial ITS application services⁴
- **User:** individual or party that enrolls in and operates within a regulated or commercial application service.⁵

The key elements of the TARV framework are outlined below.

Figure 1. TARV relationship between four key actor classes⁶



¹ ISO 15638-1:2012, *Intelligent transport systems – Framework for cooperative telematics applications for regulated commercial freight vehicles (TARV) – Part 1: Framework and architecture*, section 7.2.

² *ibid.*, section 4.6.

³ *ibid.*, section 4.24.

⁴ *ibid.*, section 4.39.

⁵ *ibid.*, section 4.45.

⁶ *ibid.*, section 8.2.

Role of the approval authority (regulatory) in the TARV

The TARV states that the jurisdiction creates or appoints an authority to approve and audit the process. The structure of that authority is a matter for the jurisdiction and it may be a separate appointed organisation, or a department of the jurisdiction.⁷ The TARV explains that an approval authority would be expected to be an independent organisation which certifies service providers and ensures that the level of service provided by the service providers is maintained, although jurisdictions have the right to make other arrangements for approval and audit.⁸

The primary role of the approval authority is to:

- consider candidates to be service providers
- test and approve that the service provider can meet the requirements necessary to provide the application service
- approve their business model in relation to charging users (where required by the jurisdiction)
- approve the service provider, and
- determine the duration of the approval and renewal options and requirements.⁹

Role of the Jurisdiction in the TARV

The TARV states that the jurisdiction is the body that has official power to make legal decisions and impose regulations in respect of the regulation of commercial freight transport.¹⁰ This could be a country, state, city council, road authority or government department.

Within the context of the TARV, the role of the jurisdiction is to:

- define the regulated application services
- define if they are mandatory or optional
- pass legislation to determine and regulate, and
- manage and regulate the provision of the regulated application services.¹¹

The TARV is policy-neutral. The specific conditions and entitlements underpinning applications are decided by the relevant jurisdiction according to the needs, infrastructure management risks and transport policies of that jurisdiction.

The TARV acknowledges the variations between jurisdictions. The TARV recognises that there will be variations between jurisdictions and does not attempt, nor recommend, homogeneity between jurisdictions.¹² The TARV identifies that strategies, tactics, policies and constraints, and indeed, the services that are regulated as mandatory or optionally supported, may vary from jurisdiction to jurisdiction.¹³ The TARV states that some countries may implement a single, government operated, controlled, or contracted service provider which is the single communication manager between the vehicle and the service.¹⁴ Other countries may provide a market based solution with multiple service providers competing for the business of vehicle operators.¹⁵

⁷ *ibid.*, section 7.7.

⁸ *ibid.*, section 8.4.7.

⁹ *ibid.*, section 8.4.9.

¹⁰ *ibid.*, section 8.4.2.

¹¹ *ibid.*

¹² *ibid.*, section 7.1.

¹³ *ibid.*, section 7.3.

¹⁴ *ibid.*, section 6.2.4.

¹⁵ *ibid.*

Role of the service provider in the TARV

The TARV describes a service provider as a party which is certified by the approval authority (regulatory) as suitable to provide regulated or commercial ITS services.¹⁶ The service provider will provide the application service, interacting wirelessly with the vehicle to collect relevant data, process the data and provide the jurisdictions with non-compliance reports and any other relevant and required data, and provide relevant data to the user.¹⁷ As determined by the jurisdiction, the service provider may need to be certified by the regulator.¹⁸

Role of the user in the TARV

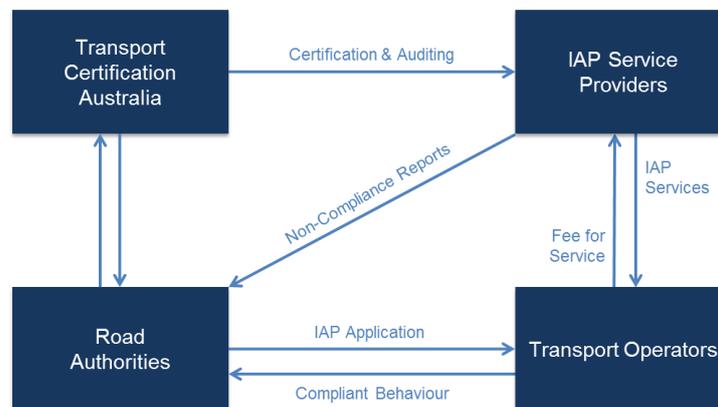
The TARV states in most circumstances the user is the operator of the regulated commercial freight vehicle, but in some cases may be the driver.¹⁹ He/she will enrol with the jurisdiction to have his/her service provided automatically by wireless communications. He/she will appoint an approved service provider to provide the regulated application service for the regulated commercial freight vehicle (or driver where appropriate).²⁰

