



**Australian Government**  
**Australian Transport Safety Bureau**

**Chief Commissioner**

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12 July 2019

Mr Paul Lindwall  
Commissioner  
Productivity Commission  
GPO Box 1428  
CANBERRA ACT 2601

Dear Mr Lindwall *Paul*

**ATSB submission to the Productivity Commission's National Transport Regulatory Reform inquiry**

Thank you for the opportunity to make a submission to the Productivity Commission's National Transport Regulatory Reform inquiry.

As noted in the Productivity Commission's Issues Paper, the ATSB was part of the national transport reforms, specifically in relation to no-blame safety investigations of rail accidents.

The ATSB's submission to the inquiry explains the ATSB's role in the reforms, comments on the measures for evaluating the success of the reforms and comments on target areas for the Commission to consider for improving safety.

The ATSB would be happy to discuss any aspects of our submission further with the Productivity Commission.

Yours sincerely

Greg Hood  
Chief Commissioner and Chief Executive Officer

Attachments

ATSB submission

62 Northbourne Ave  
Canberra ACT 2601  
Australia

PO Box 967  
Civic Square  
ACT 2608 Australia

**Web** [www.atsb.gov.au](http://www.atsb.gov.au)  
**Twitter** @ATSBinfo

Productivity Commission Inquiry –  
National Transport Regulatory Reform  
Australian Transport Safety Bureau submission

PRODUCTIVITY  
COMMISSION INQUIRY –  
NATIONAL TRANSPORT  
REGULATORY REFORM  
AUSTRALIAN TRANSPORT SAFETY BUREAU  
SUBMISSION

[Abstract](#)

This submission is in response to the Productivity Commission’s Issues Paper released on 17 May 2019. The ATSB’s submission addresses the ATSB’s role in the reforms as the national transport safety investigator.

## Contents

1	Introduction .....	2
2	About the ATSB .....	2
3	Independent no-blame transport safety investigations .....	2
4	The ATSB’s jurisdiction .....	3
5	The ATSB’s involvement in the national transport reforms .....	4
6	Evaluating the success of the national transport reforms.....	5
7	Further opportunities to improve safety .....	12

## 1 Introduction

- 1.1 The Australian Transport Safety Bureau (ATSB) makes this submission in the interests of improving transport safety. The purpose of the submission is to outline the ATSB's role in the modes of transport that are the subject of the Productivity Commission's inquiry into the National Transport Regulatory Reforms. In response to the Productivity Commission's Issues Paper (the Paper), the ATSB makes comment on the measures for evaluating the success of the reforms, including in relation to the impact on the ATSB's performance. The ATSB also makes comment on target areas for the Commission to consider for improving safety through the inquiry.

## 2 About the ATSB

- 2.1 The ATSB is an independent statutory agency of the Australian Government. It is governed by a Commission and is entirely separate from transport regulators, policy makers and service providers. The ATSB's function is to improve transport safety. The ATSB does this through:
- the independent investigation of transport accidents and other safety occurrences
  - safety data recording, analysis and research
  - fostering safety awareness, knowledge and action.
- 2.2 In accordance with the *Transport Safety Investigation Act 2003* (TSI Act), the ATSB cannot apportion blame, assist in determining liability or, as a general rule, assist in court proceedings. Its sole focus is the prevention of future accidents and the improvement of safety. The ATSB is also required to be independent, in the interests of avoiding conflicts of interest and external interference in its role.

## 3 Independent no-blame transport safety investigations

- 3.1 The role of an independent 'no-blame' safety investigator in a mature transport safety system is sometimes misunderstood. The investigator is one component of the system, amongst others, including regulators, policy makers and the safety management practices of manufacturers, operators, other services providers and industry professionals. Without an independent no-blame investigator, the system as a whole does not function as efficiently and as effectively as it should for achieving safe outcomes.
- 3.2 The safety benefits of an independent no-blame safety investigation function as part of a transport safety system are widely recognised. The Honourable Peter McInerney who led the Special Commissions of Inquiry into the Glenbrook (2001) and Waterfall (2005) rail accidents, criticised the New South Wales Government for failing to establish an independent rail investigator. In his report into the Waterfall accident he said:

*Systemic safety investigation of accidents and incidents is a necessary part of a thorough safety management system. It enables an organisation to learn from incident investigations and thereby enhance its safety performance.<sup>i</sup>*

...

