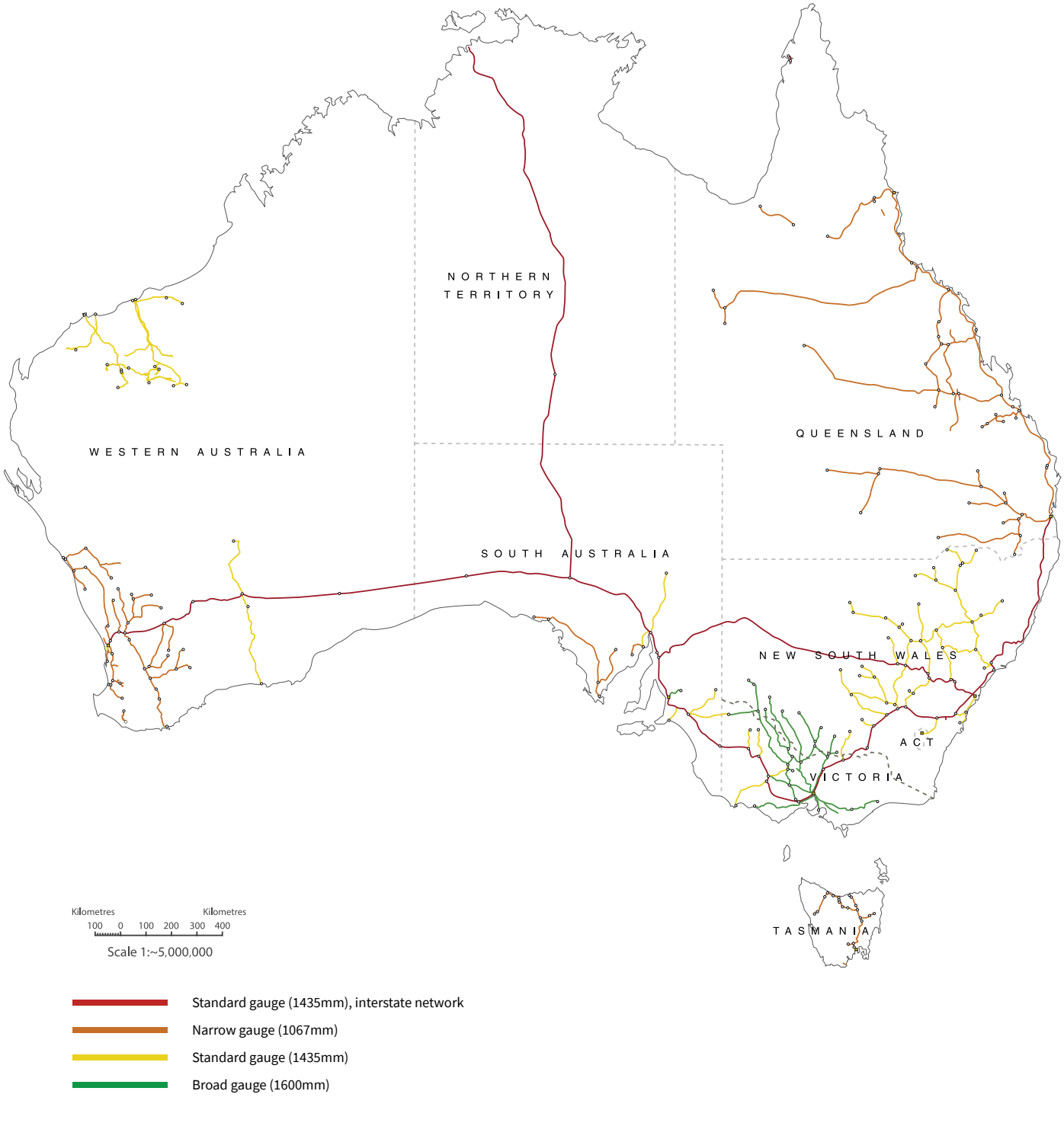
2017–2018

OFFICE OF THE
national rail
safety regulator

// RAIL SAFETY REPORT

FIGURE 1:
RAILWAY NETWORKS OPERATING ACROSS AUSTRALIA.