How the TARV is used in Australia today

The IAP mirrors the ISO 15638 the TARV standard, as illustrated below. TCA is the independent approval authority. TCA manages the national administration of the IAP and the certification and audit of the IAP service providers on behalf of state and territory road authorities. The road authority or transport department in each state and territory (or the NHVR) is the relevant jurisdiction that sets policy, determines the circumstances in which the IAP should be applied as a condition of access, and monitors behaviour; while certified services are provided to operators by IAP service providers.

Transport operators perform the user role described in the TARV. The transport operator is responsible for controlling or directing the operations of the vehicle. Transport operators enrol in the IAP to gain improved access or to meet specific requirements that have been prescribed by road authorities as a condition of access.

Figure 2. Australian operating model for the IAP



The data dictionary incorporated in the *Compliance and Enforcement Framework for Heavy Vehicle Telematics* is based on the TARV standards. This, together with TCA's *National Telematics Framework*, will enable TARV standards to be used for other regulatory uses of telematics in the future.

¹⁶ *ibid.*, section 8.4.3.

¹⁷ *ibid.*, section 8.4.3.

¹⁸ *ibid.*, section 6.6.

¹⁹ *ibid.*, section 7.9.

²⁰ *ibid.*, section 7.9.

Appendix E: Chronology of regulatory telematics in Australia

The chronology below provides an overview of the evolution of regulatory telematics in Australia.

- 1999**
- Tasmania completes the *Intelligent Vehicle Trial* to test the basic feasibility of monitoring the movement of logging trucks.
 - Following the trial, the Tasmanian Department of Infrastructure, Energy and Resources approaches other states and territories to initiate a national Intelligent Access Project.
- 2001**
- The IAP is transferred to Austroads.
 - Austroads commences the *IAP Feasibility Project*.
- 2003**
- Austroads releases the *IAP Feasibility Report*²¹ and concludes the IAP Operating Model is feasible.
 - The ATC endorses the *IAP Feasibility Project* findings and requests Stage 1 of the IAP be implemented. A number of implementation tasks are required including the development of model law, which the NTC is tasked to develop.
 - The ATC approves the *Road Transport Reform (Compliance and Enforcement) Bill*.
- 2004**
- Austroads completes Stage 1 of the IAP Implementation Project.
 - The Commonwealth, States and Territories establish TCA to administer the IAP Operating Model.
 - TCA is officially established. TCA is governed by a MoU, a constitution and a representative board of directors appointed by the head of each of TCA's member organisations (represented by the Commonwealth, and each State and Territory).
- 2005**
- The NTC prepares a Regulatory Impact Statement for the IAP, which is endorsed by the ATC.
 - The ATC approves the IAP model law.
- 2006**
- The IAP legislation is enacted by New South Wales and Victoria.
 - TCA starts its interaction with the telematics sector, ahead of accepting applications from prospective service providers seeking certification.

²¹ Austroads, 2003, *Intelligent Access Program (IAP) – Feasibility Project*, Report, <http://tca.gov.au/images/stories/pdfs/8428c0e6-6844-4a90-8561-2dc4d4be4e00.pdf>.

2008

- The IAP legislation is enacted by Queensland.
- The model law including the IAP provisions is consolidated in the HVNL as part of the National Heavy Vehicle Reform.
- The ATC agrees that the IAP be seen as ‘a preferred compliance and vehicle management solution and that jurisdictions consider a positive approach to timetabling IAP applications where it could assist improving safety, transport services and asset management with respect to heavy vehicle operations, including bus services’.²²
- TCA certifies the first service provider and monitoring of vehicles commences.
- The ATC calls for the development of an Australian performance-based specification for electronic heavy vehicle speed and driver fatigue systems, enhancing the use of in-vehicle telematics and adding value to the IAP.
- TCA publishes the *National Telematics Framework*.²³ However Ministers are not asked to endorse the framework.