*A permanent and independent investigative body, such as the ATSB, can conduct investigations much more efficiently than a Special Commission of Inquiry. It avoids the conflicts of interest identified in the current legislative model [where the investigator is part of the regulator].*

3.3 In the earlier Glenbrook inquiry the Honourable McInerney said:

*The functions of a [no-blame investigator] are intrinsically different to those of a [safety regulator]... The [no-blame investigator] necessarily has as its primary object the examination of accidents and incidents from a purely objective perspective to determine what has occurred, why it has occurred and what needs to be done to rectify any deficiencies identified by the investigation. The [no-blame investigator] has no interest in determining blame and can therefore examine the role of any organisation which may have contributed to an accident, including the adequacy or inadequacy of the [safety regulator]'s monitoring of any accredited organisation involved in the accident or incident.<sup>ii</sup>*

3.4 Annex 13 (Aircraft Accident Investigation) to the Convention on International Civil Aviation and the Code for Marine Casualty Investigation Annexed to the Safety of Life at Sea Convention demonstrate that internationally it is agreed that there needs to be an independent investigator as part of a mature transport safety system.

## 4 The ATSB's jurisdiction

4.1 The ATSB's jurisdiction covers accidents and incidents in a range of transport modes as outlined in Table 1.

Table 1: ATSB jurisdiction

<b>Aviation</b>	<ul style="list-style-type: none"><li>• Civil aircraft registered in Australia</li><li>• Civil Australian-registered aircraft overseas</li></ul>
<b>Rail</b>	<ul style="list-style-type: none"><li>• Rail vehicles in Australia</li></ul>
<b>Marine</b>	Civilian interstate and overseas shipping involving: <ul style="list-style-type: none"><li>• Australian-registered ships anywhere in the world</li><li>• Foreign ships in Australian waters</li><li>• Foreign ships en route to Australian ports</li></ul> The ATSB does not have an agreed jurisdiction for Domestic Commercial Vessels (DCVs).

4.2 The ATSB receives over 16,000 notifications of accidents and incidents a year. As with other investigation organisations around the world, the ATSB must make selective decisions about what it investigates. The ATSB makes these decisions taking into account the Statement of Expectations from the Minister for Infrastructure, Transport and Regional Development and makes assessments about what investigations will deliver the safety outcomes for the greatest public benefit.

## 5 The ATSB’s involvement in the national transport reforms

5.1 The ATSB’s involvement in the national transport reforms varied by transport mode as outlined in Table 2.

Table 2: ATSB involvement in the national transport reforms

<p><b>Rail</b></p>	<p>Agreements</p> <ul style="list-style-type: none"> <li>• In 2009, the Council of Australian Governments (COAG) agreed to a national rail safety investigator<sup>iii</sup></li> <li>• In 2011, the Commonwealth and states and territories (States) agreed through the <i>Intergovernmental Agreement on Rail Safety Regulation and Investigation Reform</i> (Rail IGA) to extend the ATSB’s role to operate as an enhanced national rail safety investigator<sup>iv</sup>.</li> <li>• In 2013 and 2018 the ATSB and the Office of the National Rail Safety Regulator (ONRSR) agreed a Memorandum of Understanding to establish and maintain a cooperative working relationship between the two agencies.</li> </ul> <p>Implementation</p> <ul style="list-style-type: none"> <li>• In 2013, the ATSB started entering into funding agreements with the States for investigations to be performed in those jurisdictions. The final agreement was signed in 2017. Funding agreements were signed with Queensland, Western Australia, South Australia and Tasmania. Some of these agreements have now expired.</li> <li>• A collaboration agreement was established with the States with existing investigation agencies – New South Wales and Victoria – allowing those state investigators to conduct rail investigations under federal legislation, with the intention of providing for consistent approaches to investigations.</li> </ul>
<p><b>Maritime</b></p>	<p>Agreements</p> <ul style="list-style-type: none"> <li>• Although early discussions included consideration of establishing the ATSB as the national DCV investigator, the ATSB was not part of the national maritime safety reforms.</li> </ul> <p>Implementation</p> <ul style="list-style-type: none"> <li>• As the ATSB is not resourced for DCV investigations, the ATSB does not investigate unless resources are made available. There is no national maritime safety investigator.</li> </ul>
<p><b>Heavy vehicles</b></p>	<p>Agreements</p> <ul style="list-style-type: none"> <li>• The ATSB was not a part of the national heavy (road) vehicle safety and productivity reforms.</li> </ul> <p>Implementation</p> <ul style="list-style-type: none"> <li>• The ATSB currently has no part in the heavy vehicle sector.</li> </ul>

## 6 Evaluating the success of the national transport reforms

6.1 The Productivity Commission Issues Paper (the Paper) outlined ways to measure the success of the national transport reforms. The ATSB sees merit in the Paper’s approach of using multiple measures. This section outlines additional and complementary measures for the Commission’s consideration.

