National Rail Safety Data Strategy Consultation Paper





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1 Introduction

In 2018 the Office of the National Rail Safety Regulator (ONRSR) partnered with the Australasian Railway Association (ARA) and industry stakeholders to develop the National Rail Safety Data Strategy (the Strategy) and Action Plan. The Strategy and Action Plan are provided at Attachment A.

The Strategy and Action Plan have been developed to deliver on the vision of having consistent, accurate, complete, valid and timely national rail safety data set (the data set) that is readily available to stakeholders when making decisions relating to rail safety. The Strategy provides an opportunity to develop a single point for reporting and a single source of truth. The Strategy will also enable data to be readily available to a range of stakeholders supporting the concept of "report once use many times".

Development and delivery of the Strategy is overseen by a Steering Committee jointly chaired by the ARA and ONRSR with membership comprising of industry representatives from Rail Industry Safety and Standards Board (RISSB), above and below rail, passenger (heavy and light), freight operators and contractors.

This consultation paper sets out the detail for establishing the data set developed through the Steering Committee working closely with industry in identifying rail safety data that is needed by key stakeholders. The following questions guided development of the data set:

- > Is it the right data reported?
- > Is it useful data?
- > Is it provided at the right time?
- > Does ONRSR need to know?
- > Is there data currently not reported that would be beneficial?
- > Who should collect it?
- > Who and how should data be accessed?
- > If we start from scratch what data would be collected?
- > What data do other stakeholders need?

Following feedback, the Steering Committee will agree on a data set and reporting requirements (including any regulation amendments) which will be progressed to Infrastructure and Transport Ministers for their consideration later in 2021. Following Ministers consideration, and if approved, regulation changes will be progressed through the South Australian Parliament. Implementation is expected to be from 1 July 2022, subject to legislative timeframes.

No changes proposed under the Strategy limits or changes an operator's responsibility to comply with other legislative reporting requirements, for example under WH&S legislation.

2 Background

The establishment of a consistent, high quality and accurate data set has been a discussion point for industry and regulators for almost 20 years. Over the years a number of attempts have been undertaken to achieve this including the introduction of Occurrence Notification – Standard 1 (ON-S1) and Occurrence Classification – Guideline 1 (OC-G1) in 2005 and further refinement by ONRSR in 2017 with the issuing of the "Reportable Requirements for Notifiable Occurrences" document. However, these changes did not achieve the desired outcome and have led to development of the Strategy and action plan in order to achieve a consistent, accurate, complete, valid and timely national rail safety data set.

With a national rail safety regulator established, combined with technology advancements bringing improvements in data sharing, management and analysis capabilities the Strategy provides an opportunity to address an increasing demand for industry-wide data and an appetite for benchmarking by operators.

The aim of the Strategy is to create a data set that can be accessed (with associated permission) by a range of stakeholders in rail safety, guided by the agreed objectives that it:

- > meets the identified needs of governments, industry and other primary stakeholders¹;
- > supports the data needs of secondary stakeholders²;
- > supports good decision-making about rail safety;
- > guides actions to improve rail safety;
- > provides timely, accurate and relevant information about rail safety performance; and
- > reduces regulatory burden on industry.

The development of the data set will not only provide significant administrative benefits but also improve access to rail safety data. The Steering Committee acknowledge that the proposed changes will require system and associated business processes changes by accredited operators.

¹ ARA, ATSB, Governments & Ministers, ONRSR, RTO and RISSB

² ACRI, ALCAM, ATHRA, level crossing committees, TrackSAFE and other specific committees as appropriate.

3 Consultation to date

ONRSR and the ARA held face-to-face consultation sessions with operators in Brisbane, Newcastle, Sydney and Adelaide. Due to COVID-19 travel restrictions online sessions were held for operators in other jurisdictions and Association of Tourist and Heritage Railway Australia (ATHRA). These sessions were extremely well attended with over 100 people registering to attend.

The face-to-face sessions provided an opportunity to discuss the proposed changes in detail, and further shape the national rail safety data set. Both the face-to-face and on-line sessions served as entry discussions into the detail contained in this paper enabling areas of concern to be clarified and further explanation provided. An overview of the of the proposed changes are:

	Current	Proposed
Occurrences	 > 21 categories – 127 sub-categories • 20 "Other" categories 	 > 21 categories – 0 sub-categories • 0 "Other" categories
Category A	 Immediately reportable Within 72 hours of occurrence - written report with further information Required to apply for exemption to comply with reporting requirements (e.g over public holiday periods) 	 Immediately reportable Within 14 days of occurrence - additional information No need to apply for exemption to comply with reporting requirements for additional information
Category B	 > Within 72 hours of occurrence Need to apply for exemption to comply with reporting requirements (e.g over public holiday periods) 	 > Within 7 days – Within 14 days of occurrence – additional information – No need to apply for exemption to comply with reporting requirements
Category C	 Not current requirement All occurrences reported at Category A or Category B 	 Annual Provision to provide earlier if preferred
Monthly	> Current requirement	 > Track kilometres only required to be reported when changes > Changed information required for some categories > Passenger journey kilometres & number of interfaces
Ontology reporting	> Not current requirement	 > Data required for cost recovery modelling and national level crossing portal. > Reviewed annually Level crossing data will be able to utilised to auto-fill level crossing occurrences and shared with ALCAM (report once use many times)

It was agreed by the Steering Committee that ONRSR would collect the data agreed under the data set and share this data as agreed. In order to make the collection, validation and sharing of data as simple as possible and in line with the actions in the Action Plan ONRSR's Portal is being enhanced.

4 Existing requirements, challenges and data available to stakeholders

The current legislative reporting requirements for Operators are detailed within this section. The proposed new requirements are detailed in section 5.

Current reporting requirements fall within the following categories:

- > occurrences;
- > monthly returns;
- > safety performance reports.

4.1 Notifiable Occurrences

Under s121 of the *Rail Safety National Law* rail transport operators must notify ONRSR of certain occurrences. Section 57 of the *Rail Safety National Law National Regulations 2012* specifies occurrences that must be reported and associated timeframes – i.e. Category A and Prescribed Occurrences (immediate) and Category B (within 72 hours).

For the 2019/2020 financial year ONRSR was advised of almost 42,000 occurrences of which 382 were required to be reported immediately (Category A).

In addition to the Category A and B occurrences, in the same year ONRSR was advised of over 5,400 occurrences that were not required to be reported to ONRSR.

The current reporting framework is based on top event reporting, meaning rail transport operators must determine what element of the chain of events of an occurrence presented the greatest adverse outcome – in terms of casualties, damage or seriousness - and report that element. This means that some detail of an occurrence can be lost. For example, a single passed at danger/authority exceeded event that results in a collision will be reported as a collision.

Operators are also asked to categorise the occurrence against the classification scheme set out in the *Reporting Requirements for Notifiable Occurrences* document – a 168-page document setting out reporting requirements for the 21 categories and 127 sub-categories.

Occurrence reporting is also typically limited to the information available within 72 hours following the occurrence, when the legislative reporting requirements stop. While there is an opportunity (and capability through the ONRSR Portal) to update the details of an occurrence should new information come to hand (for example following an internal investigation by the operator), this is not mandatory and therefore valuable rail safety data may not be provided and subsequently not able to be shared.

4.2 Monthly returns

Monthly returns provide information on operational and management activities undertaken under the operator's Notice of Accreditation, including:

- length of track over which the rail infrastructure manager (RIM) has effective management and control (track kilometres);
- > number of kilometres travelled by trains, including passenger, freight, and self- propelled infrastructure maintenance vehicles (train kilometres);
- > number of journeys made by passengers on trains (urban and non-urban);
- > number and type of drug and alcohol tests conducted, and the class of rail safety work for which the tests were undertaken; and

> number of employees engaged to undertake rail safety work, as on the last working day of the month.

This data is used to normalise occurrence data, enabling benchmarking of safety performance and more effective monitoring of occurrence trends over time. It is also used to help determine the inherent risk profile of operators and for the calculation of annual fees under the *Rail Safety National Law*.

4.3 Safety Performance Reports

Under s102 and s103 of the *Rail Safety National Law* rail transport operators must give a safety performance report to ONRSR including details of:

- > a description and assessment of the safety performance of the operator's railway operations;
- > comments on any deficiencies, and any irregularities, in the railway operations that may be relevant to the safety of the railway;
- > a description of any safety initiatives in relation to the railway operations undertaken during the reporting period or proposed to be undertaken in the next reporting period;
- > the outcomes of annual review of the safety management system.

It is proposed this requirement is retained with a greater emphasis being placed on the information required in these reports.

4.4 Legislative differences

Currently there are different requirements in relation to immediately reportable occurrences under the *Rail Safety National Law* across the States and Territories. Prescribed incidents which are required to be reported immediately and are subject to drug and alcohol testing requirements apply in Queensland, Victoria, Australian Capital Territory, Tasmania, South Australia and Northern Territory.

Legislative requirements for prescribed incidents in New South Wales were unchanged when introduced into the *Rail Safety National Law* in 2019 therefore NSW requirements differ from those required under the *Rail Safety National Law*.

As Western Australia operates under mirror law and the legislative amendments relating to the requirement for immediately reporting prescribed incidents and post incident drug and alcohol testing have not been passed, these requirements do not apply in Western Australia.

4.5 <u>Reporting back to stakeholders by ONRSR</u>

ONRSR currently provides rail safety data to stakeholders via its website for key occurrences updated every six months, and through its published Annual Report and Annual Rail Safety Report.

In addition to this publicly available data, ONRSR provides reports to level crossing committees, RISSB, TrackSafe, transport agencies as well as a number of other reports as requested by stakeholders.

While the data provided via these updates is useful, it is limited to the extent that it can be exported and tailored for specific uses by industry, especially for benchmarking or to inform risk assessments.

5 Proposed data reporting requirements

Through the work of the Steering Committee and feedback raised during consultation sessions the following is a description of the proposed approach to:

- > occurrence data;
- > monthly data;
- > operational characteristics (ontology) data;
- > safety performance reports.

In line with the National Rail Safety Data Strategy Action Plan ONRSR will be upgrading its Portal including to allow previous information provided by the operator to be available when they log in to update this information as well as providing drop-down menus to help make reporting much easier and more streamlined.

5.1 Occurrence data

Following a review of the current reporting requirements, the Steering Committee have proposed a set of occurrence reporting requirements that vary in accordance with severity. This includes recommendations to remove some current reporting requirements and to make changes to the reporting timeframes.

Currently there are 21 occurrence reporting categories and 127 sub-categories. The proposed changes still include 21 categories but no sub-categories.

5.1.1 Proposed occurrence types under new data set

- 1. Collision
- 2. Derailment
- 3. Runaway
- 4. Proceed Authority Exceeded
- 5. Passenger Door Occurrence
- 6. Wrongside Failure
- 7. Fire, explosion or dangerous goods spill
- 8. Incident directly threatening safety
- 9. Public interest or concern
- 10. Fatality or Serious injury
- 11. Safeworking breach rule/procedure breach (train operations)

- 12. Safeworking breach rule/procedure breach (track working)
- 13. Rolling stock irregularity
- 14. Load irregularity
- 15. Level crossing irregularity
- 16. Track irregularity
- 17. Civil infrastructure irregularity
- 18. Electrical traction infrastructure irregularity
- 19. Slip, trip or fall train operations
- 20. Near Hit
- 21. Alcohol or drug irregularity

Consultation question: Occurrence types

1. Do you consider that the proposed new occurrence types are appropriate? If not, please provide further information and alternative options.

5.1.2 Occurrence data no longer required to be reported to ONRSR

In evaluating required data and current reportable data, the Steering Committee concluded that the limited value gained from this information is not commensurate with the effort required to report an occurrence and has therefore proposed that the following reporting requirements be removed under the new arrangements. However, if any of these are causal factors to a reportable occurrence they will be identified through the reporting of the occurrence.

- 1. Collisions with animals
- 2. Slip, trip or fall
 - on platform/concourse
 - on/from escalator/lift
 - on/from stairs/ramp
 - from structure
 - other

- 3. Railway network security
- Alleged assault
- Vandalism
- Graffiti
- Trespass
- 4. Work scheduling practice / procedure breach
- 5. All "other" sub-categories

Consultation questions: Occurrence data no longer required to be reported to ONRSR

- 2. Are any of the occurrence types identified as potentially being removed from reporting needed by your organisation on a national basis for rail safety analysis?
- 3. Are there any further occurrence types that your organisation believes could be removed from reporting requirements that will not impact on rail safety analysis?

5.1.3 Reporting timeframes

The Steering Committee also considered occurrence reporting timeframes and have proposed the following three reporting timeframes be introduced with the severity, or potential severity of the occurrence determining the required notification timeframe.

Category A - immediately*

The requirement to notify ONRSR immediately of a serious occurrence will continue. This allows ONRSR to determine what action is required to be taken immediately and also to advise the Australian Transport Safety Bureau (ATSB) and other stakeholders.

Examples of category A occurrences are:

- A collision between a train and:
 - another train (not including shunting operations)
 - rolling stock (not including shunting operations)
 - a rail safety worker
 - person that results in a serious injury or fatality
 - plant/machinery associated with a rail worksite
 - trackside (rail) infrastructure (eg platform, buffer stop)
 - road vehicle at a level crossing
- > A derailment that has:
 - occurred on a running line;
 - resulted in multiple rolling stock units being derailed
 - threatened the safety of a person.

A full list of proposed Category A occurrences is at Attachment B.

Category B – within seven days*

The reporting timeframe for a category B occurrence is proposed to increase from within 72 hours to seven days for the initial notification. This includes occurrences that are considered significant but do not require immediate action by ONRSR or other stakeholders.