2009

- The IAP becomes formally operational and available. Transport companies can enrol their vehicles in the IAP to obtain improved access to the road network.
- The Council of Australian Governments agrees to establish the NHVR to regulate all vehicles over 4.5 tonnes Gross Vehicle Mass.

2010

- The IAP legislation is enacted by South Australia.
- The NTC releases *In-vehicle telematics: informing a national strategy discussion paper*.²⁴

2011

- The NTC releases *National in-vehicle telematics strategy: the road freight sector*,²⁵ which recommends the development of an enforcement policy to support industry uptake of telematics.

2012

- The then Standing Council on Transport and Infrastructure approves the *Policy Framework for Intelligent Transport Systems (ITS) in Australia*²⁶ to ensure that ITS use in each jurisdiction is compatible and that development occurs around a set of agreed compliance and enforcement policy principles.
- Following consultation with industry representation, New South Wales and TCA collaborate to introduce effective ways to increase the use of the IAP. TCA launches the entry options initiative that provides ways for transport operators to have their existing in-vehicle devices assessed for use in the program.
- TCA also introduces flexible pricing options for transport operators that

²² Australian Transport Council (ATC) Minutes – May 2008.

²³ Transport Certification Australia, 2017, *National Telematics Framework*, <https://tca.gov.au/ntf/national-telematics-framework>.

²⁴ National Transport Commission, 2010, *In-vehicle telematics: Informing a national strategy*, Policy Paper, [https://www.ntc.gov.au/Media/Reports/\(75171277-7C47-4C1C-344A-268D74DE8445\).pdf](https://www.ntc.gov.au/Media/Reports/(75171277-7C47-4C1C-344A-268D74DE8445).pdf).

²⁵ National Transport Commission, 2011, *National in-vehicle telematics strategy: the road freight sector*, Policy Paper, [https://www.ntc.gov.au/Media/Reports/\(5CD00DF0-8418-8BBA-DC53-63774FAA0E85\).pdf](https://www.ntc.gov.au/Media/Reports/(5CD00DF0-8418-8BBA-DC53-63774FAA0E85).pdf).

²⁶ Standing Council on Transport and Infrastructure, 2012, *Policy Framework for Intelligent Transport Systems in Australia*, Policy Paper, <http://www.itssa.org/wp-content/uploads/2014/03/Policy-Framework-for-Intelligent-Transport-Systems-in-Australia.pdf>.

have an occasional need for higher mass limits access through the IAP in New South Wales and Queensland.

- The Transport and Infrastructure Senior Officials' Committee agree that the NTC, as part of its annual work plan to ministers for 2013–14, will lead work to develop a compliance framework for heavy vehicle telematics.
- ISO publishes *ISO 15638-2012, Intelligent transport systems – Framework for cooperative telematics applications for regulated commercial freight vehicles (TARV) – Part 1: Framework and architecture*.

2013

- The NTC commences the review of the IAP and requests inputs from interested organisations and individuals.
- Between 2011 and 2013, the feasibility of EWDs is tested in an operational pilot conducted by TCA on behalf of the NSW Centre for Road Safety and NSW Road and Maritime Services. The pilot raises issues of how telematics can change the current compliance and enforcement paradigm, with the potential for smarter, risk-based enforcement, improved use of resources and a review of the balance between roadside and back-office enforcement. The pilot finds the EWD to be technically and operationally feasible.
- The pilot identifies a number of areas where the HVNL does not align with the specification and associated certification and operational requirements. As part of the pilot, the NTC undertakes a review of the HVNL to identify potential inconsistencies between the HVNL and pilot outcomes.
- TCA releases a draft *Electronic Work Diary Functional and Technical Specification*, which uses common functional and technical requirements with the IAP to enable multiple applications to be supported by the one device and service provider.²⁷
- TCA announces that the IAP has expanded to incorporate the option to monitor the weight of the load on the vehicle through the use of OBM systems.
- As part of the EWD pilot, the NTC releases *Preparing Australia for electronic work diaries issues paper*.²⁸ The paper identifies the legal implications associated with introducing the EWD and proposes solutions.
- As part of the EWD pilot, Transport for NSW releases *Operational pilot of electronic work diaries and speed monitoring systems final report*.²⁹ The pilot concludes that EWDs improve compliance through data accuracy and transparency, while real-time information can improve the responsiveness of operators to driver behaviour.