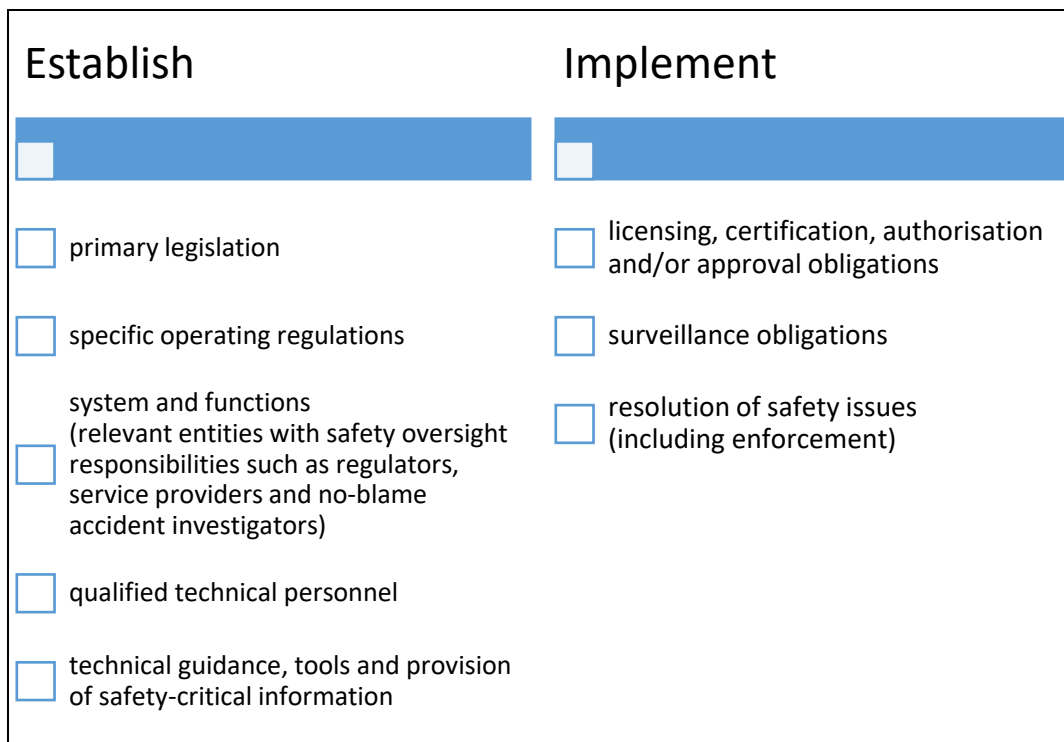
### 6.2 Assess against elements of a better practice transport safety oversight system

6.2.1 One method of evaluating the reforms would be to consider whether they have brought together all the elements of a transport safety system to achieve best practice for the mode.

6.2.2 While there is no agreed ‘best practice’ safety system for all transport modes, the aviation sector provides a useful reference. Appendix 1 of Annex 19 to the Convention on International Civil Aviation outlines the critical elements of an aviation safety oversight system<sup>v</sup>.

6.2.3 Figure 1 outlines these critical safety oversight system elements, adapted for a general transport context.

Figure 1: Critical elements of a safety oversight system



6.2.4 Assessing the degree to which the rail, maritime and heavy vehicle sectors have these critical elements may assist in evaluating the success of the reforms and areas for further work. The ATSB makes the suggestion as assessing the reforms simply against what the COAG agreements required to be in place, may not reveal whether the system is effective.

### 6.3 Refer to relevant data

6.3.1 The Paper sought suggestions for the best measures of safety in rail, maritime and road.

As outlined previously, the ATSB's function includes a focus on safety data recording, analysis and research. A number of ATSB datasets and related datasets may assist the Productivity Commission in evaluating safety. These are outlined below.