Sourced from the Australasian Railway Association

ABOUT // THIS REPORT

ONRSR's Rail Safety Report provides a summary of rail safety performance in the 2017–2018 financial year. This performance is described in terms of safety statistics based on rail safety occurrences notified to ONRSR, and intelligence gathered through regulatory activities. ONRSR also summarises some of the key areas that have been the focus of regulatory attention. Analysis of these sources provides the focus areas for compliance and safety improvement in the coming year. This report is designed to consider rail safety from a national perspective rather than to single out individual operators or specific incidents. It is an ongoing function of ONRSR to work with individual rail transport operators on issues that pertain specifically to them. ONRSR does, however, highlight specific examples of incidents where they demonstrate issues considered relevant to the wider industry.

SCOPE AND METHODS

The scope and methods used for the presentation of data are described in Appendix A. The general approach is outlined below.

GEOGRAPHIC COVERAGE

Except where explicitly stated, all descriptions and statistics in this report apply only to those railways within ONRSR's area of operation. For the 2017–2018 financial year this includes railway operations in all states and territories, with the exception of some operators in Victoria. All tramways operating in Victoria, including the metropolitan tram operator in Melbourne and several tourist and heritage railways are regulated under Victorian local law and are therefore not subject to the RSNL.

REPORTING PERIOD

A minimum reporting period of 1 July 2017 to 30 June 2018 applies to this report. A longer period of data is considered where appropriate and available for analysis.

DATA SOURCES

The information presented in this report is principally based on notifiable occurrences — the initial written advice of a rail safety incident that a rail transport operator submits to ONRSR in accordance with section 121 of the RSNL.

Unlike previous versions of the report, data tables are not presented in the appendices. Instead, a complete set of the data presented can be downloaded from the National Safety Data[4] area of ONRSR's website.

DEFINITIONS

Most statistical summaries in this report are based on the incident definitions within ONRSR's reporting requirements for notifiable occurrences[5]. Some statistics are based on definitions specific to this report to support a more meaningful risk-based analysis of critical events, and in such cases these definitions are presented.

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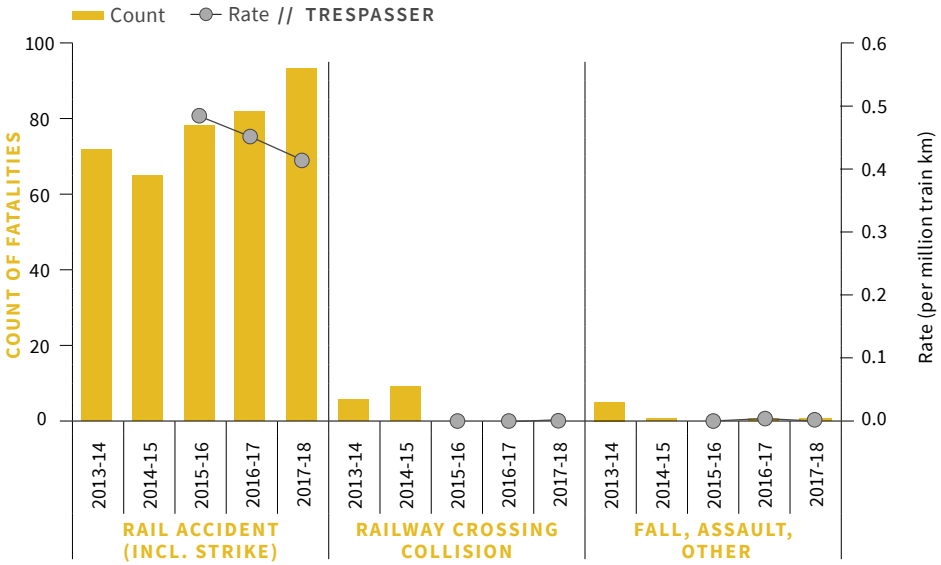
[4] The national safety data area of ONRSR's website presents statistics to allow operators to benchmark their safety performance against industry and sector averages <https://www.onrsr.com.au/publications/national-safety-data>

[5] Office of the National Rail Safety Regulator, Reporting Requirements for Notifiable Occurrences, Version 2.1, ONRSR, Adelaide, 2018.