²⁷ Transport Certification Australia, 2013, *Electronic Work Diary Functional and Technical Specification (Draft)*, Policy Paper, <https://tca.gov.au/images/EWD%20Functional%20and%20Technical%20Specification%20Draft%20v1.3%20August2013.pdf>.

²⁸ National Transport Commission, 2013, *Preparing Australia for Electronic Work Diaries*, Issues Paper, [https://www.ntc.gov.au/Media/Reports/\(65801854-7059-AA62-C39A-38EB955CB63B\).pdf](https://www.ntc.gov.au/Media/Reports/(65801854-7059-AA62-C39A-38EB955CB63B).pdf).

²⁹ Transport for NSW, 2013, *Operational Pilot of Electronic Work Diaries and Speed Monitoring Systems*, Final Report, http://roadsafety.transport.nsw.gov.au/downloads/electronic_work_diaries_oct2013.pdf.

- The NTC releases *Developing a Compliance Framework for Heavy Vehicle Telematics discussion paper for consultation*.³⁰ The paper examines common issues across regulatory telematics applications. It proposes framework principles, a method to assess assurance, a data dictionary, and examines how telematics can be used as a tool to increase safety and compliance. The discussion paper also proposes that mandatory and voluntary options for telematics are dependent on specific applications and policy proposals.

2014

- The HVNL commences in Queensland, New South Wales, Victoria, South Australia, Tasmania and the Australian Capital Territory. The HVNL contains two regulatory applications that utilise heavy vehicle telematics: EWDs and the IAP.³¹
- The NTC releases a *Compliance and Enforcement Framework for Heavy Vehicle Telematics*, including principles for implementation of new heavy vehicle telematics initiatives.³²
- The NTC releases *Electronic work diaries final policy paper*.³³ The paper puts forward a number of policy findings and recommendations for the Transport and Infrastructure Council's approval, including amendments to the HVNL and implementation plans. The primary purpose of the HVNL amendments is to remove outdated requirements (such as in-vehicle printers).
- The NTC releases *Review of the Intelligent Access Program draft for consultation*.³⁴
- The Transport and Infrastructure Council endorse the *Compliance and enforcement framework for heavy vehicle telematics*.³⁵ The framework outlines that a higher level of assurance of integrity, security and performance is required for applications or systems used for enforcement. The framework principles, which remain current, provide guidance on how to determine whether a system needs to be certified or approved by government.³⁶
- The NTC releases *Review of the Intelligent Access Program final paper*.³⁷ The review finds the rollout of the IAP project was well managed and the objective of the IAP is being achieved. The review notes factors that may have contributed to lower than expected vehicle uptake, including: road authorities making fewer than anticipated IAP applications available; introduction of concessional mass limits; enrolment costs; demand for higher mass limits may have been over estimated; and heavy vehicle access issues on local roads.

³⁰ National Transport Commission, 2013, *Developing a Compliance Framework for Heavy Vehicle Telematics*, Discussion Paper, [https://www.ntc.gov.au/Media/Reports/\(5973CD25-4A5D-6EF8-F057-6DEA0233B901\).pdf](https://www.ntc.gov.au/Media/Reports/(5973CD25-4A5D-6EF8-F057-6DEA0233B901).pdf).

³¹ *Heavy Vehicle National Law Act 2012*, Chapter 6 Vehicle Operations Driver Fatigue, Chapter 7 Intelligence Access Program.

³² National Transport Commission, 2014, *Delivering a Compliance Framework for Heavy Vehicle Telematics*, Policy Paper, [https://www.ntc.gov.au/Media/Reports/\(460859F4-7E0B-9B53-55E3-CB14E482E71A\).pdf](https://www.ntc.gov.au/Media/Reports/(460859F4-7E0B-9B53-55E3-CB14E482E71A).pdf).