#### a. Rail

- i. The ATSB sources rail accident and incident notification data through ONRSR.
- ii. The ATSB used to publish rail safety occurrence data prior to the national reforms. This information is available on the ATSB's website. The ONRSR now publishes statistical information, available on its website.
- iii. The ATSB has a number of rail safety investigations published on its website that can inform the Productivity Commission's inquiry by taking into account the safety issues that have arisen out of the investigations.

#### b. Maritime (specifically DCVs)

- i. The Transport Safety Investigation Regulations 2003 (TSI Regulations) do not provide for the notification of DCV accidents and incidents to the ATSB. The ATSB has not sought reporting to the ATSB as there is no agreement around resourcing for the ATSB to investigate. The Australian Maritime Safety Authority (AMSA) provides the ATSB with some reports of very serious DCV occurrences. Consistent with the TSI Regulations, the ATSB is notified of certain serious maritime incidents involving interstate and overseas shipping.

#### c. Heavy vehicles

- i. The ATSB is not involved in heavy vehicles and thus cannot comment on relevant data.

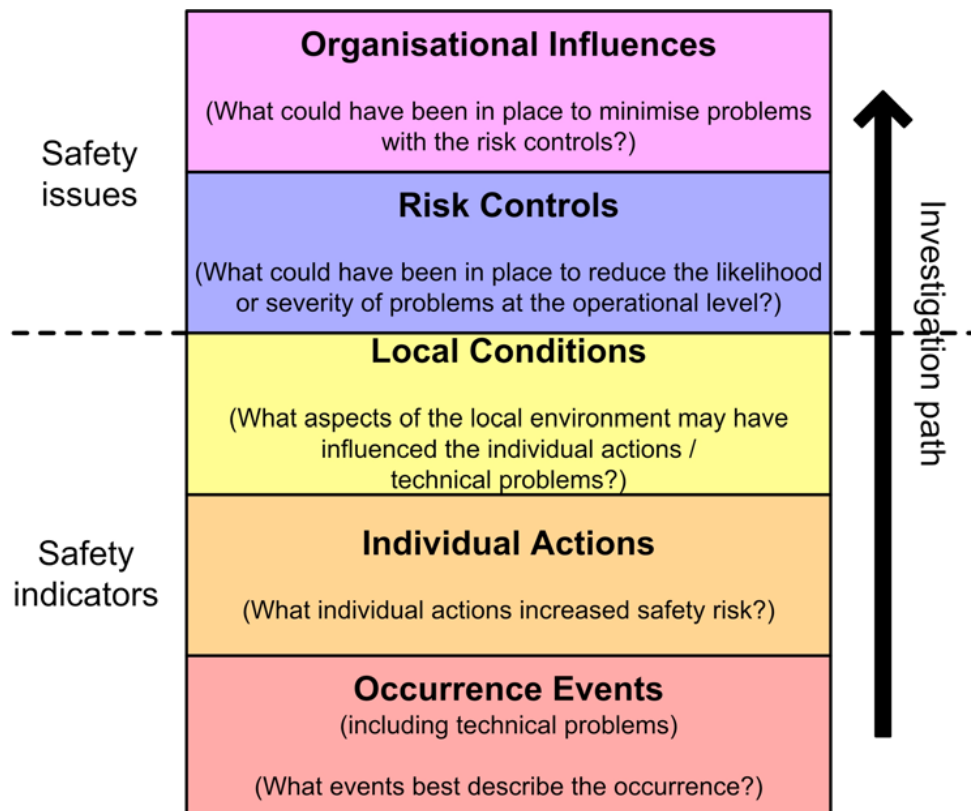
6.3.2 For information about further opportunities to improve safety through data, see section 7.1 of this submission.



## 6.4 Consider safety outcomes

- 6.4.1 In the context of determining the impact of the national reforms on safety outcomes, the Paper identified various forces that influence safety outcomes (see Figure 5 in the Paper).
- 6.4.2 Identifying safety factors is the ATSB’s area of specialist expertise. The ATSB can assist with frameworks for the Commission’s analysis.
- 6.4.3 The ATSB’s investigation analysis model is derived from the ‘Reason model’ of organisational accidents, also known as the ‘Swiss cheese’ model. The central premise of this model is that accidents rarely result solely from the actions of operational personnel, instead they are most likely to occur due to a combination of factors.
- 6.4.4 The ATSB’s investigation analysis model can be applied to all transport contexts to identify potential safety factors. The ATSB’s model notes key factors that influence safety outcomes – see Figure 2.