Examples of category B occurrences are:

> Runaway

A runaway in a yard.

Excludes any short uncontrolled movement (eg <2 rolling stock unit lengths) of a train or rolling stock that was arrested through immediate action or the presence of other rolling stock

> Proceed Authority Exceeded

A train has exceeded a limit of a proceed authority on or onto a running line due to:

- Misjudged application of train braking with no impact to safety (no conflict point created); or
- Signal being restored due to infrastructure or network control failure/error; or
- Signal being restored due to an emergency response

Excludes light rail vehicle/tram exceeding a limit authority when travelling under line of sight method of safeworking on a light rail corridor, except where otherwise agreed with the Regulator.

A full list of proposed Category B occurrences is at Attachment C.

* Following the initial reporting of an occurrence (Category A or B) a total of 14 days from the date of the occurrence will be allowed for the remainder (if any) of the required details (detailed under 5.1.4) to be provided to ONRSR. If further information becomes available after 14 days (predominately following an investigation) this will be required to be entered through the ONRSR Portal.

There will be no category of prescribed occurrences however mandatory drug and alcohol testing will be required following certain Category A occurrences.

Category C – reported on an annual basis

This is a new category and seeks to include those occurrences that are still important to rail safety data collation typically from a trending perspective rather than event-byevent.

Category C occurrences will be required to be reported for an annual period by a specified reporting date. However, if operators wish to report more frequently this option will be available.

Examples of Category C occurrences are:

- > Proceed Authority Exceeded
 - A train has exceeded a limit of a proceed authority:
 - Within a yard or siding; or
 - On a light rail corridor and has not been reported as a Category A or B occurrence.

During consultation there was some concern raised as to whether some of this data should be reported more frequently. It is not proposed to amend the current provisions of the RSNL which allow ONRSR to require more regular reporting under certain circumstances.

A full list of proposed Category C occurrences is at Attachment D.

Consultation questions: Reporting timeframes

4. Do you consider the proposed new reporting timeframes of immediate, within seven days (with each open for 14 days) and annual are appropriate? If not, please provide details as to why not.

5.1.4 Reporting requirements – information required

General information will be required for all categories which will include the following:

- > Operator's unique identifier
- > Date, time, location
- > Operator(s) involved
- > Line type
- > Line status
- > Train type
- > Train identifier
- > Train operations

With more specific information required depending on the occurrence type. For example, for a collision the following information would be required:

- > The object collided with person/vehicle/rolling stock etc
- > Consequence to railway operations
- > Consequence to person
- > Likely cause

A full list of the information required for each occurrence type is at Attachment E.

Consultation questions: Occurrence data

- 5. Do you consider the proposed data to be collected for each occurrence type appropriate and useful? If not, please provide further details?
- 6. Would your organisation have any difficulties in providing the required information within the specified timeframes?
- 7. Is there other information that would be of value if provided? If so, please list.

Full details of the proposed new occurrences types are provided at Attachment F.

5.2 Monthly data

As noted above this information is used for a variety of purposes including to monitor trends and safety implications, as an indication of the size of industry and the volume of rail activity and as a tool for normalising statistics. It is also currently an input into the calculation of annual accreditation fees.

The importance of this data to provide effective normalisation of data in the proposed rail safety database remains. However, through consultation to date the question has been posed whether this needs to be provided on a monthly basis or another timeframe more appropriate. The proposed monthly reporting data requirements contains the same three broad categories as currently required with some additional information requirements to support the proposed new cost recovery model.

Where this data does not change greatly month-by-month the Portal will make the update an easy process.

5.2.1 Drug and alcohol testing

It is not proposed to make any changes to the reporting requirements of drug and alcohol (D&A) testing.

5.2.2 Number of rail safety workers

When current requirements to report a monthly figure for rail safety workers were introduced it was agreed that the number would only include employees working directly with the organisation and not rail safety workers working under contract either directly with the organisation or through a third-party provider under the organisation's accreditation. The rail workforce has changed substantially over the past few years and this figure is no longer a true representation of the number of rail safety workers and therefore is not accurate to allow analysis. Following discussions at the Steering Committee and during consultation it is proposed, at a minimum, that reporting of rail safety workers includes all contractors working under an organisation's accreditation not just employees.

This data is an input into ONRSR D&A testing program and will continue to be required. The Strategy provides an opportunity for the number of rail safety workers to be broken down further into the same sub-categories of workers as for D&A testing. This would allow ONRSR to provide information on the percentage of each rail safety worker type that is tested. Stakeholder views are sought on whether this level of detail, beyond direct employee and contractor, and available nationally, would be useful for internal risk profiling or benchmarking purposes.

5.2.3 Train kilometres (including maintenance train kms)

Train kilometres are currently required to be reported by RSOs and is an important normalising factor used across a range of operator risk profile and occurrence analysis. Passenger and freight train kilometres are also used to calculate annual accreditation fees. There are no proposed changes to the requirement for RSO's, however it is proposed that RIMs report passenger and freight train kilometres travelled on their network.

5.2.4 Track Managed

This is currently reported on a monthly basis however it is proposed to no longer require this on a monthly basis but to include it in the ontology data reporting requirements instead. This means any changes to the length of track managed once initially captured would only need to be reported as they occur and validated at least annually.

5.2.5 Passenger train operations

It is not proposed to make any changes to the reporting requirements of passenger train kilometres.

5.2.6 Passenger journey kilometres

It is proposed to include a new data reporting requirement for rolling stock operators (RSOs) to support the proposed cost recovery model. The new requirement is passenger journey kilometres - a passenger journey kilometre represents the transport of one passenger by rail over one kilometre. The measure of passenger journey kilometres is recognised internationally as a contemporary measure for passenger risk exposure and strongly supported for inclusion in Australian data. During the consultation sessions for both cost recovery and the data strategy, several stakeholders raised concerns in relation to being able to provide this data.

5.2.7 Interfaces

It is proposed to include a new data reporting requirement relating to interfaces for both RSOs and RIMs to support the proposed cost recovery model as follows:

- RSOs the number of different networks, managed by different RIM on which the RSO operates during the month
- > RIM the number of RSOs on their network during the month

Full details of the proposed monthly reporting requirements are provided at Attachment G.

Consultation questions: monthly data

- 8. Would your organisation have issues in reporting monthly the total number of employees and rail safety workers working under contract arrangements as at the last operating day of the month?
- 9. Would your organisation see value in the number of rail safety workers being available by rail safety worker type?
- 10. Would your organisation be able to comply with the requirements to report total passenger journey kilometres? If not, please provide details and any alternative suggestions for data capture that would provide a measure for passenger risk exposure.

5.3 Ontology data

Ontology data is the summary term for data used to identify an operator's profile which describes the nature and characteristics of their operations.

Much of this data is already available to ONRSR, however, it is not captured in a systemic way and therefore is not able to be used to support information flowing back to industry or reduce the need for industry to provide it with each occurrence. For example, when a location of an incident is provided, ontology data will allow other information such as level crossing control type, line section and line type to be automatically populated.

The data set for ontology data is, at this stage, focusing on data required to support the development and sharing of information with industry through the National Level Crossing Portal which ONRSR is developing on behalf of the National Level Crossing Safety Committee and the cost recovery model. Currently much of this information is sourced from Australian Level Crossing Assessment Model (ALCAM) which often does not align to the current information provided by operators at the time of an occurrence. An opportunity exists for level crossing ontology data to be managed, as proposed by this strategy, as the single source of truth and for this data to be provided to ALCAM ensuring a single set of accurate data is available to all stakeholders.

There is potential for expansion of the ontology dataset in the future to assist with benchmarking and reporting automation purposes. These opportunities will be examined on a case-by-case basis post implementation of this strategy.

Where this information is already held by ONRSR it will be pre-populated onto the Portal and will require operators to validate the data and provide missing information. Validation of this data will be required annually and any changes during the year are required to be updated at the time of the change.

Full details of the proposed ontology data are provided at Attachment H.

Consultation question: ontology data

11. Are there any impediments in providing the identified ontology data? If so, please advise what these are.

5.4 Safety Performance Report

During development of the data requirements under the Strategy consideration has been given by the Steering Committee as to the value of the Safety Performance Reports, which was discussed during initial consultation. It is considered that under the proposed new arrangements these reports will be a valuable source of information both for ONRSR and industry, particularly with the introduction of Category C reporting and the benefits of industry being able to "tell their story" for the year.

An operator's Safety Performance Report should include an overview of their operations for the past 12 months, description of key risks and how they have been managed, outcome from the review of the safety management system and their safety performance for the year. These reports also provide an opportunity to highlight safety initiatives being undertaken or planned and to identify future challenges.

With the introduction of Category C occurrence reporting, the Safety Performance Report becomes the logical place to provide the operator with the opportunity to describe the trends in this data. ONRSR will be expecting operators to report and describe how the associated safety issues have been/are being addressed and managed.

An example of a Safety Performance Report is provided at Attachment I.

Safety Performance Reports are required annually and will align with the annual reporting of Category C occurrences.

Consultation questions: Safety Performance Report

12. Does the example at Attachment I provide sufficient guidance on ONRSR's expectations on the level of information to be included in a safety performance report? Please provide details of any further information you would seek from ONRSR to provide sufficient guidance.

6 System changes

Achieving a consistent, accurate, complete, valid and timely national rail safety data set that is readily available to stakeholders when making decisions relating to rail safety will require investment in current reporting systems and associated business processes by both ONRSR and rail transport operators.

Following consideration of the feedback received during the consultation and finalisation of the national rail safety data set, documentation detailing data requirements of the national rail safety data set will be provided to operators to enable them to evaluate any system changes required by their organisation. It is proposed to have this documentation available by mid-2021, being 12 months before the changes in reporting requirements are implemented.

7 Access to rail safety data set

The Strategy proposes a significant change to the way rail safety data is reported, collected and accessed by stakeholders.

As identified in the action plan, ONRSR will work with the ARA and the Steering Committee to identify stakeholder requirements in relation to improving accessibility to the national rail safety data set.

The ONRSR Portal is being enhanced to support the implementation of the Data Strategy which will include the ability to share de-identified data back to operators and governments and other primary stakeholders.

8 Attachments

Attachment A – National Rail Safety Data Strategy and Action Plan

- Attachment B Category A Proposed occurrence data set and reporting requirements
- Attachment C Category B Proposed occurrence data set and reporting requirements
- Attachment D Category C Proposed occurrence data set and reporting requirements
- Attachment E Information required for each proposed occurrence type
- Attachment F Combined proposed occurrence data set and reporting requirements
- Attachment G Monthly reporting
- Attachment H Ontology reporting
- Attachment I Safety Performance Report example



National Rail Safety Data Strategy 2018 - 2022





BACKGROUND

The first national strategy for rail safety data was released in October 2008 by the National Transport Commission (NTC) and contained actions under three strategic themes to address identified issues to improve quality and availability of rail safety data. The rail industry has matured significantly since that time including regulatory responsibility now being undertaken nationally by the Office of the National Rail Safety Regulator (ONRSR).

All stakeholders and in particular ONRSR, the Australasian Railway Association (ARA), Rail Industry Safety and Standards Board (RISSB), Australian Transport Safety Bureau (ATSB) and rail transport operators continue to recognise the importance of consistent, quality and accurate data when making decisions relating to rail safety. This new strategy is based on the themes of the original strategy which remain applicable to continuing to improve data quality and availability.

VISION

To have consistent, quality and accurate national rail safety data that is readily available to stakeholders when making decisions relating to rail safety.

PURPOSE

Quality data is essential for making decisions and managing risks to rail safety. While the responsibility of the primary stakeholders identified in this strategy vary significantly they all have a common goal of improving rail safety in Australia.

ONRSR, ARA, RISSB and industry have worked together to develop this strategy to provide a mechanism for identifying and focusing on the safety data needs of key stakeholders, facilitating improvements in the quality, timeliness, sharing and use of data, without unnecessary regulatory burden.

CURRENT ISSUES

While progress has been made since the NTC's strategy of 2008 - 2010, a number of issues remain as the need for high quality, timely data increases.

As the rail industry matures, data analytic tools advance and IT platforms are enhanced, the opportunity arises to review the current approach and re-shape it to meet the requirements for risk-based regulation and good safety decision making. The following areas of concern have been raised:

- Whether the right data is being reported for the right purpose and collected by the right organisation;
- = Whether the data is being reported and collected in an appropriate timeframe;
- Potential duplication of data being reported and collected and whether this can be streamlined;
- The quality of data;
- = Efficiency of the reporting and collection of data and whether this be improved;
- = Sharing of and access to national data to better meet the needs of stakeholders;
- Reporting burden as a result of uniform reporting requirements irrespective of type or scope of operations;
- Legal requirements/constraints for the collection and sharing of data between stakeholders.

OBJECTIVES

To ensure that rail safety data:

- = Meets the identified needs of governments, industry and other primary stakeholders;
- Supports the data needs of secondary stakeholders;
- Supports good decision-making about rail safety;
- Guides actions to improve rail safety;
- = Provides timely, accurate and relevant information about rail safety performance;
- = Reduces regulatory burden on industry.

STAKEHOLDERS

Primary

- = Australasian Railway Association (ARA)
- = Australian Transport Safety Bureau (ATSB)
- = Governments and Ministers (state and federal)
- = Office of the National Rail Safety Regulator = National and jurisdiction level crossing (ONRSR)
- = Rail Transport Operators (RTO)
- = Rail Industry Safety and Standards Board (RISSB) as owner of the Australian Rail Risk Model (ARRM)

Secondary

- = Australasian Centre of Rail Innovation (ACRI)
- Australian Level Crossing Assessment Model (ALCAM) National Committee
- Association of Tourist and Heritage Rail Australia (ATHRA)
- committee
- = TrackSAFE
- Other industry specific committees as appropriate

STRATEGIC THEMES

The strategy has three themes which contain actions to address the identified problems and to improve rail safety data:

1. BETTER FOCUSED NATIONAL DATA

The national data ONRSR currently holds and collects is a combination of legislative requirements under the *Rail Safety National Law* (RSNL) along with data previously collected by jurisdictional regulators.