³³ National Transport Commission, 2014, *Electronic Work Diaries*, Final Policy Paper, [https://www.ntc.gov.au/Media/Reports/\(09E15645-A37B-745E-F9C5-D01BFFE782AB\).pdf](https://www.ntc.gov.au/Media/Reports/(09E15645-A37B-745E-F9C5-D01BFFE782AB).pdf).

³⁴ National Transport Commission, 2014, *Review of the Intelligent Access Program*, Consultation Paper, [https://www.ntc.gov.au/Media/Reports/\(969A07AB-745D-49C7-9DB2-2D5249230978\).pdf](https://www.ntc.gov.au/Media/Reports/(969A07AB-745D-49C7-9DB2-2D5249230978).pdf).

³⁵ National Transport Commission, 2014, *Compliance and enforcement framework for heavy vehicle telematics*, Policy Framework, [https://www.ntc.gov.au/Media/Reports/\(C5F39CEF-3F43-490C-8D2B-569185379C55\).pdf](https://www.ntc.gov.au/Media/Reports/(C5F39CEF-3F43-490C-8D2B-569185379C55).pdf).

³⁶ *ibid.*, p. 20.

³⁷ National Transport Commission, 2014, *Review of the Intelligent Access Program*, Final Report, [http://www.ntc.gov.au/Media/Reports/\(0B7482F8-C272-4907-80C2-5797C54ABCEF\).pdf](http://www.ntc.gov.au/Media/Reports/(0B7482F8-C272-4907-80C2-5797C54ABCEF).pdf).

- TCA releases the *Telematics Data Dictionary*.³⁸ The data dictionary provides a common set of data definitions to facilitate the collection, exchange and use of data and information between telematics and related intelligent technologies. The data dictionary enables alignment with the ISO 15638 (TARV), and other relevant international frameworks and standards, to enable greater interoperability across individual systems and services.

2015

- The HVNL is amended to enable implementation of an approval and monitoring regime to support the use of EWDs by the heavy vehicle industry.³⁹ The amendments also provide that a record made by an approved EWD is presumed to be a correct representation of the information generated, unless the contrary is proved.

2016

- The Transport and Infrastructure Council endorses the *National Policy Framework for Land Transport Technology: Action Plan 2016-2019*.⁴⁰ This document includes Principles for Government Action to inform a consistent approach to decision-making on transport technology and two action items explicitly relating to telematics.

2017

- The Federal Government announces a pilot national direct user-charging system for heavy vehicles as a potential replacement for the current Pay As You Go (PAYGO) system.

³⁸ Transport Certification Australia, 2014, *Telematics Data Dictionary*, <https://tca.gov.au/ntf/tdd>.

³⁹ *Heavy Vehicle National Law Amendment Bill 2015*, Explanatory Notes, <https://www.legislation.qld.gov.au/Bills/55PDF/2015/HeavyVehNLawAB15E.pdf>.

⁴⁰ Transport and Infrastructure Council, 2016, *National Policy Framework for Land Transport Technology: Action Plan 2016-2019*, http://transportinfrastructurecouncil.gov.au/publications/files/National_Policy_Framework_for_Land_Transport_Technology.pdf.