Figure 2: ATSB investigation analysis model<sup>vi</sup>



- 6.4.5 While the ATSB’s model is designed to be used to investigate transport accidents and incidents, the elements of the model could inform the Productivity Commission’s evaluation of safety at a sector-wide level.
- 6.4.6 Further information about the ATSB’s model and factors that influence safety outcomes, is available from the ATSB research report AR-2007-053<sup>vi</sup>.

## 6.5 Consider agency views

6.5.1 Another way of assessing the success of the national transport reforms is to consider the experiences of the organisations involved.

### 6.5.2 Positive outcomes

6.5.3 From the ATSB's perspective, the national transport reforms delivered many positive outcomes. Some of the key benefits are outlined below.

#### 6.5.4 Improved safety

The States do not resource the ATSB to investigate all accidents and serious incidents. However, the ATSB's increased involvement in rail has meant that at least a few more accidents and incidents each year are subject to an independent investigation that looks for systemic safety issues. This has resulted in more safety action taken in response to ATSB identified findings.

#### 6.5.5 Improved data

The ONRSR and the ATSB's involvement in rail has meant more consistent reporting from industry, leading to better availability, consistency and quality of rail data. Better data has positioned the ATSB to make more informed decisions about which matters to investigate and determine the scope of investigations. The ATSB acknowledges the National Rail Safety Data Strategy 2018–2022 and action plan, published on the ONRSR's website, which is intended to continue to improve the quality and availability of rail safety data.

#### 6.5.6 Improved regulator relationship

With the introduction of one rail regulator rather than multiple regulators, the ATSB's relationship with the regulator has changed. The ATSB has more frequent contact with the ONRSR (simply by relating to one entity multiple times rather than multiple entities fewer times). This has resulted in reduced transaction costs, improved relationships and better understandings for cooperation to improve rail safety.

#### 6.5.7 Improved knowledge and experience

The ATSB's increased involvement in rail has developed the ATSB's knowledge of rail safety matters. ATSB investigators have been able to gain greater experience in rail investigations. The ATSB has also been able to share lessons learned between the modes of transport it investigates.

#### 6.5.8 Areas for improvement

6.5.9 There have been improvements from the ATSB's perspective and these improvements can be further enhanced with a focus on particular areas with respect to the efficiency and effectiveness of the reforms. The suggested areas are outlined below.

#### 6.5.10 The ATSB's rail funding model

The Rail IGA asserts that all States (other than those with their own existing investigator) "will pay the full cost of the ATSB investigatory services in their jurisdiction". As noted in Table 2, this arrangement was formalised through bilateral funding agreements. These funding agreements are:

a. Not aligned with the ATSB's resource requirements

Most agreements are made on the basis that a State will pay the ATSB if an accident happens that meets certain criteria for the ATSB to investigate. Being funded on this basis means the ATSB cannot predict whether it will receive funds from a State in any given year.

Accident investigations require the use of highly skilled resources who are trained in methodologies for obtaining and analysing evidence to determine safety factors. It takes around 18 months of training and on the job experience to fully qualify an ATSB investigator. The ATSB cannot sustainably make an investment in recruiting and retaining resources for rail investigations if it does not know whether they will be used and subsequently funded. Going forward, there is the potential that if a few serious rail accidents happened together, the ATSB would have to consider not investigating one or more or diverting resources from investigations in other modes. The outcome either way is reduced safety.

b. Limited independent decision making

There is limited ability for the ATSB to receive increased funding from the States to a level appropriate to the size and scope of the rail sector, particularly as the sector grows and changes. The funding agreements limit the ATSB's independent decision making to respond to changes and to look at lower level occurrences that may reveal an adverse trend.

c. Inconsistencies between States

Some agreements exclude certain types of rail vehicles, others exclude specified rail lines, one agreement ensures a yearly set fee is paid to the ATSB, others outline agreed fees to be paid to the ATSB at the completion of an investigation. The 'Defined Interstate Network' (DIRN) is largely excluded from the agreements even though the DIRN does not have the same significance for separate treatment since the reforms. Greater consistency would assist with certainty around funding and independent decision making with respect to what needs to be investigated.

d. Administrative barriers

The ATSB itself negotiates the funding agreements with the States. Despite attempts to renew, agreements have lapsed in two jurisdictions. Another jurisdiction is yet to sign an agreement. The uncertainty around commitments from the States impacts on the ATSB's workforce planning to retain resources for those States. The resources required to continually review and renegotiate agreements further detracts from the ATSB's core business.