The occurrence reporting requirements have been slightly refined by ONRSR during the past few years, including publication of the Notifiable Occurrence Reporting Requirements document in 2017; however a full review of all reporting requirements (including occurrences) has not been undertaken since ONRSR's inception.

RISSB has developed and released the ARRM, the population of which relies on rail safety data. Data is also required to populate the ALCAM as well as other reports and analysis undertaken by other committees.

As we move forward into a more challenging time of risk-based operations and regulation, where systems and expectations are changing rapidly, it is essential to have better focused national data available. Technology is developing rapidly and will provide greater capacity and options to support better focused national data and the sharing of this data to ensure an accurate understanding of the current, short and long term trends in rail safety in Australia. Better focused national safety data will support good rail safety decision making.

In order to achieve better focused national data, the following actions will be undertaken to ascertain stakeholder data needs, including **what** data is need **when**.

Action 1.1 Determine legislative reporting requirements of ONRSR.

The collection of relevant data by ONRSR will continue to be required to maintain oversight of rail safety performance. ONRSR to identify its requirements, including timing, in line with its risk-based approach to regulation.

- Action 1.2 Specify the national data that is required to meet the needs of RTOs, the ATSB, Governments and Ministers (state and federal) and RISSB. *ATSB, industry and RISSB representatives will identify their data requirements, including timing, and develop a recommended data set as the high level national data set.*
- Action 1.3 Specify who is responsible for reporting collecting and managing the agreed data set (in part or as a whole). Once all data requirements are identified, agreement is to be reached on who will collect and manage the data.

2. BETTER DATA QUALITY

Improving the quality and timeliness of data will ensure its relevance and usefulness. The value of collecting data is limited if the quality, or perception of the quality, is that the data is unreliable, old or provides little value in reflecting the picture of rail safety.

With the commencement of ONRSR, standard reporting of notifiable occurrences and other data requirements has been improving. ONRSR provided clarification for industry on the data requirements through the publication of Reporting Requirements for Notifiable Occurrences in 2017; however the quality, timeliness and efficiency in the collection of data by ONRSR still requires enhancing to provide better quality national data to all stakeholders and alignment with other data being collected.

In order to achieve better data quality, the following actions will be undertaken to ascertain **how** data is reported, captured and shared.

Action 2.1 Reporting requirements of ONRSR to be tailored as appropriate for specific sectors of the rail industry. Recognising the different risk profiles and operating environments of the rail industry, one size fits all reporting is to be challenged and aligned to the data required to enable ONRSR to be an effective risk-based regulator. With the finalisation of actions under theme 1, ONRSR will provide supporting documentation and systems to support high quality data being provided.

Action 2.2 Identification of how richer information (e.g. chain of events, contributing factors and other relevant information) can be efficiently reported, captured and shared amongst stakeholders.

A broader approach than just top event occurrence reporting is required to be undertaken as part of this strategy. ONRSR, industry and other stakeholders will explore the most effective way to report, capture and share data between themselves and others in relation to chain of events, contributing factors and other relevant information.

Action 2.3 Specify the means of collection and validation of the national data sets required by stakeholders.

The means of collection and validation of different national data sets required by different stakeholders is to be appropriate ensuring enough time is provided to support the quality of the data being provided.

Action 2.4 Revise the RSNL to reflect the outcomes from actions as required. As a result of the outcomes of work undertaken under this strategy, ONRSR will progress through the Transport and Infrastructure Council required changes to RSNL and Regulations.

3. BETTER CONSISTENCY AND COMPARABILITY

The effective use of the national data set to drive improvements to rail safety decision making will only be possible through a data set that delivers consistency and comparability of data collected from multiple sources.

In order to achieve better consistency and comparability of data, the following actions will be undertaken to determine **how** technology can be utilised to improve consistency and availability for stakeholders.

Action 3.1 Improve consistent interpretation and application of rail safety data.

How rail safety data is classified, recorded and reported also affects the quality of the data. With new technologies available to assist in this area an essential part of this strategy is to identify relevant technologies and develop training and education material to assist operators in fostering an enhanced reporting culture that provides accurate data to ONRSR.

Action 3.2 Better rail safety data available to stakeholders.

A lot of rail safety data is collected by many different stakeholders but the efficient and effective sharing of this data is not currently meeting the needs of stakeholders. There are many reasons for this which will be identified and addressed by this strategy.

Action 3.3 Agree technical solutions to assist in the delivery of the outcomes of this strategy.

Technology has moved past the need for a single consolidated database. It will be necessary to identify where relevant data should be held and how this will be made available.

IMPLEMENTATION

The National Rail Safety Data Strategy will be supported by an action plan, developed by the Steering Committee, which will contain activities, responsibilities and timeframes required to achieve the strategic themes.

Once outcomes are agreed, consideration will also be given to a timeframe for implementation of the changes including any legislative changes that may be required.



National Rail Safety Data Strategy 2018 – 2022

Action Plan





Ref	Action/Project	Lead	Due date	Dependent on
1	Better focused national data			
1.1	Determine legislative reporting requirements of ONRSR.			
Α	 Review current occurrence reporting requirements 			
	 Identify operator network reporting requirements 	ONRSR		
	 Identify annual safety reporting requirements 			
В	 Identify industry sectors for tailored reporting 	ONRSR		
С	 ONRSR to socialise with stakeholders 	ONRSR	Nov-18	1.1 A & B
1.2	Specify the national data that is required to meet the needs of RTOs, the ATSB, governments and Ministers (state and federal) and RISSB.			
Α	 Identify national data requirements for RTOs 	ARA	Nov-18	
В	 Identify national data requirements for the ATSB 	ONRSR	Nov-18	
С	 Identify national data requirements for RISSB / ARRM 	RISSB	Nov-18	
D	 Identify national data requirements for ALCAM 	ONRSR	Nov-18	
E	 Identify national data requirements for ATHRA 	ONRSR	Nov-18	
F	 Identify national data requirements for Ministers / government 	ONRSR	Nov-18	
G	 Map & overlay information; identify critical / key requirements and consult on identified national data requirements through associated bodies 	ONRSR & ARA	Mar-19	1.1 B; 1.2 A - F
1.3	Specify who is responsible for reporting, collecting and managing the agreed data set (in part or as a whole).			
A	 Identify key stakeholders & recommendations 	ONRSR & ARA	Mar-19	1.2 G
В	 Socialisation with key stakeholders 	ONRSR & ARA	Jun-19	1.3 A

Ref	Action/Project	Lead	Due date	Dependent on
2	Better data quality			
2.1	Reporting requirements of ONRSR to be tailored as appropriate for specific sectors of the rail industry.			
А	 Identify detailed / tailored reporting requirements by sector 	ONRSR	Mar-19	1.1, 1.2
В	 Develop supporting documentation/guidance 	ONRSR	Dec-21	3.1 C
С	Identify & prepare system changes	ONRSR & ARA	Jun-21	3.1 C
2.2	Identification of how richer information (eg chain of events, contributing factors, lessons learnt and other relevant information) can be efficiently reported, captured and shared amongst stakeholders.			
A	 Explore additional information requirements that can enhance national data set 	ONRSR & ARA	Dec-19	1.2 G
В	 Explore information sharing mechanisms and/or opportunities 	ONRSR & ARA	Dec-19	2.2 A
С	 Identification of barriers to sharing information 	ONRSR & ARA	Dec-19	2.2 A & B
2.3	Specify the means of collection and validation of the national data sets required by stakeholders.			
А	 Identification of who is collecting & governance model for data sets 	ONRSR & ARA	Dec-19	1.3
В	 Explore the technology opportunities for collection of data 	ONRSR & RISSB	Jun-20	2.3 A
С	 Explore the technology opportunities for the validation of data 	ONRSR & RISSB	Jun-20	2.3 A
D	Identification of legal requirements		Jun-20	2.3 A
2.4	Revise the Rail Safety National Law to reflect the outcomes from actions as required			
Α	 Ministerial approval of required changes to RSNL 	ONRSR	Nov-21	1.3

Ref	Action/Project	Lead	Due date	Dependent on
3	Better consistency and comparability			
3.1	Improve consistent interpretation and application of rail safety data.			
A	 Identification of education / training support required by stakeholders to implement the new frameworks 	ONRSR & ARA	Jul-21	1.3, 2.3
В	Identify / develop framework for operator network infrastructure characteristics	ONRSR & ARA	Nov-18	1.3
С	 Explore the technology opportunities for data consistency 	ONRSR & RISSB	Jun-20	2.3 A
D	= Delivery of education & training package	ONRSR & ARA	Jan-22	3.1 A
3.2	Better rail safety data available to stakeholders.			
A	Identify what data is shared, who & frequency	ONRSR & ARA	Jun-19	1.3
В	 Identify barriers of sharing data 	ONRSR & ARA	Jun-19	2.3 D
С	= Explore appropriate technology	ONRSR & RISSB	Jun-20	3.2 C
3.3	Agree technical solutions to assist in the delivery of the outcomes of this strategy.			
A	Identify & select technologies to support the outcomes of the strategy	ONRSR & RISSB	Dec-20	3.1 C, 3.2 C

			CATEGORY A IMMEDIATELY REPORTABLE OCCURRENCE
			Immediate report to the Regulator providing:
	Manı	ner of Reporting	> Date and Time; Location; Operator(s) involved
			> Description of the occurrence, which includes the circumstances, extent of damage/disruption, known events prior to and as a result of the
			occurrence.
			+ National Occurrence Data Set Details completed within 14 days of the occurrence.
		Occurrence Type	
			A collision between a train and:
			> another train (not including shunting operations); or
			> rolling stock (not including shunting operations); or
		Collision	> a rail safety worker; or
		compion	> a person that results in a serious injury or fatality; or
	1	including level	> plant/machinery associated with a rail worksite; or
		crossing collisions	(e.g. platform; buffer stop or overhead); or
			> a road vehicle at a level crossing.
			A derailment that has:
	2	Dorailmont	> occurred on a running line; or
	2	Deraiment	> resulted in multiple rolling stock units derailed; or
			> threatened the salety of a person.
	3	Runaway	A runaway of a train or rolling stock on or onto a running line.
ENCES			A train has exceeded a limit of a proceed authority on or onto a running line due to:
			> driver completely missed (error); or
		Proceed Authority	> driver misjudged but has entered into an occupied
	4	Exceeded	section or in conflict with another train movement.
			Frederic State and a birth from a constant of a state in the state of
			excludes light run venicle/trum exceeding a limit of authomy when travening with line of sight on a light run cornaor, except where otherwise pareed with the Regulator
IX I			A rolling stock passenger door has failed or has been operated in a way that has resulted in a passengers being:
			> exposed to an open door while a train is in motion; or
			> caught in a door and exposed to a risk of harm while a train is in motion.
	5	Passenger Door	
		Occurrence	A platform screen door has failed or has been operated in a way that has resulted in a person being:
			> exposed to an open door with a train in motion; or being caught in a door and exposed to a risk of harm from a moving train.
3			
CAN			A safety critical system has failed, or is suspected to have failed, in an unsafe way (not in accordance with its design), including:
			> active level crossings;
ופ	6	Wrongside Failure	> signalling systems;
			> overhead traction systems, or
Ī			Note that a fire, explosion or dangerious goods spill that directly threatens the safety of people or railway operations is reportable as a Category
	7	Fire, Explosion or	A Incident Directly Threatening Safety occurrence.
	-	Dangerous Goods Spill	
ŀ			Any incident or event (not otherwise defined as a Category A) that results in a direct threat to the safety of people or railway operations, for
			example:
		Incident Directly	> loss of load from rolling stock; or
	8	Threatening Safety	> track worker safety occurrences (including near hit of rail safety worker); or
	Ů		> incorrect proceed authority/instruction given by network controller or rail safety worker; or
			incorrect work authority or access given to a rail safety worker (placing them in danger); or
			> sabotage or cyber security event; or > an event resulting in an evacuation to protect public safety
F		Dublic to the	Any incident that is likely to generate immediate or intense public interest or concern.
	9	Concern	
-			Any fatality or serious injury to a person as a result from or associated with railway operations (including passenger - train/platform interface)
		Fatality or Serious	
	10	Injury	Excludes fatalities or serious injuries resulting from health related conditions or slip, trips and falls on railway premises not directly associated
		(not captured above)	with railway operations.