Appendix F: Alcohol interlock programs

Jurisdiction	Legislation	Introduced	Offences requiring alcohol interlock	Program length and conditions	Accredited interlock service providers
VIC ⁴¹	<p><i>Road Safety Act 1986</i> (Vic)</p> <p><i>Road Safety (Alcohol Interlocks) Act 2002</i> (Vic)</p> <p>Alcohol Interlock Guidelines 2014 (contains technical specification)</p>	1 May 2002	<p>For offences committed on or after 1 October 2014, alcohol interlocks are mandatory for:</p> <ul style="list-style-type: none"> all learner and probationary licensed offenders with a BAC>0.00 all first-time offenders with a BAC≥0.07 all repeat offenders <p><i>Note:</i> The Andrews government has proposed changing the criteria to BAC≥0.05 for first-time offenders. This change has not yet been legislated.</p>	<p>The minimum program length for:</p> <ul style="list-style-type: none"> a first offence, six months a second offence if BAC<0.15, 12 months in any other case, four years <p>All people who have an interlock condition on their licence are subject to a 0.00% prescribed alcohol limit for a period of 3 years from the date they are given permission to be re-licensed, or for the duration of the interlock period, whichever is longer</p>	<ul style="list-style-type: none"> Draeger Safety Pacific Guardian Interlock Systems Smart Start <p>Interlock service providers must comply with VicRoads' Conditions of Approval⁴² and Alcohol Interlock Guidelines⁴³</p> <p>Interlock service providers must be certified as complying with European Standard BS EN 50436-1⁴⁴</p>
NSW ⁴⁵	<p><i>Road Transport Act 2013</i> (NSW)</p> <p><i>Road Transport (Driver Licensing)</i></p>	1 February 2015 (replaced voluntary scheme in	<p>Alcohol interlocks are mandatory for:</p> <ul style="list-style-type: none"> first offenders with a BAC≥0.15 repeat offenders (defined as having a previous offence in the 	<p>The program length ranges from 12 months for low range and novice repeat offences, to 48 months for repeat, serious and high range offences</p> <p>If a person receives an interlock order and</p>	<ul style="list-style-type: none"> Guardian Interlock Systems Draeger Safety Pacific

⁴¹ VicRoads, 2016, *About the Victorian Alcohol Interlock Program*, <https://www.vicroads.vic.gov.au/licences/demerit-points-and-offences/drink-driving-offences/changes-to-the-alcohol-interlock-program>;

VicRoads, 2017, *How to install and use your alcohol interlock*, <https://www.vicroads.vic.gov.au/licences/demerit-points-and-offences/drink-driving-offences/installing-and-using-the-alcohol-interlock>.

⁴² *Road Safety Act 1986* (Vic) sections 50AAE and 50AAF; VicRoads, 2015, *Victorian Alcohol Interlock Program Conditions of Approval*,

https://www.vicroads.vic.gov.au/~media/files/formsandpublications/business-and-industry/conditions_of_approval_interlock_suppliers_pdf.pdf?la=en.

⁴³ VicRoads, 2014, *Consolidated version of the Alcohol Interlock Guidelines*, https://www.vicroads.vic.gov.au/~media/files/formsandpublications/business-and-industry/consolidated_alcohol_interlock_guidelines_pdf.pdf?la=en.

⁴⁴ *ibid.*, section 7.

⁴⁵ Roads and Maritime Services, 2015, *Alcohol Interlock Program: Participant Guide*, <http://www.rms.nsw.gov.au/documents/roads/safety-rules/mandatory-alcohol-interlock-program-participant-guide.pdf>.

Jurisdiction	Legislation	Introduced	Offences requiring alcohol interlock	Program length and conditions	Accredited interlock service providers
	<i>Regulations 2017</i> (NSW)	effect since September 2003)	past five years)	does not enter the interlock program, they will be disqualified from holding a licence (other than a learner or interlock licence) for a period of five years from the date of their conviction	<ul style="list-style-type: none"> Smart Start Interlocks <p>TCA is currently working with Transport for NSW to develop a <i>Functional and Technical Specification for Alcohol Interlocks</i>⁴⁶</p>
NT ⁴⁷	<i>Traffic Act 1987</i> (NT) <i>Motor Vehicles Act 1988</i> (NT)	9 April 2009	Drivers may be issued a court order to install an alcohol ignition lock if they are found guilty of repeat drink-driving and the disqualification period is less than five years	<p>The program length can range from six months to three years at the court's discretion</p> <p>Drivers can elect to serve the full disqualification period and sit-out the interlock period with no additional disincentive for not participating in the program</p> <p>If a driver chooses to get an alcohol ignition lock licence, they must complete the relevant drink driver education course and comply with the course conditions⁴⁸</p>	<ul style="list-style-type: none"> Guardian Interlock Systems Draeger Safety Pacific
SA ⁴⁹	<i>Motor Vehicles Act 1959</i> (SA)	1 May 2009	<p>Alcohol interlocks are mandatory for drivers convicted of:</p> <ul style="list-style-type: none"> driving under the influence refusing to provide a breath or 	The program length includes a combination of the immediate licence suspension (issued at the roadside at the time of the offence by the SA Police) and the court-imposed disqualification, to a maximum of three years	<ul style="list-style-type: none"> Guardian Interlock Systems Draeger Safety Pacific

⁴⁶ Transport Certification Australia, *Mandatory Alcohol Interlock Program (MAIP) - New South Wales*, <https://tca.gov.au/car/maip>.