Addressing these issues would likely improve the effectiveness and efficiency of the ATSB and result in better transport safety outcomes.

#### 6.5.11 Commonwealth–State collaboration on rail investigations

For States with an existing independent investigator, the Rail IGA allows for an arrangement where the state investigator delivers investigatory services on behalf of the ATSB. As noted in Table 2, the ATSB established a collaboration agreement with the relevant investigators in New South Wales (the Office of Transport Safety Investigations [OTSI]) and Victoria (the Office of the Chief Investigator, Transport Safety [CITS]). While the three agencies have diligently worked together to improve rail safety, challenges remain:

##### a. Inconsistent investigation methodologies, policies and procedures

OTSI and CITS are multi-modal. They are funded to investigate DCV and bus accidents, while the ATSB is not. Under the collaboration agreement, OTSI and CITS only conduct rail investigations in accordance with the ATSB’s investigative framework and methodologies. While OTSI and CITS may choose to adopt the ATSB methodology, policies and procedures for investigations in other modes, there is no obligation or expectation for them to do so; they may and in many cases, do, use different approaches.

##### b. Different priorities

The modes of transport that the three agencies investigate are not aligned and each agency has different deliverables. While all of the agencies focus on the broad goal of improving safety, each agency prioritises investigations differently based on their different deliverables, operating environments and risk profiles. These different priorities are apparent in decisions such as whether to investigate an occurrence or not, and the scale of an investigation (including the effort and resources allocated). If the priorities of the agencies do not align, one agency may be in a position where it needs to conduct an investigation outside the collaboration arrangements, or an agency may make a decision in relation to its workload that affects the deliverables of another agency.

##### c. Costs

The Rail IGA states that “jurisdictions with their own identified existing investigator, that elect to enter into a service agreement to deliver investigatory services on behalf of the ATSB, will fully meet their own on-going costs”. While OTSI and CITS do cover core costs to conduct investigations, the ATSB is in a position where it is absorbing other costs to support the collaboration activities. Costs include ATSB Commission review and approval of investigations, provision of training, provision of ATSB compatible ICT equipment and software, report publishing, and legal support. There is also the time invested from staff in the administration of the collaboration activities. The ATSB has received some support, for example CITS provided accommodation for two ATSB staff in Melbourne for a short period of time and OTSI continues to provide accommodation for one ATSB staff member in Sydney, but these are generally time-limited and relatively small costs.

##### d. Staffing

The three agencies have separate recruitment and engagement processes. Different approaches mean that workforce planning is not coordinated between the agencies – there is no clear way to ensure the best mix of subject matter knowledge and skills across the investigator cohort. Different approaches can also affect the expectations that staff across the agencies have of the work they will be involved in.

**6.5.12 Domestic Commercial Vessel no-blame investigations**

As noted in Table 2, the ATSB was not included in the national maritime safety reforms. While the TSI Act allows the ATSB to investigate DCVs, it is not resourced to do so. As noted above at paragraph 6.3.1(b) with the ATSB not being resourced to conduct DCV investigations the TSI Regulations do not contain any requirements for notifying the ATSB of DCV accidents and incidents.

This means that, apart from in New South Wales through OTSI and in Victoria through CITS, there is no resourcing for independent no-blame safety investigations of DCV occurrences. In the other States the ATSB is unable to investigate unless resources are made available. Any decisions going forward around the ATSB's engagement in the DCV sector is a matter for government.

## 7 Further opportunities to improve safety

7.1 The Paper seeks input in relation to further opportunities to improve safety. The ATSB, as an organisation committed to continual improvement, welcomes the opportunity to suggest an area for focus. From the ATSB's perspective, a focus on the availability, quality and use of accident and incident data would deliver benefits.

### 7.2 Data

7.2.1 Data quantity, quality and use varies considerably across the transport sector, particularly in different modes. There have been definite improvements in the rail sector through the transport reforms. The ATSB supports the National Rail Safety Data Strategy 2018–2022 which is intended to bring about continued improvements. Although the ATSB is not resourced to investigate or analyse data relating to DCV occurrences, the ATSB is aware of the significant challenges with the historical dataset acquired by AMSA as part of the national reforms as well as the challenges in encouraging better reporting. The ATSB is similarly aware that there are significant challenges for data collection in the heavy vehicle industry.