A comparison of the rate of fatality between ONRSR-regulated railways and selected overseas railways is summarised in Table 1. The ONRSR-based data in this table is a subset of the fatalities summarised in Figure 2 to align with the overseas data definitions. For example, local data excludes suspected suicide as these are also excluded from overseas data.

TABLE 1:

RAILWAY FATALITIES – AUSTRALIA, GREAT BRITAIN AND UNITED STATES

SA, NSW, NT, Tas., Vic. and ACT data for full period, WA data from 2 November 2015, and Qld. data from 1 July 2017. Fatalities involving passengers, workers, public and trespass (excluding suspected suicide).

		2015–16	2016–17	2017–18	3 YEAR
Australia (ONRSR regulated railways)	Fatalities	12	16	17	45
	Train Km (million)	159.6	180.4	227.5	567.5
	Rate	0.075	0.089	0.075	0.079
Great Britain	Fatalities[1]	45	39	49	133
	Train Km (million)[2]	556.7	572.2	577.3	1706.2
	Rate	0.081	0.068	0.085	0.078
United States	Fatalities[3]	779	846	857	2482
	Train Km (million)[3]	1,133.8	1,135.2	1,132.8	3401.8
	Rate	0.687	0.745	0.757	0.730

[1]Source: Rail Safety and Standards Board, Annual Safety Performance Report 2017/18, RSSB, UK, 2018
[2]Source: Rail Safety and Standards Board, Rail KM on request (provided 22 August 2018), RSSB, UK, 2018
[3]Source: Federal Railroad Administration Office of Safety Analysis: online database query (accessed 6 September 2018) http://safetydata.fra.dot.gov

The comparison is most valid for the Great Britain (GB) statistics because information on individual GB incidents is available to confirm consistency of scope with local data. GB is also a suitable benchmark to compare with ONRSR data because of its comparatively high rail safety performance. The United States (US) data is less reliable because of uncertainties in data collection methods.

The fatality rate for ONRSR's area of operation over the three-year period (0.079 fatalities per million train km) is marginally higher than that of GB (0.078) but well below that of the US (0.730). A review of the US figures by individual incident type suggests the rate reflects a significantly higher proportion of trespass and level crossing-related fatalities in the US compared to the figures within ONRSR's area of operation.

TABLE 2:
RAILWAY-RELATED FATALITIES, EXCLUDING TRESPASS OR SUSPECTED SUICIDE, JULY 2017 TO JUNE 2018

Railway operations regulated under the RSNL. Excludes fatality associated with trespass or suspected suicide.

DATE	DESCRIPTION	LOCATION
12/08/2017	A passenger fell from a platform and was struck and fatally injured by an oncoming train.	West Ryde Station, NSW
20/08/2017	A passenger fell down a station escalator and was fatally injured.	Parliament Station, Vic.
29/08/2017	The driver of a truck was fatally injured in a collision between the vehicle and a freight train at a railway crossing protected by stop signs.	Wagoora, Qld.
29/09/2017	A passenger riding a motorised tricycle fell from a platform and was struck and fatally injured by an oncoming train.	Greenwood Station, WA
24/10/2017	A passenger fell inside a train and subsequently died on a station platform.	Newcastle Interchange, NSW
3/11/2017	The driver of a road vehicle was fatally injured in a collision between the vehicle and a passenger train at a railway crossing protected by give way signs.	Werneth, Vic.
30/01/2018	The driver of a road vehicle was fatally injured in a collision between the vehicle and a passenger train at a railway crossing protected by flashing lights.	Brunswick Junction, WA
18/02/2018	A member of the public was fatally injured when struck by a freight train at a railway crossing protected by flashing lights.	Piccadilly St, Kalgoorlie – Leonora, WA
22/04/2018	A member of the public was fatally injured when they were struck by a passenger train at a train station.	Oatley, NSW