Manner of Reporting Occurrence Type Manner of Reporting > Date and Time; Location; Operator(s) involved > Date and Time; Location; Operator(s) involved > Description of the occurrence, which includes the circumstances, extent of damage/disruption, known events prior to and occurrence. + National Occurrence Data Set Details completed within 14 days of the occurrence. + National Occurrence Data Set Details completed within 14 days of the occurrence. * Safeworking - Network Rule or Procedure Breach (Train Operations)	as a result of the
Manner of Reporting Immediate report to the Regulator providing: > Date and Time; Location; Operator(s) involved > Description of the occurrence, which includes the circumstances, extent of damage/disruption, known events prior to and occurrence. • National Occurrence Type Occurrence Type Note: occurrences resulting in a wrong-side failure or a direct threat to safety are reportable as Category A occurrences. Safeworking - Network Rule or Procedure Breach (Train Operations)	d as a result of the
Occurrence Type A National Occurrence Data Set Details completed within 14 days of the occurrence. Occurrence Type Note: occurrences resulting in a wrong-side failure or a direct threat to safety are reportable as Category A occurrences. In Safeworking - Network Rule or Procedure Breach (Train Operations) Note: occurrences resulting in a wrong-side failure or a direct threat to safety are reportable as Category A occurrences.	
11 Safeworking - Network Note: occurrences resulting in a wrong-side failure or a direct threat to safety are reportable as Category A occurrences. 11 Safeworking - Network Rule or Procedure Breach (Train Operations) Item (Train Operations)	
12 Safeworking - Network Note: occurrences resulting in a wrong-side failure or a direct threat to safety are reportable as Category A occurrences. 12 Safeworking - Network Rule or Procedure Breach (Track Working)	
13 Rolling Stock	
14 Load Irregularity Note: loss of load, including dangerous goods spills, that result in a direct threat to safety are reportable as Category A occur	rrences.
Level Crossing Irregularity Note: Wrongside failures of level crossing protection devices (e.g. a train passes through an active crossing with no activation Category A occurrence.	n) are reportable as a
16 Track Irregularity	
Signal Civil Infrastructure Note: A civil infrastructure irregularity or failure that presents a direct threat to safety of people or will attract public interest reportable as a Category A occurrence.	t or concern will be
Electrical Traction 18 Infrastructure Irregularity	
19 Slip, Trip or Fall - Train Operations Serious injuries and fatalities associated with railway operations are reportable as a Category A occurrence.	
20 Near Hit Note, near hits with track workers are reportable as a Category A Incident Directly Threatening Safety occurrence.	

21	Alcohol or Drugs	Note: ONRSR conducted testing may be triggered from immediately reportable occurrences. Operator post-incident testing is to be reported as
	Irregularity	part of the specific occurrence reporting requirements.

Definitions

Level Crossing	An area where a road and a railway (other than a tramway) meet at substantially the same level, whether or not there is a level crossing sign on the road at all or any of the entrances to the area OR an area where a road and a tramway meet at substantially the same level and that has a level crossing sign on the road at each entrance to the area.
Running Line	A railway line (other than within a yard or siding) that is used for the through movement trains between locations, includes passing loops or other track systems that enable the through movement of trains (e.g. faciliate passing or crossing).
Shunting	Movement of trains or rail vehicles for the purpose of marshalling or altering their consist.
Train	Two or more units of rolling stock coupled together, at least one of which is a locomotive or other self propelled unit (e.g. an EMU, DMU, tram) OR a unit of rolling stock that is a locomotive or other self-propelled unit (e.g. light engine, single tram or other light rail vehicle, track machine or road rail vehicle that is on track).
Yard or siding	A track, or a system of tracks, primarily used for the stabling, shunting, marshalling, repair, maintenance, loading or unloading of rolling stock, not including systems of tracks associated with passenger railway stations.

			CATEGORY B REPORTABLE OCCURRENCE
Manner of Reporting Occurrence Type		er of Reporting Occurrence Type	Interim report to the Regulator within 7 days of the occurrence providing: > Date and Time; Location; Operator(s) involved > Description of the occurrence, which includes the circumstances, extent of damage/disruption, known events prior to and as a result of the occurrence. + National Occurrence Data Set Details completed within 14 days of the occurrence.
CONSEQUENCE OCCURRENCES		Collision	
	1	including level crossing collisions	
	2	Derailment	All other derailments that are not a Category A derailment. Excludes events that result in wheel lifts (e.g. during loading, unloading or plant operation) where the wheel returns to the track.
	3	Runaway	A runaway in a yard. Excludes any short uncontrolled movement (e.g. < 2 rolling stock unit lengths) of a train or rolling stock that was arrested through immediate action or the presence of other rolling stock.
	4	Proceed Authority Exceeded	A train has exceeded a limit of a proceed authority on or onto a running line due to: – Misjudged application of train braking with no impact to safety (no conflict point created); or – Signal being restored due to infrastructure or network control failure/error; or – Signal being restored due to an emergency response Excludes light rail vehicle/tram exceeding a limit authority when travelling under line of sight method of safeworking on a light rail corridor, except where otherwise agreed with the Regulator. Note: a near hit on a light rail corridor resulting from exceeding a limit of authority is reportable as a Category B near hit.
	5	Passenger Door Occurrence	
NIFICAN	6	Wrongside Failure	
SIGN	7	Fire, Explosion or Dangerous Goods Spill	An fire, explosion or dangerious goods spill event that: > caused damage to infrastructure, rolling stock or environment that resulted in service termination or closure of stations or other rail premises; or > presented, or continues to present, a risk to safety of people (but not an immediate or direct threat).
	8	Incident Directly Threatening Safety	
	9	Public Interest or Concern	
	10	Fatality or Serious Injury (not captured above)	

			CATEGORY B REPORTABLE OCCURRENCE
Manner of Reporting			Interim report to the Regulator within 7 days of the occurrence providing: > Date and Time; Location; Operator(s) involved > Description of the occurrence, which includes the circumstances, extent of damage/disruption, known events prior to and as a result of the occurrence.
Occurrence Type		Occurrence Type	+ National Occurrence Data Set Details completed within 14 days of the occurrence.
	11	Safeworking - Network Rule or Procedure Breach (Train Operations)	Failure, breach or omission of a system, process or procedure that had the potential to threaten the safety of people or railway operations, for example: > signals incorrectly set; or > train moves over points incorrectly set.
	12	Safeworking - Network Rule or Procedure Breach (Track Working)	Failure, breach or omission of a system, process or procedure that had the potential to threaten the safety of people or railway operations, for example: > incorrect location; > working without authority; or > incorrectly commencing or cancelling an authority.
ULARITIES	13	Rolling Stock Irregularity	Significant failure of a safety critical item on rolling stock during operations that resulted in degraded operations or threatened the safety of people or railway operations, specifically: > rolling stock structural (frame) failure; or > wheel/axle failures; or > braking system failures (inability to apply brakes or where braking performance of the train is compromised). Excludes rolling stock irregularities faults that are detected and addressed through routine inspection, servicing and maintenance.
IRREG	14	Load Irregularity	
DPERATION/	15	Level Crossing Irregularity	
RAIL SAFETY/0	16	Track Irregularity	Track irregularities that are detected outside of track maintenance or inspection activity that exceed operational limits, specifically: > broken rail > misaligned track (buckles) > spread track > points irregularity (damage presenting a threat to train operations)
Ī	17	Civil Infrastructure Irregularity	
	18	Electrical Traction Infrastructure Irregularity	
	19	Slip, Trip or Fall - Train Operations	
	20	Near Hit	Interaction between a train and a person, road vehicle or mobile plant that had the potential to result in a collision. Near hit - incident where a train driver takes emergency action, or would have taken emergency action if there was time, to avoid a collision. Excludes a near hit between light rail vehicle/tram with a pedestrian or road vehicle that occurs in a shared use area (e.g. not at a level crossing or rail only corridor) during normal operations (e.g. not associated with a safe working breach or exceeding a proceed authority).
	21	Alcohol or Drugs Irregularity	All positive test results or refused tests for testing undertaken by a rail transport operator, includes: > breath test and breath analysis result > oral fluid analysis result (confirmed positive) > urine test result > other testing
L		Definitions	
Level Crossing			An area where a road and a railway (other than a tramway) meet at substantially the same level, whether or not there is a level crossing sign on the road at all or any of the entrances to the area OR an area where a road and a tramway meet at substantially the same level and that has a level crossing sign on the road at each entrance to the area.

A railway line (other than within a yard or siding) that is used for the through movement trains between locations, includes passing loops or

Two or more units of rolling stock coupled together, at least one of which is a locomotive or other self propelled unit (e.g. an EMU, DMU,

tram) OR a unit of rolling stock that is a locomotive or other self-propelled unit (e.g. light engine, single tram or other light rail vehicle, track

A track, or a system of tracks, primarily used for the stabling, shunting, marshalling, repair, maintenance, loading or unloading of rolling stock,

other track systems that enable the through movement of trains (e.g. faciliate passing or crossing).

Movement of trains or rail vehicles for the purpose of marshalling or altering their consist.

not including systems of tracks associated with passenger railway stations.

machine or road rail vehicle that is on track).

Running Line

Shunting

Train

Yard or siding

			CATEGORY C NOTIFIABLE OCCURRENCE
Manner of Reporting Occurrence Type		ner of Reporting Occurrence Type	National Occurrence Data Set Details completed relevant to the occurrence: > by a prescribed date for occurrences that have occurred within a prescribed period (e.g Calendar year period); or > within a specified period (as determined by the Regulator) of the occurrence - as imposed by the Regualtor on a specific operator and/or occurrence basis.
DNSEQUENCE OCCURRENCES	1	Collision including level crossing collisions	All other collisions involving a train that are not a Category A collision, including a collision between a train and: > another train during shunting operations; or > rolling stock during shunting operations; or > a person (not resulting in a serious injury/fatality); or > a road vehicle (other than at a level crossing); or > an object that results in significant damage (e.g. disables) to rolling stock.
	2	Derailment	
	3	Runaway	
	4	Proceed Authority Exceeded	A train has exceeded a limit of a proceed authority: > within a yard or siding; or > on a light rail corridor and has not been reported as a Category A or B occurrence.
	5	Passenger Door Occurrence	Passenger door failures or incidents involving rolling stock or platform screen doors that presents a risk to safety of passengers/public, including: > defective rolling stock doors (including between coaches) > door incorrectly opened on the wrong side of the train, or the train is not on the platform > platform screen door incorrectly opened without the presence of a train
CANT C	6	Wrongside Failure	
SIGNIFI	7	Fire, Explosion or Dangerous Goods Spill	Any fire, explosion or dangerous goods event that has threatened or impacted on railway operations that is not reportable as a Category A or B.
	8	Incident Directly Threatening Safety	
	9	Public Interest or Concern	
	10	Fatality or Serious Injury (not captured above)	

Manner of Reporting		er of Reporting	Notifiable Occorrence National Occurrence Data Set Details completed relevant to the occurrence: > by a prescribed date for occurrences that have occurred within a prescribed period (e.g Calendar year period); or > within a specified period (as determined by the Regulator) of the occurrence - as imposed by the Regualtor on a specific operator and/or occurrence basis.
		Occurrence Type	
	11	Safeworking - Network Rule or Procedure Breach (Train Operations)	
	12	Safeworking - Network Rule or Procedure Breach (Track Working)	
	13	Rolling Stock Irregularity	Failure of a safety critical item of rolling stock during operations that had the potential to endanger the safety of a person or railway operations, specifically: > train parting; or > wheel/axle faults resulting in removal from service or reduction in service (e.g. speed restriction); or > braking system failures (where braking performance is not as expected, e.g. train misses braking point). Excludes rolling stock irregularities and faults that are detected and addressed through routine inspection, servicing and maintenance.
	14	Load Irregularity	Load irregularities that breach load restraint and management tolerances.
IONAL IRREGULARITIES	15	Level Crossing Irregularity	Failure of level crossing equipment that results in the intended level of protection not being fully provided prior to or during the passage, or potential passage, of a train, including: > partial operation of active warning devices, e.g. not all warning lights operating; > boom barriers not completely lowering or are slow to lower for the passage of a train; > locking on pedestrian gates failing to fully engage when closed (including emergency escape gates); or > missing or damaged control signs and devices at a passive level crossing. Evaluates property and equipment damage from road whick collisions, damaged road surface, continuous operation (fail safe modes).
AIL SAFETY/OPERATI	16	Track Irregularity	Track irregularities that are detected during track maintenance or inspection activity that exceed operational limits, specifically: > broken rail > misaligned track (buckles) > spread track > points irregularity (damage presenting a threat to train operations)
R	17	Civil Infrastructure Irregularity	Civil infrastructure irregularities that threatened the safety of railway operations, specifically: > significant track obstructions > bridge strikes > failure of infrastructure that threatens train operations Evolutions track obstructions or other civil infrastructure related defects that would not directly threaten the refer of train operations
	18	Electrical Traction Infrastructure Irregularity	Electrical infrastructure failures that present a threat to persons and railway operations, specifically: > dewirement / entanglement > overhead traction equipment failure > other (track related) traction equipment failure
	19	Slip, Trip or Fall - Train Operations	Slip, trips and falls associated with train operations, including: > fall from train; or > fall from platform onto track; or > fall between rolling stock and platform; or > fall on rolling stock associated with train operations (e.g. sudden braking or acceleration). Excludes slips trips and falls that occur on railway premises not directly associated with train movement or interaction.
	20	Near Hit	
	21	Alcohol or Drugs Irregularity	

Definitions

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Level Crossing	An area where a road and a railway (other than a tramway) meet at substantially the same level, whether or not there is a level crossing sign on the road at all or any of the entrances to the area OR an area where a road and a tramway meet at substantially the same level and that has a level crossing sign on the road at each entrance to the area.
Running Line	A railway line (other than within a yard or siding) that is used for the through movement trains between locations, includes passing loops or other track systems that enable the through movement of trains (e.g. faciliate passing or crossing).
Shunting	Movement of trains or rail vehicles for the purpose of marshalling or altering their consist.
Train	Two or more units of rolling stock coupled together, at least one of which is a locomotive or other self propelled unit (e.g. an EMU, DMU, tram) OR a unit of rolling stock that is a locomotive or other self-propelled unit (e.g. light engine, single tram or other light rail vehicle, track machine or road rail vehicle that is on track).
Yard or siding	A track, or a system of tracks, primarily used for the stabling, shunting, marshalling, repair, maintenance, loading or unloading of rolling stock, not including systems of tracks associated with passenger railway stations.