⁴⁷ Northern Territory Government, 2017, *Alcohol ignition lock order*, <https://nt.gov.au/driving/driving-offences-and-penalties/alcohol-ignition-lock-order/introduction>.

⁴⁸ Northern Territory Government, 2017, *Drink and drug driver education course*, <https://nt.gov.au/driving/driving-offences-and-penalties/drink-and-drug-driver-education-course>.

⁴⁹ Department of Planning, Transport and Infrastructure, 2016, *Mandatory Alcohol Interlock Scheme*, https://www.dpti.sa.gov.au/towardszerotogether/Safer_behaviours/alcohol_drink_driving2/mandatory_interlock_scheme_faqs.

Jurisdiction	Legislation	Introduced	Offences requiring alcohol interlock	Program length and conditions	Accredited interlock service providers
			<p>blood sample for alcohol testing</p> <ul style="list-style-type: none"> • driving with BAC\geq0.15 • driving with a BAC\geq0.08, where a previous alcohol offence has occurred in the last five years 	An interlock will only be removed from a driver's vehicle if the driver records no violations during the final three-month period of the program	
QLD ⁵⁰	<p><i>Transport Operations (Road Use Management) Act 1995 (Qld)</i></p> <p><i>Transport Operations (Road Use Management – Driver Licensing) Regulation 2010 (Qld)</i></p>	6 August 2010	<p>Alcohol interlocks are mandatory for drivers convicted of:</p> <ul style="list-style-type: none"> • driving under the influence of alcohol • high-range BAC offences (BAC \geq0.15) • failing to provide a specimen of breath or blood for analysis • dangerous driving while affected by alcohol • two or more drink driving offences within a 5-year period 	<p>The minimum program length is 12 months</p> <p>If a person receives an interlock order and does not enter the interlock program, they will not be able to legally drive a motor vehicle for 2 years after their disqualification period ends</p>	<ul style="list-style-type: none"> • Guardian Interlock Systems • Draeger Safety Pacific
TAS ⁵¹	<p><i>Vehicle and Traffic Act 1999 (TAS)</i></p> <p><i>Vehicle and Traffic (Driver Licensing and Vehicle Registration)</i></p>	31 July 2013	<p>Alcohol interlocks are mandatory for drivers convicted of:</p> <ul style="list-style-type: none"> • driving under the influence • refusing to provide a breath or blood sample for alcohol testing • driving with BAC\geq0.15 	The minimum program length is 15 months (including a 'Learning Period' of nine months and a 'Demonstration Period' of at least six months)	<ul style="list-style-type: none"> • Guardian Interlock Systems • Draeger Safety Pacific • Smart Start Interlocks

⁵⁰ Queensland Government, 2017, *Alcohol ignition interlocks*, <https://www.qld.gov.au/transport/safety/road-safety/drink-driving/penalties/interlocks>.

⁵¹ Department of State Growth, 2017, *Mandatory Alcohol Interlock Program*, <http://www.transport.tas.gov.au/licensing/offences/interlocks>.