TABLE 11: (CONTINUED)

DATE	DESCRIPTION	LOCATION
26/03/2018	Worksite protection was established without accounting for a coal train already in the section. Track workers saw the approaching train and remained clear of the track.	Drayton Junction to Newdell Junction, NSW
06/04/2018	A work crew operated road rail vehicles and deconstructed track for approximately one hour without permission to start work.	Frankston Line, Vic.
03/05/2018	A worksite protection officer allowed a track excavator onto a track without any protection in place for the track section.	Hesso, SA
22/06/2018	After completing an inspection and clearing the track, a work group observed a passenger train on the track they believed was protected. One of the signals used for protection was not controlled by the signaller that set up the protection.	Sunbury, Vic.

TOURIST AND HERITAGE SECTOR, SAFETY MANAGEMENT CAPABILITY

ONRSR national priority since 2018. Ongoing.

With operations as diverse as hobbyists running section cars, museums providing short ride experiences and scenic railway lines carrying high frequency passenger trains, ONRSR continues to focus on the safety management capability of the tourist and heritage rail sector.

ONRSR is aware of the challenges that tourist and heritage operators face with identifying, assessing and treating risks associated with the scope and nature of their operations given their often limited resources. However, with their tens of thousands of recreational passengers each year, tourist and heritage operators must place safety management at the centre of everything they do.

Working with the Association of Tourist and Heritage Rail Australia (ATHRA), ONRSR will deliver a safety improvement program to help improve the safety management maturity of tourist and heritage operators. The program will provide tourist and heritage railway staff with practical information on the importance of safety governance, accountability, leadership, and organisational safety culture as well as safety management systems and risk management.

Complementing the safety improvement program will be an increased focus on providing improved safety education and support to operators during in the field interactions with ONRSR's rail safety officers.

With the scope and nature of Australia's accredited tourist and heritage operators varying widely, ONRSR aims to encourage individual tourist and heritage operators to tailor risk management controls and safety management systems to the scope and nature of their specific railway operations and risk profiles.

FIGURE 13:
OCCURRENCES INVOLVING TOURIST AND HERITAGE OPERATORS, JULY 2015 TO JUNE 2018

SA, NSW, NT, Tas., Vic. and ACT data is for the full period, WA data is from 2 November 2015 onwards, and Qld. data is from 1 July 2017 onwards. Includes all train types. SPAD / PAE occurrences are SPAD A1: Limit of Authority Missed by Train Crew classifications only.

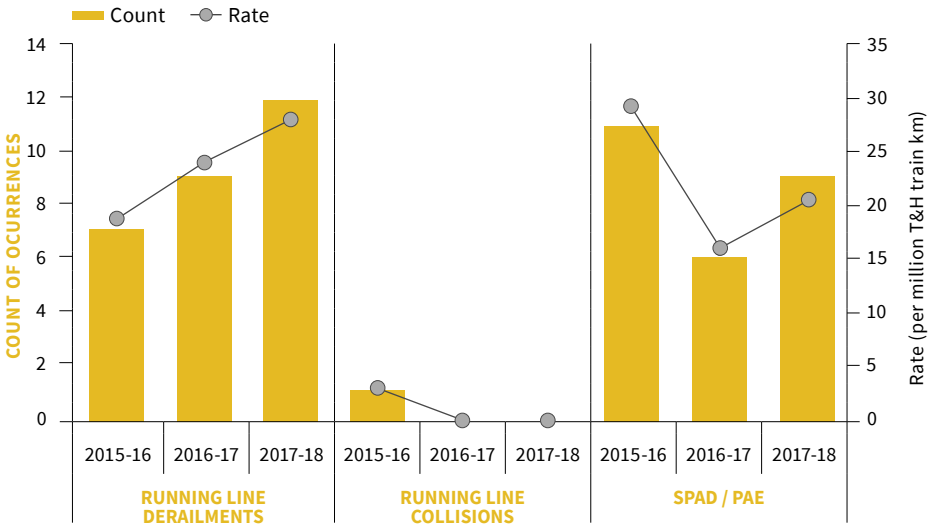


TABLE 12:
SELECTED OCCURRENCES INVOLVING TOURIST AND HERITAGE OPERATORS, JULY 2017 TO JUNE 2018

Railway operations regulated under the RSNL.