(Track Working)

			NATIONAL OCCURRENCE DATA SET
			(examples only)
	Manı	ner of Reporting	> Unique identifier;
			> Date and Time; Location; Operator(s) involved
			As appropriate: > Line type - e.g. running line; yard
			> Line status - e.g. normal operations; under possesion
			> Train type > Train identifier
		Occurrence Type	> Train operation
<u> </u>			Rasic datails plus
		Collision	> Collision object - e.g. person type; road vehicle (type); infrastructure; railway-related object; natural obstruction; animal; other
	1	completi	object/obstruction
	-	including level	> Consequence (person)
		crossing consions	> Cause - e.g. rolling stock left foul; exceed authority; runaway; railway object left foul; other object found foul; object fell foul; person's actions: suspected suicide: road vehicle movement
Ī			Basic details plus:
			> Initiating rolling stock - e.g. head of train (loco); within consist > Extent of derailment - e.g. single hogie: single rolling, stock; multiple rolling stock
	2	Doroilmont	> Consequence (railway operations) - e.g. rail infrastructure damage (major/minor); rolling stock damage (major/minor)
	2	Deraiment	> Consequence (person)
			deliberate action; natural event; under investigation
-			Rosic details plus:
		Runaway	> Recovery action
	3		> Consequence (railway operations) - e.g. rail infrastructure damage (major/minor); rolling stock damage (major/minor) > Consequence (person)
			 > Cause - e.g. human error; rolling stock irregularity
ŀ			Basic details plus:
NCES		Due of a state with	> Safeworking system
RRED	4	Exceeded	> Exceed authority distance (in meterage) > Distance to next conflict point
CCU			> Conflict type - e.g. another train; level crossing; control block; worksite
VCE C			> Cause - e.g. missed; misjudged; incorrectly displayed; signal restored (technical); signal restored (emergency).
GUE	5		Basic details plus:
ONSEC		Passenger Door	Immediate response - e.g. none; stop and isolate; stop and repair; remove from service.
NT C		occurrence	> Consequence (person)
IFICA			Basic details plus:
SIGN	6	Wrongside Failure	> System - e.g. wayside signalling; level crossing; in-cab signalling > Significance - e.g. detected no conflict; detected action taken to prevent conflict; conflict occurred
•,			+ Additional reporting as required relevant to the type of occurrence reported against this category that is described elsewhere in this
ŀ			document. Basic details plus:
		Fire, Explosion or	> Type - e.g. fire; explosion; spill.
	7	Dangerous Goods	 > Dangerous goods involved - e.g. yes; no
		Spill	> Consequence - e.g. delayed service; cease operations; evacuation; damage to infrastructure
ŀ		Incident Directly	> Cause - e.g. natural; accidental; rail related; deliberate action National Occurrence Data Set reporting requirements will be as per the occurrence type that is directly related to the occurrence being
	8	Threatening Safety	reported, e.g. reporting of near hit with a track worker will require data to be entered in accordance with a Safeworking Network Rule or
			Procedure Breach (Track Working).
	9	Public Interest or	These events will only require additional data to be provided if they are related to an occurrence type described elsewhere in this document.
	5	Concern	
			Basic details plus:
		Fatality or Serious	 > Rail safety worker type (if appropriate)
	10		> Injury type - e.g. fatality; serious injury
		(not captured above)	 > Injury type - e.g. fatality; serious injury; minor injury
			+ Details of the occurrence that resulted in the serious injury
		Safeworking -	Basic details plus:
	11	Network Rule or	Reported against: > Safeworking type
		Procedure Breach (Train Operations)	> Nature of breach
			> Consequence - e.g. none; cancel and re-issue of authority; cancellation of work; near hit Basic details plus:
		Sateworking - Network Rule or	Reported against:
	12	Procedure Breach	> Sateworking type > Nature of breach

> Consequence - e.g. none; cancel and re-issue of authority; cancellation of work; near hit

			NATIONAL OCCURRENCE DATA SET			
			(examples only) For all occurences <i>basic details</i> will be required such as:			
	Mann	er of Reporting	> Unique identifier;			
			> Date and Time; Location; Operator(s) involved			
			As appropriate:			
			Line type - e.g. normal operations: under possesion			
			> Train type			
			> Train identifier			
		Occurrence Type	> Train operation			
T			Basic details plus:			
			> Type of rolling stock			
	13	Rolling Stock	> Type of irregularity - e.g.communications system; train parting; wheel failure; axle failure; braking system			
		inegularity	> Consequence - e.g. none; delay (repair); removed from service; damage to rolling stock; damage to traction equipment			
			Basic details plus:			
	14	Load Irregularity	> inequilarity consequence - e.g. no impact on service; resecured in service; load sing, load si			
			> dangerous goods involved - e.g. yes; no			
┝			Racin details plus:			
£			> Level Crossing ID			
AKI			> Level Crossing Control Type			
		Lough Crossing	> Failed equipment - e.g. signs or markings; warning lights; warning bells; boom gates; pedestrian gates; track circuit; axle counter			
KKE	15	Irregularity	> Consequence - partial operation (of controls); wrongside failure (full failure of active controls); delay to service; near hit; road/pathway			
AL		0	closure			
2			> Cause - e.g. vandalism; road vehicle collision; power failure; failure to detect train; technical fault			
EKA						
			Basic details plus:			
H.	16	Track Irregularity	> how detected - e.g. inspection; maintenance activity; train crew reported			
11 24			> remedial action - e.g. no action; speed restriction; suspended services; immediate correction			
Å			Basic details plus:			
	17	Irregularity	> type of irregularity: bridge strike (e.g. by road vehicle); etc.			
			> consequence - e.g. none, delay for inspection; services cancelled for repair			
			Basic details plus:			
		Electrical Traction	traction: insulator failure: excessive sag of contact wire:			
	18	Infrastructure	energised stanchions or related infrastructure			
		incoularity	> extent of damage (location of damage)			
ŀ			> consequence - e.g. threat to rail safety workers; threat to public Basic details plus:			
	19	Slip, Trip or Fall - Train Operations	, event type - e.g.on-train, on-platform; fall from platform; fall between platform and train; fall from train			
			> consequence (railway operations) - e.g. none; delay; suspended services			
ŀ			Basic details plus:			
			> Near hit type - e.g. observed unsafe behaviour; near hit			
		Near Hit	> Near hit object - e.g. train; person; vehicle			
	20		> Rail safety worker type			
			> Vehicle type			
			> Emergency action taken - e.g. not required; no time; yes + Additional reporting as required relevant to the type of occurrence leading to the pear bit that is described elsewhere in this document			
			Basic details plus:			
		Alcohol or Drugs	> Type of test > Test reason			
	21	Irregularity	> Test result			
			> Remedial action taken			
L		Definition	I> Kall satety worker type			
		Definitions	An area where a road and a railway (other than a tramway) meet at substantially the same level, whether or not there is a level crossing sign			
		Level Crossing	on the road at all or any of the entrances to the area OR an area where a road and a tramway meet at substantially the same level and that			
			has a level crossing sign on the road at each entrance to the area.			
		Running Line	other track systems that enable the through movement of trains (e.g. faciliate passing or crossing).			
		Shunting	Movement of trains or rail vehicles for the purpose of marshalling or altering their consist.			
			Two or more units of rolling stock coupled together, at least one of which is a locomotive or other self propelled unit (e.g. an EMU, DMU,			
		Train	tram) OR a unit of rolling stock that is a locomotive or other self-propelled unit (e.g. light engine, single tram or other light rail vehicle, track			
		Manal	A track, or a system of tracks, primarily used for the stabling, shunting, marshalling, repair, maintenance, loading or unloading of rolling stock,			
		Yard or siding	not including systems of tracks associated with passenger railway stations.			

			CATEGORY A	CATEGORY B	CATEGORY C	NATIONAL OCCURRENCE DATA SET
				REPORTABLE OCCURRENCE	NOTIFIABLE OCCURRENCE	(examples only)
Manner of Reporting		nner of Reporting	Immediate report to the Regulator providing: > Date and Time; Location; Operator(s) involved > Description of the occurrence, which includes the circumstances, extent of damage/disruption, known events prior to and as a result of the occurrence. + National Occurrence Data Set Details completed within 14 days of the occurrence.	Interim report to the Regulator within 7 days of the occurrence providing: > Date and Time; Location; Operator(s) involved > Description of the occurrence, which includes the circumstances, extent of damage/disruption, known events prior to and as a result of the occurrence. + National Occurrence Data Set Details completed within 14 days of the occurrence.	National Occurrence Data Set Details completed relevant to the occurrence: > by a prescribed date for occurrences that have occurred within a prescribed period (e.g Calendar year period); or > within a specified period (as determined by the Regulator) of the occurrence - as imposed by the Regulator on a specific operator and/or occurrence basis.	For all occurences basic details will be required such as: > Unique identifier; > Date and Time; Location; Operator(s) involved As appropriate: > Line type - e.g. running line; yard > Line status - e.g. normal operations; under possesion > Train type > Train identifier > Train operation
	1	Occurrence Type Collision including level crossing collisions	A collision between a train and: > another train (not including shunting operations); or > rolling stock (not including shunting operations); or > a rail safety worker; or > a person that results in a serious injury or fatality; or > plant/machinery associated with a rail worksite; or > trackside (rail) infrastructure (e.g. platform; buffer stop or overhead); or > a road vehicle at a level crossing.		All other collisions involving a train that are not a Category A collision, including a collision between a train and: > another train during shunting operations; or > rolling stock during shunting operations; or > a person (not resulting in a serious injury/fatality); or > a road vehicle (other than at a level crossing); or > an object that results in significant damage (e.g. disables) to rolling stock. Excludes collisions with objects that result in minor or no damage (e.g. with animals).	Basic details plus: > Collision object - e.g. person type; road vehicle (type); infrastructure; railway-related object; natural obstruction; animal; other object/obstruction > Consequence (railway operations) - e.g. rail infrastructure damage (major/minor); rolling stock damage (major/minor) > Consequence (person) > Cause - e.g. rolling stock left foul; exceed authority; runaway; railway object left foul; other object found foul; object fell foul; person's actions; suspected suicide; road vehicle movement
	2	Derailment	A derailment that has: > occurred on a running line; or > resulted in multiple rolling stock units derailed; or > threatened the safety of a person.	All other derailments that are not a Category A derailment. Excludes events that result in wheel lifts (e.g. during loading, unloading or plant operation) where the wheel returns to the track.		Basic details plus: > Initiating rolling stock - e.g. head of train (loco); within consist > Extent of derailment - e.g. single bogie; single rolling stock; multiple rolling stock > Consequence (person) > Cause - e.g. track failure; track misalignment; points operation; points run-through; rolling stock failure; train handling; rail-wheel interface; deliberate action; natural event; under investigation
-	3	Runaway	A runaway of a train or rolling stock on or onto a running line.	A runaway in a yard. Excludes any short uncontrolled movement (e.g. < 2 rolling stock unit lengths) of a train or rolling stock that was arrested through immediate action or the presence of other rolling stock.		Basic details plus: > Recovery action > Consequence (railway operations) - e.g. rail infrastructure damage (major/minor); rolling stock damage (major/minor) > Consequence (person) - e.g. human error; rolling stock irregularity > Cause - e.g. human error; rolling stock irregularity
ONSEQUENCE OCCURRENCES	4	Proceed Authority Exceeded	A train has exceeded a limit of a proceed authority on or onto a running line due to: > driver completely missed (error); or > driver misjudged but has entered into an occupied section or in conflict with another train movement. Excludes light rail vehicle/tram exceeding a limit of authority when travelling with line of sight on a light rail corridor, except where otherwise agreed with the Regulator.	A train has exceeded a limit of a proceed authority on or onto a running line due to: > Misjudged application of train braking with no impact to safety (no conflict point created); or > Signal being restored due to infrastructure or network control failure/error; or > Signal being restored due to an emergency response Excludes light rail vehicle/tram exceeding a limit authority when travelling under line of sight method of safeworking on a light rail corridor, except where otherwise agreed with the Regulator. Note: a near hit on a light rail corridor resulting from exceeding a limit of authority is reportable as a Category B near hit.	A train has exceeded a limit of a proceed authority: > within a yard or siding; or > on a light rail corridor and has not been reported as a Category A or B occurrence.	Basic details plus: > Safeworking system > Exceed authority distance (in meterage) > Distance to next conflict point > Conflict type - e.g. another train; level crossing; control block; worksite > Cause - e.g. missed; misjudged; incorrectly displayed; signal restored (technical); signal restored (emergency).
SIGNIFICANT CC	5	Passenger Door Occurrence	A rolling stock passenger door has failed or has been operated in a way that has resulted in a passengers being: > exposed to an open door while a train is in motion; or > caught in a door and exposed to a risk of harm while a train is in motion. A platform screen door has failed or has been operated in a way that has resulted in a person being: > exposed to an open door with a train in motion; or > being caught in a door and exposed to a risk of harm from a moving train.		Passenger door failures or incidents involving rolling stock or platform screen doors that presents a risk to safety of passengers/public, including: > defective rolling stock doors (including between coaches) > door incorrectly opened on the wrong side of the train, or the train is not on the platform > platform screen door incorrectly opened without the presence of a train	Basic details plus: > Event - e.g door open in motion; door failed to close; brake interlocking failure; person trapped in doors > Immediate response - e.g. none; stop and isolate; stop and repair; remove from service. > Consequence (person)
-	6	Wrongside Failure	A safety critical system has failed, or is suspected to have failed, in an unsafe way (not in accordance with its design), including: > active level crossings; > signalling systems; > proceed authority systems; or > overhead traction systems (e.g. fail to trip).			Basic details plus: > System - e.g. wayside signalling; level crossing; in-cab signalling > Significance - e.g. detected no conflict; detected action taken to prevent conflict; conflict occurred + Additional reporting as required relevant to the type of occurrence reported against this category that is described elsewhere in this document.
	7	Fire, Explosion or Dangerous Goods Spill	Note that a fire, explosion or dangerious goods spill that directly threatens the safety of people or railway operations is reportable as a Category A Incident Directly Threatening Safety occurrence.	An fire, explosion or dangerious goods spill event that: > caused damage to infrastructure, rolling stock or the environment that resulted in service termination or closure of stations or other rail premises; or > presented, or continues to present, a risk to safety of people (but not an immediate or direct threat).	Any fire, explosion or dangerous goods event that has threatened or impacted on railway operations that is not reportable as a Category A or B.	Basic details plus: > Type - e.g. fire; explosion; spill. > Nature of event - e.g. on-train; track-side; railway premises > Dangerous goods involved - e.g. yes; no > Consequence - e.g. delayed service; cease operations; evacuation; damage to infrastructure > Cause - e.g. natural; accidental; rail related; deliberate action
	8	Incident Directly Threatening Safety	Any incident or event (not otherwise defined as a Category A) that results in a direct threat to the safety of people or railway operations, for example: > loss of load from rolling stock; or > track worker safety occurrences (including near hit of rail safety worker); or > incorrect proceed authority/instruction given by network controller or rail safety worker; or > incorrect work authority or access given to a rail safety worker (placing them in danger); or > sabotage or cyber security event; or > an event resulting in an evacuation to protect public safety.			National Occurrence Data Set reporting requirements will be as per the occurrence type that is directly related to the occurrence being reported, e.g. reporting of near hit with a track worker will require data to be entered in accordance with a Safeworking Network Rule or Procedure Breach (Track Working).
		Public Interest or	Any incident that is likely to generate immediate or intense			These events will only require additional data to be provided
	9	Fatality or Serious Injury (not captured above)	public interest or concern. Any fatality or serious injury to a person as a result from or associated with railway operations (including passenger - train/platform interface). Excludes fatalities or serious injuries resulting from health related conditions or slip, trips and falls on railway premises not directly associated with railway operations.			if they are related to an occurrence type described elsewhere in this document. Basic details plus: > Person type - e.g. passenger; member of the public > Rail safety worker type (if appropriate) > Injury type - e.g. fatality; serious injury > Cause - e.g. rail related incident (occurrence type); suspected suicide; health related (to be excluded) > Injury type - e.g. fatality; serious injury; minor injury + Details of the occurrence that resulted in the serious injury