7.2.2 In general, accident and incident data is of a greater quality when there is a 'just culture' approach to reporting. Given that most unsafe human actions are not deliberate, an atmosphere of trust is required to encourage organisations and people to report without fear of unjustified administrative action being taken against them. This leads to better data and subsequently, an opportunity to improve safety. It is integral that the framework for accident and incident reporting is able to support a 'just culture' approach.

7.2.3 Obtaining quality data is one challenge, the other is ensuring there are resources to interpret and analyse the data. In aviation, the ATSB has constrained resources but it still seeks to make valuable use of the safety data it collects. For example, each year the ATSB publishes an Aviation Occurrence Statistics report<sup>vii</sup> to provide information to the aviation industry, manufacturers and policy makers, as well as to the travelling and general public, about aviation safety occurrences. The report shares what can be learned to improve transport safety in the aviation sector. The ATSB also provides aviation occurrence data in a publicly available searchable format. Operators can use the ATSB's dataset in combination with their own data to improve safety outcomes.

7.2.4 The ATSB also conducts data analysis in aviation to identify existing and emerging safety issues. Investing in interrogating the data is necessary to reveal safety issues that may not be apparent through investigating a single event. Research and education using safety data is also necessary to demonstrate that best use is being made of what is available.

7.2.5 The ATSB's website provides further information on the work it undertakes with data which may be relevant to the Commission's inquiry for considering what happens in other modes.

### 7.3 Independent no-blame safety investigations

7.3.1 Any decision to expand the ATSB’s jurisdiction into other modes is a matter for the Australian Government. However, as a general principle the ATSB acknowledges the value of having an independent no-blame safety investigation entity as part of the overall transport safety system as articulated by the Honourable Peter McInerney, whose comments are reproduced in Part 3 of this submission.

7.3.2 Table 3 below addresses the existence of independent no-blame safety investigations across the transport modes.

Table 3: Independent no-blame safety investigations by mode

Transport mode	Current situation			Additional notes
	ATSB legislative power to investigate?	ATSB funded to investigate?	State-based investigations?	
Aviation	✓	✓	✗	<ul style="list-style-type: none"> <li>ATSB has full jurisdiction although investigations are limited in the sport and recreation sector which is self-administering.</li> </ul>
Rail	✓	✓	✓ (NSW, Vic only)	<ul style="list-style-type: none"> <li>Efficiency and effectiveness issues under the national reforms are addressed in this submission.</li> </ul>
International and Interstate Shipping	✓	✓	✓ (Vic only – one investigation)	<ul style="list-style-type: none"> <li>Investigations address Australia’s International obligations.</li> </ul>
Domestic commercial vessels	✓	✗	✓ (NSW, Vic only)	<ul style="list-style-type: none"> <li>ATSB was not included in the national reforms for DCVs.</li> </ul>
Heavy vehicles	✗	✗	✓ (NSW, Vic only)	<ul style="list-style-type: none"> <li>ATSB investigations occasionally involve road vehicles where the ATSB is investigating a rail level crossing accident.</li> <li>NSW and Vic have a limited jurisdiction involving buses</li> <li>Some other countries including the United States provide for independent no-blame investigations of heavy road vehicles</li> <li>Automated road vehicles are also subject to independent investigations in other countries because of the complex systems they operate within.</li> </ul>

Productivity Commission Inquiry – National Transport Regulatory Reform  
Australian Transport Safety Bureau submission

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**References:**

- <sup>i</sup> The Honourable Peter Aloysius McInerney QC, *Special Commission of Inquiry into the Waterfall Rail Accident, Final Report (Vol 1)*, 2005, p.58
- <sup>ii</sup> The Honourable Peter Aloysius McInerney QC, *Special Commission of Inquiry into the Glenbrook Rail Accident, Final Report, 2001*, p.58, p.174
- <sup>iii</sup> COAG, *Communique 2 July 2009*, 2009
- <sup>iv</sup> COAG, *Intergovernmental Agreement on Rail Safety Regulation and Investigation Reform*, 2011
- <sup>v</sup> International Civil Aviation Organization, *Annex 19 to the Convention on International Civil Aviation – Safety Management*, 2013, Appendix 1
- <sup>vi</sup> Walker, M and Bills, K, *AR-2007-053 Analysis, Causality and Proof in Safety Investigations*, 2008, p37
- <sup>vii</sup> Australian Transport Safety Bureau, *AR-2018-030 Aviation Occurrence Statistics 2008 to 2017*, 2018