Jurisdiction	Legislation	Introduced	Offences requiring alcohol interlock	Program length and conditions	Accredited interlock service providers
	<i>Regulations 2010 (TAS)</i>		<ul style="list-style-type: none"> two or more drink-driving offences within a five-year period 		
ACT ⁵²	<i>Road Transport (Driving Licensing) Act 1999 (ACT)</i> <i>Road Transport (Driving Licensing) Regulation 2000 (ACT)</i>	17 June 2014	Alcohol interlocks are mandatory for drivers convicted of: <ul style="list-style-type: none"> driving with BAC\geq0.15 refusing to provide a breath or blood sample for alcohol testing two or more alcohol-related disqualifying offences within the previous five years 	The minimum length of the mandatory program is 6 months	<ul style="list-style-type: none"> Draeger Safety Pacific Smart Start The alcohol ignition interlock device must be certified as complying with Australian Standard AS 3547-1997 (Breath Alcohol Testing Devices for Personal Use) ⁵³
WA ⁵⁴	<i>Road Traffic (Authorisation to Drive) Act 2008 (WA)</i> <i>Road Traffic (Vehicles) Act 2012 (WA)</i> <i>Road Traffic Act 1974 (WA)</i>	24 October 2016	Alcohol interlocks are mandatory for drivers convicted of: <ul style="list-style-type: none"> driving with a BAC\geq0.15 failing to provide a breath, blood or urine sample dangerous driving causing death, bodily harm or grievous bodily harm where the offender is under the influence of alcohol to such an extent they are considered to be incapable of having proper control of a vehicle. 	The minimum restricted driving periods are: <ul style="list-style-type: none"> permanently disqualified alcohol offenders who have been granted an extraordinary licence – 3 years disqualified alcohol offenders who have been granted an extraordinary licence – the duration of the extraordinary licence A person who serves his or her period of disqualification and is subsequently granted a driver's 	<ul style="list-style-type: none"> Smart Start Draeger Safety Pacific Guardian Interlock In 2016 TCA worked with the Department of Transport WA to develop a <i>Functional and Technical Specification for Alcohol Interlocks</i> ⁵⁵

⁵² Access Canberra, 2017, *Alcohol and drug awareness courses and Alcohol Ignition Interlock Program*, https://www.accesscanberra.act.gov.au/app/answers/detail/a_id/1323/~alcohol-and-drug-awareness-courses-and-alcohol-ignition-interlock-program.

⁵³ *Road Transport (Driving Licensing) Regulation 2000 (ACT)*, regulation 73ZL(2).

⁵⁴ Department of Transport WA, 2017, *Alcohol interlock scheme*, <https://www.transport.wa.gov.au/licensing/alcohol-interlock-scheme.asp>.

⁵⁵ Transport Certification Australia, *Annual Report 2016-17*, p. 12, http://tca.gov.au/documents/2016-17_TCA_Annual-Report.pdf.

Jurisdiction	Legislation	Introduced	Offences requiring alcohol interlock	Program length and conditions	Accredited interlock service providers
			<ul style="list-style-type: none"> repeat drink driving offences (of driving with a BAC>0.08 or >0.05 or >0.02) within a five year period 	<p>licence – a continuous 180 days immediately after being granted their licence</p> <p>The interlock condition will remain on a person's licence indefinitely, unless they participate in and successfully complete the requirements of the program</p>	

Appendix G: Glossary

Term	Definition
AFM	Advanced Fatigue Management
ALC	Australian Logistics Council
ATA	Australian Trucking Association
AOBRD	Automatic On-Board Recording Device
ATC	Australian Transport Council
BAC	Blood Alcohol Concentration
C&E Framework	Compliance and Enforcement Framework for Heavy Vehicle Telematics
Council	Transport and Infrastructure Council
CTP	Compulsory Third Party
CTS	Certified Telematics Service
DIRDAC	Department of Infrastructure, Regional Development and Cities
ELD	Electronic Logging Device
eRUC	Electronic Road User Charges
EWD	Electronic Work Diary
FMCSA	Federal Motor Carrier Safety Administration
GNSS	Global Navigation Satellite System
GPS	Global Positioning System
HML	Higher Mass Limits
HVNL	Heavy Vehicle National Law
IAM	Intelligent Access Map
IAP	Intelligent Access Program
ITF	International Transport Forum
ISC	Intelligent Speed Compliance

ISO	International Organization for Standardization
ITS	Intelligent Transport Systems
IVU	In-Vehicle Unit
MDL	Mass Distance Location
MoU	Memorandum of Understanding
National Policy Framework	National Policy Framework for Land Transport Technology
NHVAS	National Heavy Vehicle Accreditation Scheme
NHVR	National Heavy Vehicle Regulator
NTC	National Transport Commission
OBM	On Board Mass
RCS	Risk Classification System
RIS	Regulatory Impact Statement
TARV	ISO 15638 Intelligent transport systems – Framework for cooperative telematics applications for regulated commercial freight vehicles (TARV) – Part 1: Framework and architecture
TCA	Transport Certification Australia
TISOC	Transport and Infrastructure Senior Officials' Committee
2011 strategy	National In-Vehicle Telematics Strategy

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