			CATEGORY A	CATEGORY B	CATEGORY C	NATIONAL OCCURRENCE DATA SET
			IMMEDIATELY REPORTABLE OCCURRENCE	REPORTABLE OCCURRENCE	NOTIFIABLE OCCURRENCE National Occurrence Data Set Details completed relevant to	(examples only) For all occurences basic details will be required such as:
			> Date and Time; Location; Operator(s) involved	occurrence providing:	the occurrence:	> Unique identifier;
	Ma	nner of Reporting	> Description of the occurrence, which includes the circumstances, extent of damage/disruption, known events	> Date and Time; Location; Operator(s) involved > Description of the occurrence, which includes the	> by a prescribed date for occurrences that have occurred within a prescribed period (e.g Calendar year period); or	> Date and Time; Location; Operator(s) involved As appropriate:
	IVIA	inter of Reporting	prior to and as a result of the occurrence.	circumstances, extent of damage/disruption, known events	> within a specified period (as determined by the Regulator)	 > Line type - e.g. running line; yard
				prior to and as a result of the occurrence.	of the occurrence - as imposed by the Regualtor on a specific operator and/or occurrence basis.	> Line status - e.g. normal operations; under possesion > Train type
			+ National Occurrence Data Set Details completed within 14	+ National Occurrence Data Set Details completed within 14		> Train identifier
			days of the occurrence.	days of the occurrence.		> Train operation
		Occurrence Type				
			Note: occurrences resulting in a wrong-side failure or a direct threat to safety are reportable as Category A	Failure, breach or omission of a system, process or procedure		Basic details plus: Reported against
		Safeworking - Network	occurrences.	railway operations, for example:		> Safeworking type
	11	(Train Operations)		> signals incorrectly set; or > train moves over points incorrectly set.		> Nature of breach > Consequence - e.g. none: cancel and re-issue of
						authority; cancellation of work; near hit
F			Note: occurrences resulting in a wrong-side failure or a	Failure, breach or omission of a system, process or procedure		Basic details plus:
			direct threat to safety are reportable as Category A occurrences.	that had the potential to threaten the safety of people or railway operations, for example:		Reported against: > Safeworking type
		Safeworking - Network		> incorrect location;		> Nature of breach
	12	Rule or Procedure Breach (Track Working)		 > working without authority; or > incorrectly commencing or cancelling an authority. 		> Consequence - e.g. none; cancel and re-issue of authority; cancellation of work; near hit
Γ				Significant failure of a safety critical item on rolling stock		Basic details plus:
				during operations that resulted in degraded operations or	Failure of a safety critical item of rolling stock during	 Type of forming stock Type of irregularity - e.g.communications system; train
				threatened the safety of people or railway operations, specifically:	operations that had the potential to endanger the safety of a nerson or railway operations specifically:	parting; wheel failure; axle failure; braking system
				> rolling stock structural (frame) failure; or	> train parting; or	crew report; in-service incident
				> wheel/axle failures; or > braking system failures (inability to apply brakes or where	> wheel/axle faults resulting in removal from service or reduction in service (e.g. speed restriction); or	> Consequence - e.g. none; delay (repair); removed from service; damage to rolling stork; damage to traction
	13	Rolling Stock Irregularity		braking performance of the train is compromised).	> braking system failures (where braking performance is not	equipment
				Excludes rolling stock irregularities faults that are detected	as expected, e.g. train misses braking point).	
				and addressed through routine inspection, servicing and	Excludes rolling stock irregularities and faults that are	
				mannenance.	and maintenance.	
			Note: loss of load including despersion and the state		Load irregularities that breach had extended	Pasis datails alue:
			Note: loss of load, including dangerous goods spills, that result in a direct threat to safety are reportable as Category		Load irregularities that breach load restraint and management tolerances.	 > load irregularity type - e.g. loose load fastening, uneven
			A occurrences.			load, load slip, load spill/leak; loss of load
	14	Load Irregularity				> irregularity consequence - e.g. no impact on service; resecured in service; load cut from service; cancellation of
						service; recovery operation.
						> dangerous goous involveu - e.g. yes, no
L						
			Note: Wrongside failures of level crossing protection devices (e.a. a train passes through an active crossing with no		Failure of level crossing equipment that results in the intended level of protection not being fully provided prior to	Basic details plus: > Level Crossing ID
			activation) are reportable as a Category A occurrence.		or during the passage, or potential passage, of a train,	> Level Crossing Control Type
					including: > partial operation of active warning devices, e.g. not all	> Failed equipment - e.g. signs or markings; warning lights; warning bells; boom gates; pedestrian gates; track circuit;
					warning lights operating;	axle counter
		Lough Crossing			for the passage of a train;	failure (active controls); damaged or missing (passive
	15	Irregularity			> locking on pedestrian gates failing to fully engage when closed (including emergency escape gates); or	controls)
					 > missing or damaged control signs and devices at a passive 	wrongside failure (full failure of active controls); delay to
					level crossing.	service; near hit; road/pathway closure
TIES					Excludes property and equipment damage from road vehicle	failure; failure to detect train; technical fault
JLARI					collisions, damaged road surface, continuous operation (fail safe modes).	
REGI						Desis dotaile alue:
IN				maintenance or inspection activity that exceed operational	maintenance or inspection activity that exceed operational	 > irregularity type - e.g. broken rail; misalignment; points
TION				limits, specifically:	limits, specifically:	equipment defect; etc.
PERA	16	Track Irregularity		> misaligned track (buckles)	> misaligned track (buckles)	crew reported
TY/0	10	nackinegularity		> spread track > points irregularity (damage presenting a threat to train	> spread track > points irregularity (damage presenting a threat to train	> remedial action - e.g. no action; speed restriction; suspended services: immediate correction
SAFE				operations)	operations)	
RAIL						
			Note: A civil infrastructure irregularity or failure that		Civil infrastructure irregularities that threatened the safety of railway operations specifically:	Basic details plus:
			public interest or concern will be reportable as a Category A		 > significant track obstructions 	> type of irregularity: bridge strike (e.g. by road vehicle); etc.
			occurrence.		> bridge strikes > failure of infrastructure that threatens train operations	> consequence - e.g. none, delay for inspection; services cancelled for repair
	17	Civil Infrastructure Irregularity				
		,			Excludes track obstructions or other civil infrastructure related defects that would not directly threaten the safetv of	
					train operations.	
					Electrical infrastructure failures that present a threat to persons and railway operations, specifically:	Basic details plus: > type of failure - e.g. dewirement: damage to overhead
		Electrical Traction			> dewirement / entanglement	traction; insulator failure; excessive sag of contact wire;
	18	Infrastructure			 > overhead traction equipment failure > other (track related) traction equipment failure 	energised stanchions or related infrastructure > extent of damage (location of damage)
		irregularity				> consequence - e.g. threat to rail safety workers; threat to
						public
			Serious injuries and fatalities associated with railway operations are reportable as a Cateaory A occurrence.		Slip, trips and falls associated with train operations, including: > fall from train: or	Basic details plus:
					> fall from platform onto track; or	fall between platform and train; fall from train
		Slip, Trip or Fall - Train			> fall between rolling stock and platform; or > fall on rolling stock associated with train operations	> consequence (operations) - e.g. none; delay; suspended services
	19	Operations			(e.g. sudden braking or acceleration).	> consequence (person)
					Excludes slips trips and falls that occur on railway premises	
					not directly associated with train movement or interaction.	

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			CATEGORY A	CATEGORY B	CATEGORY C	NATIONAL OCCURRENCE DATA SET				
			IMMEDIATELY REPORTABLE OCCURRENCE	REPORTABLE OCCURRENCE	NOTIFIABLE OCCURRENCE	(examples only)				
Manner of Reporting		nner of Reporting	Immediate report to the Regulator providing: > Date and Time; Location; Operator(s) involved > Description of the occurrence, which includes the circumstances, extent of damage/disruption, known events prior to and as a result of the occurrence. + National Occurrence Data Set Details completed within 14 days of the occurrence.	Interim report to the Regulator within 7 days of the occurrence providing: > Date and Time; Location; Operator(s) involved > Description of the occurrence, which includes the circumstances, extent of damage/disruption, known events prior to and as a result of the occurrence. + National Occurrence Data Set Details completed within 14 days of the occurrence.	National Occurrence Data Set Details completed relevant to the occurrence: > by a prescribed date for occurrences that have occurred within a prescribed period (e.g Calendar year period); or > within a specified period (as determined by the Regulator) of the occurrence - as imposed by the Regulator on a specific operator and/or occurrence basis.	For all occurences basic details will be required such as: > Unique identifier; > Date and Time; Location; Operator(s) involved As appropriate: > Line type - e.g. running line; yard > Line status - e.g. normal operations; under possesion > Train type > Train identifier > Train operation				
		Occurrence Type								
	20 Near Hit		Note, near hits with track workers are reportable as a Category A Incident Directly Threatening Safety occurrence.	Interaction between a train and a person, road vehicle or mobile plant that had the potential to result in a collision. <i>Near hit</i> - incident where a train driver takes emergency action, or would have taken emergency action if there was time, to avoid a collision. <i>Excludes a near hit between light rail vehicle/tram with a pedestrian or road vehicle that occurs in a shared use area</i> <i>(e.g. not at a level crossing or rail only corridor) during normal operations (e.g. not associated with a safe working breach or exceeding a proceed authority).</i>		Basic details plus: > Near hit type - e.g. observed unsafe behaviour; near hit > Near hit object - e.g. train; person; vehicle > Person type > Rail safety worker type > Vehicle type > Emergency action taken - e.g. not required; no time; yes + Additional reporting as required relevant to the type of occurrence leading to the near hit that is described elsewhere in this document.				
	21	Alcohol or Drugs Irregularity	Note: ONRSR conducted testing may be triggered from immediately reportable occurrences. Operator post-incident testing is to be reported as part of the specific occurrence reporting requirements.	All positive test results or refused tests for testing undertaken by a rail transport operator, includes: > breath test and breath analysis result > oral fluid analysis result (confirmed positive) > urine test result > other testing		Basic details plus: > Type of test > Test reason > Test result > Remedial action taken > Rail safety worker type				
Definitions		Definitions								
Denni			An area where a road and a railway (other than a tramway) me	eet at substantially the same level, whether or not there is a le	vel crossing sign on the road at all or any of the entrances to th	e area OR an area where a road and a tramway meet at				
Level Cro		Level Crossing	substantially the same level and that has a level crossing sign of	on the road at each entrance to the area.		· · · · · · · · · · · · · · · · · · ·				
Running Li		Running Line	A railway line (other than within a yard or siding) that is used f	wement of trains (e.g. faciliate passing or crossing).						
Shunting		Shunting	Movement of trains or rail vehicles for the purpose of marshal	ling or altering their consist.		_				
Train		Train	Two or more units of rolling stock coupled together, at least or other light rail vehicle, track machine or road rail vehicle that i	ne of which is a locomotive or other self propelled unit (e.g. an is on track).	EMU, DMU, tram) OR a unit of rolling stock that is a locomotive	e or other self-propelled unit (e.g. light engine, single tram or				
Yard or siding		Yard or siding	A track, or a system of tracks, primarily used for the stabling, shunting, marshalling, repair, maintenance, loading or unloading of rolling stock, not including systems of tracks associated with passenger railway stations.							