DATE	DESCRIPTION	LOCATION
8/07/2017	A tourist and heritage train carrying passengers derailed on a bend. No damage or injury was reported.	Busselton Jetty, WA
16/07/2017	The bogie of a carriage on a steam-hauled tourist and heritage passenger train derailed when travelling over points. No injuries were reported.	Marina Mirage Station, Port Douglas, Qld.
16/07/2017	A tourist and heritage locomotive derailed on a crossing loop due to a spread track. No injuries were reported.	Victor Harbor, SA
18/08/2017	A tourist and heritage passenger train and road vehicle collided at a railway crossing protected by flashing lights. One of the road vehicle occupants sustained a minor injury.	Cairns Railway, Qld.
8/10/2017	Two road vehicle occupants were seriously injured in a collision between a tourist and heritage light locomotive and a road vehicle at a railway crossing equipped with give way signs.	Mount Compass – Goolwa, SA
24/12/2017	Two passenger carriages of a steam-hauled tourist and heritage train derailed. One passenger sustained minor injuries and was taken to hospital.	Cobdogla, SA
1/01/2018	A passenger carriage of a tourist and heritage train derailed. The carriage was empty and no injuries were reported.	Dwellingup, WA
15/02/2018	The locomotive of a tourist and heritage train derailed when it struck a small a tree branch laying across the track. Passenger carriages did not derail and no injuries were reported.	Ida Bay, Tas.
6/03/2018	A tourist and heritage passenger train and bus collided at a railway crossing protected by flashing lights. No injuries were reported.	School Rd, Gembrook Line, Vic.

TABLE 12: (CONTINUED)

DATE	DESCRIPTION	LOCATION
12/03/2018	The leading passenger carriage of a tourist and heritage train derailed. No injuries were reported.	Moonta, SA
18/04/2018	The rear passenger carriage of a tourist and heritage train derailed. No injuries were reported.	Moonta, SA
28/04/2018	A tourist and heritage passenger train and a road vehicle collided at a railway crossing protected by give way signs. The driver of the road vehicle sustained a minor injury.	Main Goolwa to Mount Barker, SA
22/06/2018	The locomotive of a tourist and heritage train derailed after travelling over a set of points. Passenger carriages did not derail and no injuries were reported.	Ida Bay, Tas.

ROAD RAIL VEHICLE SAFETY

ONRSR national priority since 2015. Ongoing.

Although an important tool for rail network maintenance, road rail vehicles (RRVs) carry substantial safety risks and remain a national rail safety priority for ONRSR. Occurrence data from the past three years does not indicate a reduction in the rate of incidents related to RRV safety on the Australian network, and while operators have demonstrated improvements in some areas, ongoing vigilance and improvement is required.

During 2017–2018 ONRSR's RRV safety national compliance project focused on how operators maintain effective management and control of RRV operations on their networks.

Anchored by a national program of audits, the year's activities revealed a pleasing uptake of Australian standard *AS/RISSB: 7502 Road Rail Vehicles,* with all audited operators incorporating the RRV certification and registration requirements into their safety management systems and complying with the specified requirements.

Also reassuring is that all operators audited as part of this project during 2017–2018 have prohibited the use of friction drive RRVs that do not have at least one braked axle in contact with the rail during on-tracking and off-tracking.

SAFETY CONCERN: CERTIFICATION OF CONTRACTOR-PROVIDED RRVS

In order to allow RRVs onto their networks, operators are required to put into place processes to manage the safety of RRV operations. They are strongly encouraged to:

> ensure RRV certification, registration and compliance to appropriate standards, such as Australian standard *AS/RISSB:7502 Road Rail Vehicles*

> engage an independent competent person (ICP) to undertake engineering assessment of the RRV