ALL RAIL TRANSPORT OPERATORS

Number of Rail Safety Workers:

Minimum requirement	
Rail Safety Worker Type	Number*
Employees	
Contractors	
Total	

Legend:
Current reported data
Enhanced requirements for currently reported data.
New requirements to support current initiatives.

Rail Safety Worker Type		Number*
Train driver		
Guard		
Shunter		
Rolling stock maintainer		
Controller/Signaller		
Station staff		
Railway infrastructure worker		
Other		
	Total	

* Reported as of the end of the month

	# Alcohol Tests		# Drug Tests								
Drug & Alcohol Testing Activity:	Breath or Blood		Urine		Oral fluid		Blood		Other		
Rail Safety Worker Type	Pre-sign on	Post-sign on	Pre-sign on	Post-sign on	Pre-sign on	Post-sign on	Pre-sign on	Post-sign on	Pre-sign on	Post-sign on	Total
Train driver											
Guard											
Shunter											
Rolling stock maintainer											
Controller/Signaller											
Station staff											
Railway infrastructure worker											
Other											
Total											

ROLLING STOCK OPERATORS

Total train operations (kms travelled):

Train Service Type	Own operations				
	# kms				
Passenger train services					
Freight train services					
Maintenance train services					
Total					

Networks Operated On (Interfaces)

	# Networks	
Total number of different rail networks (different rail infrastructure managers) operated over in the month.		Not including own operations on own network.
		-

Passenger journey kilometres

russenger journey knometres	# kms
	# KIII5
Total passenger journey kilometres	
Passenger Journeys	
Dessenger Lourney Tune	# 10,000,000

Passenger Journey Type	# journeys
Urban areas on passenger trains	
Non-urban areas on passenger trains	
Total	

RAIL INFRASTRUCTURE MANAGER

Total train operations on network (kms travelled)						
Train Service Type	# kms					
Passenger train operations						
Freight train operations						

Rolling Stock Operators operating on network (Interfaces)

Not including own operations on own network.

Legend: Areas of common overlap between ONRSR, RISSB and ALCAM requirements. Emerging data requirements for current initiatives.

RAIL INFRASTRUCTURE MANAGER

otal Track Managed (replaces monthly reporting requirement)					
Data Field	Value	Description			
Operational	Actual track kilometres	Actual length track, inclusive of passing loops, that is managed in an operational state, regardless of frequency of use.			
Non Operational	Actual track kilometres	Actual length of lines that will not be used by revenue services at any stage throughout the year.			

Network Description

Data Field	Line Section	Segment (km point)	Traffic Density	Max. Track Speed
Description and/or	Operator's name	Used to specify the	> value (#/day)	> value (km/h)
value	of each line	location (track kilometre		
	section managed	point) where a change of	Peak number of trains	General max track speed
		parameters occurs along	per day	(ignoring infrastructure
		the Line Section		speed restrictions for
				curves, points etc.)

Level Crossing Description (entry for each level crossing location)					Data required to support the National Level Crossing Portal									
Data Field	Line Section	Segment (km point)	Level Crossing Name	Level Crossing ID	Level Crossing Type	Level Crossing Control	Jurisdiction	Suburb/town	Road Manager	Local Council area	Crossing Status	No. of operational tracks	Track speed	Train Volume
Description and/or	Operator's name	Location point along the	Operator's description of	> ID Number	Selection of:	Selection of:	Selection of:	> Name of town	Selection of:	> Name of Council	If different to line	> Num. of tracks	> value (km/h)	Annual average
value	of each line	Line Section	the crossing - typically	Proposed ALCAM LXM	> vehicle	> Active - lights	> ACT		> Council name	Area	section status,			number of trains
	section managed.		the road name for the	numbering systems as a	> pedestrian	> Active - boom gates	> SA		> Govt road authority		selection of:		Can be determined	per day.
			crossing.	common identifier.		> Passive - Stop	> NSW		> Private		> operational		from Network	
	Noting a crossing			May need an additional		> Passive - Give Way	> NT				> non-operational		description above -	Can be determined
	may be linked to			field to capture operator		> Pedestrian - lights	> QLD						or supplied if	from Network
	multiple line			specific identifier if this		> Pedestrian - gates	> TAS						different at the	description above
	sections.			needs to be			> VIC						crossing.	or from ALCAM if
				accommodated.			> WA							different

Network Interfaces & Connections

Data Field	Network Connections
Description and/or	> value (# Interfacing Railways)
value	Number of other railways that are connected

ROLLING STOCK OPERATOR

Stations/Stops Utilised (Interfaces)

Data Field	Stations Utilised
Description and/or	> value (# Stations/stops)
value	Number of stations and/or stops (public

NOTES:

Ontology established at time of accreditation, with review and update of data triggered by applications to vary accrediation and/or the receipt of notifications of change.

Data to be maintained through the ONRSR Portal, enabling updates to occur at any time.

If no amendments made within 12 months, automate a review request to the operator via the ONRSR Portal.

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National Rail Safety Data Strategy – Example

SAFETY PERFORMANCE REPORT

ABC Rail Company 2019-2020 Financial Year



DISCLAIMER: The information contained within this sample Safety Performance Report is for demonstration purposes only. Any references to dates, events, data, organisation names and roles is fictitious. The scenarios and events outlined within this document are intended to provide relatable examples to assist with preparation of future Safety Performance Reports.

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Operators will be required to submit to the Regulator an annual Safety Performance Report. The purpose is to provide an operator the opportunity to describe the safety performance being achieved and identify what is being done to maintain or improve this performance in context with the scope and nature of the operator's railway operations and in meeting the RSNL duty to ensure, so far as is reasonably practicable, the management of risks to safety associated with these railway operations.

1 Purpose

The purpose of this report is to provide a description of the ABC Rail Company's safety management performance for the 2019-2020 financial year. This report is submitted to the National Rail Safety Regulator as per the requirements of section 103 of the *Rail Safety National Law.* The report addresses:

- monitoring of its own performance;
- understanding of the reasons for the identified level of performance;
- identification of implications to operational rail safety from the above; and
- changes to risk controls (planned or underway) necessary to maintain or improve safety performance.

2 Operational Overview

A description of the extent of railway operations undertaken by the operator with a specific focus on significant changes than may have occurred or influenced these operations. This is intended to give the Regulator a view of what may have been different from previous operational periods.

ABC Rail Company owns and operates a freight distribution network between its freight distribution warehouse at the Southern Freight Terminal (SFT) in Adelaide, South Australia through the Great Northern Freight (GNF) rail corridor to the Darwin Port Freight Terminal (DPFT) in the Northern Territory. ABC Rail Company transports goods via rail for export to Australia's trading partners and transports imported goods via rail to support Australia's defence, manufacturing and technology sectors. This includes the transportation of dangerous goods.

ABC Rail Company is accredited as a Rail Infrastructure Manager and a Rolling Stock Operator in the jurisdictions of South Australia and the Northern Territory.

On 26 July 2019, ABC Rail Company provided a written notification of change to ONRSR outlining details of a track upgrade on a section of the GNF rail corridor that would facilitate an increase in permitted track speeds, higher axle loading limits and train frequency (subject to demand).

Details of the notification of change are contained within the submission made to ONRSR, however it can be summarised as an upgrade from 47kg/m rail to 60kg/m rail to an 800km section of track on the GNF rail corridor in the far north of South Australia. This is the final stage of the ABC Rail Company rail upgrade project and as a result, the entire GNF rail corridor is 60kg/m rail and therefore will support increased axle loads of 25 tonnes at an increased speed from 80km/h to 90km/h. Additionally the upgraded track will enable an additional 25% increase in frequency of services subject to additional demand. The changes were to be implemented from 31 August 2019 in accordance with the ABC Rail Company risk management, change management and systems engineering processes.

3 Summary of key risks

Identify the key or top risks for the organisation. This should include the top ongoing risks for the operator and any risks that have emerged over the previous reporting period. This does not need to be a comprehensive list but provide a summary of where the immediate and ongoing risk management efforts of the operator are being targeted.

ABC Rail Company has in place a comprehensive and robust enterprise and WHS risk management system in place that is supported by leading software. The ABC Rail Company risk team regularly reviews ABC Rail Company risks, controls and risk ratings and reports on these activities quarterly to the ABC Rail Company Risk Committee and the ABC Rail Company Executive Committee. There is also a complete feedback loop in place where outcomes from both internal and external assurance activities are analysed and evaluated by the ABC Rail Company risk team resulting in revised risk ratings where required. In relation to key safety risks for ABC Rail Company, a summary of the key risks is highlighted below:

- Fatal or serious injury to ABC Rail Company worker This includes any ABC Rail Company rail safety worker, contractors, corporate employees and visitors to ABC Rail Company worksites and depots. Key focus areas include driving road vehicles, rail safe working and transport and handling of dangerous goods. ABC Rail Company has numerous controls in place using the hierarchy of controls which manages risk SOFAIRP. This is a key focus of every ABC Rail Company employee as part of our zero-harm philosophy. Key controls include:
 - Safeworking rules and procedures;
 - o Dangerous goods and manual handling procedures;
 - o Mandatory 5 star ANCAP safety rating for all ABC Rail Company vehicles; and
 - Mandatory defensive driving training for all ABC Rail Company employees that are required to drive as part of their duties.
- Rolling stock collisions This includes train to train collisions, train to RRV collisions or RRV to RRV collisions. This is a key risk for ABC Rail Company, despite having confidence that there are several effective engineering controls in place to manage risk SOFAIRP and prevent collisions or minimise the consequences of a collision, it is acknowledged that a rollingstock collision involving a ABC Rail Company service that is transporting dangerous goods may result in a catastrophic event. This is a key focus area for the planning and implementation of ABC Rail Company emergency management exercises with key stakeholders as part of the ABC Rail Company Emergency Management Plan. Key controls include:
 - o Automatic Train Protection (ATP) system installed on ABC Rail Company's rail network;
 - o Locomotive and wagon design standards that meet or exceed applicable standards; and
 - Training and Competency standards for rail safety workers including train crews and train controllers.
- **Running line derailments** This is a key risk for ABC Rail Company based on analysis of recent occurrence data combined with the transport of dangerous goods. ABC Rail Company has many controls in place to manage risks SOFAIRP. Running line derailments are also a key focus for the program for ABC Rail Company emergency management exercises. Key controls include:
 - High frequency ultra-sonic testing (increased from every 6 months to 3 months);
 - o Track maintenance procedures that meed required engineering standards; and
 - Training and Competency standards for rail safety workers including train crews and train controllers.
- **Terrorism / Network Security** Given ABC Rail Company's role as owner and operator of a rail network that supports both State and National economic and defence interests and transports dangerous goods, ABC Rail Company has identified terrorism / network security as a key risk. Through the ABC Rail Company Security Management Plan, ABC Rail Company frequently liaises with relevant state and federal law enforcement agencies and conducts regularly exercises and testing of ABC Rail Company security management plans. Key controls include:
 - The ABC Rail Company security management plan
 - $\circ\;$ Interface security agreements with state and federal law enforcement agencies
 - o ABC Rail Company CCTV network and security control centre based at SFT.

As outlined in section 5.3 of this report. ABC Rail Company has identified an emerging threat that may pose an additional risk to ABC Rail Company operations, primarily in the area of network security. That is a rising trend in network security occurrences involving the use of drones. ABC Rail Company is currently liaising with law enforcement agencies to identify additional controls. ABC Rail Company has also scheduled a risk assessment workshop to identify and assess risk treatment options and determine risk ratings. ABC Rail Company will raise this emerging issue for further industry discussion at the upcoming 2020 National Rail Safety Convention.

4 Review of the Safety Management System

A summary of planned or triggered actions undertaken to review the effectiveness of the safety management system, including the legislated annual review (s.102 of the RSNL), and commentary on the findings of such reviews and what changes have been made/initiated in the safety management system as a result of the reviews.

In accordance with RSNL s102, s99(3) and RSNL National Regulations 16 and 17, ABC Rail Company SMS Review Committee met on 31 July 2020 and undertook the annual review of the ABC Rail Company SMS.

Members of the committee include, ABC Rail Company Executive, ABC Rail Company Director Safety, ABC Rail Company Director Internal Audit, ABC Rail Company WHS committee representatives, employee representatives and representatives of the National Federation of Railway Workers (NFRW).

SMS review workshops were held with all relevant workers on 5 July 2020 and 15 July 2020. All workers were notified of the SMS review and had access to provide any feedback via the ABC Rail Company SMS review online feedback system. This system was introduced in mid-2019 following feedback from the SMS review for 2018/19.

The SMS review for the reporting period examined items outlined in RSNL National Regulation 17(3) including but not limited to:

- the outcomes of ONRSR's regulatory interactions with ABC Rail Company,
- the notifiable occurrences of ABC Rail Company and the incident response and investigation process;
- the outcomes of the rolling 5-year ABC Rail Company SMS internal audit program; and
- the effectiveness of improvements of the ABC Rail Company SMS implemented as a result of the previous SMS review.

The SMS review confirmed that ONRSR had undertaken 3 compliance inspections and 1 audit of ABC Rail Company's railway operations during the reporting year. There were no outstanding NCR's and all 3 of the ONRSR observations provided to ABC Rail Company have been recorded in the ABC Rail Company Corrective Action System (CAS) and reviewed by the ABC Rail Company Corrective Action Committee (CAC). It is noted that these ONRSR observations did not formally require a response from ABC Rail Company however it is confirmed they were received, recorded and considered for action as part of the ABC Rail Company continuous improvement processes.

As part of the SMS, ABC Rail Company manages a rolling 5-year ABC Rail Company internal audit program that consists of a risk-based approach to implementing an annual planned program of internal audits, compliance inspections and a reactive component related to internal data analysis, internal investigations and external investigations and regulatory interactions. This audit program is designed to ensure that all elements of the ABC Rail Company SMS as per Schedule 1 of the RSNL National Regulations is examined in thorough detail and no element is not examined in a 5-year period.

Each year, the internal audit committee utilises a risk-based approach to prioritise core focus areas for the year's program. For the 2019/20 financial year the core focus areas were:

- Emergency management;
- Security management;
- Governance and internal control arrangements;
- Safety Culture; and
- Safety performance measures.

For the 2019/20 financial year, ABC Rail Company undertook 12 audits, and 36 compliance inspections in addition to 6 level 1 ICAM incident investigations and 25 local incident investigations. All corrective actions arising from these assurance activities were recorded in the ABC Rail Company CAS and reported to the ABC Rail Company Risk Committee and the ABC Rail Company Executive Committee.

Through the ABC Rail Company internal audit program for the reporting period, it was identified that there were 8 occurrences that were notifiable to ONRSR and notifications were not initially provided. All 8 occurrences related to the non-operation of emergency safety communication equipment at the ABC Rail Company SFT and Control Centre and are currently notifiable to ONRSR as per the ONRSR Reporting Requirements 3.19 Communications System Failure (pg. 145). The matter was investigated and determined that it was a localised human error issue arising from an incorrect interpretation of ONRSR's reporting requirements by a local manager. Upon identification and verification of this reporting anomaly, ABC Rail Company notified ONRSR on 16 November 2019. In addition, ABC Rail Company created corrective action reference number: 2019-056 regarding the provision of additional training on ONRSR's reporting requirements for notifiable occurrences which was provided to all ABC Rail Company supervisors and managers during December 2019. This training program has now been implemented as a standard element of induction training for all ABC Rail Company supervisors and managers going forward with refresher training every 3 years.

Throughout 2019/20, as part of the established ABC Rail Company internal investigation process, ABC Rail Company undertook an Incident Cause Analysis Method (ICAM) investigation for several significant notifiable occurrences including a running line derailment in far north SA (3 July 2019) and a number of collisions between rolling stock and persons that were suspected to be suicide or attempted suicide. Further details are in section 5.1.

Key corrective actions arising from the ABC Rail Company internal investigation process from these occurrences include:

- An increase in the frequency of ultrasonic testing from 6 monthly intervals to 3 monthly intervals. (Far North SA Derailment Corrective action 2019-044);
- An internal auditing program to verify and evaluate the visual track inspection program (by foot and RRV) (Far North SA Derailment Corrective action 2019-045);
- Coordination and funding agreement with the SA Government to conduct emergency management exercise 'Containment 2019' held on 21 February 2020 (Far North SA Derailment – Corrective action 2019-046);
- The creation of an interface agreement between ABC Rail Company, Police and Health Authorities to facilitate the early warning and notification involving patients absconding from a new mental health facility constructed near the ABC Rail Company SFT (Suspected suicide investigations – Corrective action 2019-052); and
- A joint initiative between ABC Rail Company and the local council resulting in the installation of fencing and CCTV surveillance of a 2km section of the GNF Rail Corridor from the ABC Rail Company SFT (Suspected suicide investigations Corrective action 2019-052).

As a result of the previous ABC Rail Company SMS review in 2018/19, 2 new initiatives were introduced:

- Enhanced consultation and stakeholder engagement in the review of the ABC Rail Company SMS with the introduction of the ABC Rail Company SMS review online feedback system which facilitates confidential employee feedback. An employee satisfaction survey conducted on 1 August 2019 demonstrated that this initiative had a significant uptake and utilisation rate.
- A CCTV security upgrade and installation of enhanced motion detection systems at the ABC Rail Company SFT undertaken in September 2019 to address an identified rising trend in occurrences of trespass at this facility has resulted in a significant reduction in trespass related occurrences (further details in section 4.1).

ABC Rail Company is committed to safe rail operations and continuous improvement and is confident has demonstrated that there are robust internal assurance processes in place to ensure the ABC Rail Company SMS is reviewed annually and as required in response to significant occurrences and internal/external assurance reports.

4.1 Effectiveness of legislated safety plans and programs

Commentary, supported by data analysis as appropriate, on the effectiveness of the legislated plans and programs in mitigating (or eliminating) the relevant risk, changes to the risks and any changes to these plans or programs that have been undertaken during the reporting period. The legislated plans and programs include the:

- security management plan (s.112 of the RSNL);
- emergency management plan (s.113);
- health and fitness management program (s.114);
- drug and alcohol management program (s.115); and
- fatigue risk management program (s.116).

Security Management Plan

In relation to the ABC Rail Company Security Management Plan as required by s112 of RSNL, ABC Rail Company advises that a multi-agency in field security exercise is currently being planned in consultation with the State government and emergency services for October 2020. The exercise will likely be focused on a scenario involving high jacking of rollingstock and dangerous goods in the ABC Rail Company SFT. Details and key outcomes of this exercise will be provided in the 2020/21 Safety Performance Report.

Regarding security related occurrence data, as shown in Figure 1 and Graph 1 below, ABC Rail Company recorded a significant increase from 2017/18 to 2018/19 in the number of occurrences related to trespass, particularly Near Miss with Trespasser and Other Railway Trespass. Data for 2019/20 shows a significant decrease in the occurrence rate. Data shown includes normalised data and negative variance is displayed in red text, positive variance is displayed in green text.

Railway Network Security	2017/2018	2017/2018 N (per 100,000 train km travelled)	2018/2019	2018/2019 N (per 100,000 train km travelled)	2019/2020	2019/2020 N (per 100,000 train km travelled)
Railway Trespass - Near Miss with Trespasser	3	0.12	5	0.19	1	0.04
Railway Trespass - Other Railway Trespass	25	1.00	37	1.40	28	1.08
Vandalism	14	0.56	20	0.75	13	0.50





Graph 1 – Trespass occurrence data.

The ABC Rail Company believes that the decrease in the number of occurrences involving trespass in 2019/20 is partially attributable to the enhanced fencing, CCTV and motion detection measures implemented by ABC Rail Company as outlined in Section 3.

Emergency Management Plan

In relation to the ABC Rail Company Emergency Management Plan as required by s113 of RSNL, the ABC Rail Company Emergency Management Plan requires testing of the plans every 3 years. The last in field exercise named Operation 'Stranded 2016' was conducted in 2016 and simulated the destruction of track and isolation of a loaded freight train containing dangerous goods following storms and floodwaters in far north SA.

Following the running line derailment involving a ABC Rail Company freight train on the GNF rail corridor in far north SA on 3 July 2019, ABC Rail Company liaised with the State Government and on 1 September 2019 reached a funding agreement to plan and conduct a multi-agency infield emergency management exercise. ABC Rail Company liaised with the State Government Central Exercise Writing Team to plan and conduct the multi-agency field exercise named Operation 'Containment 2019'. The exercise was conducted on 21 February 2020 and provided an opportunity to test the emergency management arrangements and plans of numerous agencies and ABC Rail Company.

A debrief workshop was held 6 March 2020 and attended by all relevant stakeholders. In summary feedback was the exercise was well planned, implemented and provided an opportunity for greater collaboration between stakeholders. The debrief workshop enabled the identification of 3 corrective actions for government emergency services agencies that were provided in writing to the State Interagency Incident Management Sub-committee. There was 1 corrective action identified for ABC Rail Company:

 ABC Rail Company to ensure online dangerous goods manifests are made available to Emergency Services through the secure ABC Rail Company customer portal (Corrective Action number 2020-005).

Health & Fitness Management Program

In relation to ABC Rail Company Health & Fitness Program as required by s114 of RSNL, ABC Rail Company has a Rail Safety Worker Health and Wellbeing program which is monitored by a dedicated health and wellbeing officer. It is designed and implemented in accordance with the National Standard for Health Assessment of Rail Safety Workers. Health assessments of ABC Rail Company rail safety workers are conducted by a third-party contractor AUSCHECK, a large organisation that performs health services for many corporations Australia wide.

For the reporting period, the ABC Rail Company has:

- 246 Category 1 Safety Critical Rail Safety Workers; and
- 45 Category 3 Safety Critical Rail Safety Workers

The ABC Rail Company has an internal database that allows the monitoring of details and currency of health assessments and provides the health & wellbeing officer with alerts requiring action prior to expiry as controls to ensure that the currency of health assessments is maintained.

For 2019, all rail safety workers had current health assessments as verified by the ABC Rail Company internal audit team.

Drug & Alcohol Management Program

In relation to the ABC Rail Company Drug & Alcohol Management Program as required by s115 of RSNL, ABC Rail Company has a DAMP as part of the SMS. Drug & Alcohol testing undertaken by D&A Test Australia and covers drug and alcohol testing for rail safety workers:

- For all ABC Rail Company prescribed incidents;
- As part of ABC Rail Company's show cause testing policy; and
- ABC Rail Company's random RSW D&A Testing program

For the 2019/20 reporting period:

- There were 15 prescribed incidents reported to ONRSR. This resulted in drug & alcohol testing of 48 ABC Rail Company rail safety workers. All results were negative except 1 occurrence where a positive laboratory reading for medication was identified. This was reported to ONRSR on 14 January 2020. The Chief Doctor at AUSCHECK confirmed that reading was consistent with prescription medication and was not a breach of the ABC Rail Company DAMP.
- There were 3 show cause Drug & Alcohol tests of ABC Rail Company rail safety workers conducted. Of those 1 resulted in a refusal by a worker to undertake testing. ONRSR was notified on 7 April 2020. The rail safety worker involved in that occurrence was disciplined in accordance with the ABC Rail Company DAMP and HR procedures.

There were 250 random Drug & Alcohol tests conducted of ABC Rail Company rail safety workers as part of the ABC Rail Company random D&A testing process. There were no positive results.

A monthly breakdown of D&A testing details undertaken by ABC Rail Company is provided to ONRSR through the submission of monthly reporting data through the ONRSR Portal.

Fatigue Risk Management Program

In relation to the ABC Rail Company Fatigue Risk Management Program (FRMP) as required by s116 of RSNL, the ABC Rail Company has a Fatigue Risk Management Program which is managed by the Safety Division and internally audited by the internal audit team.

For the reporting period 2019/20, occurrence data involving work scheduling breaches of the program is highlighted in Figure 2 and Graph 2 below. A breach of the program involves work being undertaken beyond the permitted working limits of the FRMP.

		2017/2018 N		2018/2019 N		2019/2020 N
		(per 100,000 train km		(per 100,000 train km		(per 100,000 train km
	2017/2018	travelled)	2018/2019	travelled)	2019/2020	travelled)
Work Scheduling breach of the FRMP.	6	0.24	7	0.26	3	0.12

Figure 2 – Safeworking – Network Rule or Procedure Breaches, including Work Scheduling Breaches.

As shown in graph 2 above, in 2019/20 there has been a reduction in the number of occurrences from 7 to 3 for the previous corresponding period. It is believed this improvement has been due to improvements in enhanced rostering software that was introduced throughout the organisation in July 2019.

5 Safety Performance Review

Commentary on the operator's safety performance is intended to provide the Regulator with an overview of how the operator is monitoring the performance of its risk management controls and addressing issues that are identified through this monitoring.

5.1 Response to significant occurrences/events

Commentary on the operator's response, in terms of changes or improved safety controls (safety management system) to any significant occurrences or events that are likely to be of interest to or are being monitored by the Regulator.

As per the ABC Rail Company SMS, the Safety Division of ABC Rail Company is responsible for incident notification, incident response / investigation functions and internal safety assurance activities including compliance checks and safety audits. All intelligence, findings, corrective actions and safety learnings are communicated to the ABC Rail Company risk team and summarised data is presented to the ABC Rail Company Risk Committee and ABC Rail Company Executive Committee to support informed decision making.

All corrective actions identified are recorded in the ABC Rail Company CAS and monitored for implementation by the internal audit team. The ABC Rail Company risk team reviews the effectiveness of corrective actions, provides identification and analysis of trends and to the ABC Rail Company Risk Committee which ensures that risk ratings are reviewed and revised as required by the ABC Rail Company risk management framework.

In relation to the running line derailment on 3 July 2019 in the far north of SA involving a ABC Rail Company train on the GNF rail corridor, the ICAM investigation undertaken by ABC Rail Company found that:

• There was significant damage to 2 locomotives, 39 freight wagons and 3km of track;

- The derailment was likely caused by a broken rail;
- There were identified deficiencies in ABC Rail Company preventative maintenance and reactive maintenance processes that did not readily detect degraded track conditions at the point of derailment; and
- There was a delay in notification to emergency services and obtaining details of the dangerous good manifest. This resulted in approximately a 3-hour delay in establishing the protective cordon around incident response site. It is acknowledged this could have had adverse safety implications if the derailment occurred in an urban environment.

Corrective actions implemented by ABC Rail Company following the derailment include:

- An increase in the frequency of ultrasonic testing from 6 monthly intervals to 3 monthly intervals. (Corrective action 2019-044);
- An internal auditing program to verify and evaluate the adequacy and effectiveness of the ABC Rail Company track inspection process (by Track Inspectors on foot and RRV). (Corrective action 2019-045); and
- Coordination and funding agreement with the State Government to conduct emergency management exercise 'Containment 2019' held on 21 February 2020 (Corrective action 2019-046).

The effectiveness of these corrective actions will be monitored and analysed throughout 2020/21 and commentary will be included in the ABC Rail Company Safety Performance Report for 2020/21.

In relation to the several collisions with rollingstock and persons suspected to be suicide or attempted suicide, ABC Rail Company reported 4 occurrences of suspected suicide (fatal injuries) and 4 occurrences of attempted suicide (serious injuries) during the first 6 months of the 2019 financial year occurring near the ABC Rail Company SFT. This represented a significant increase in the occurrence rate and as a result, on 6 January 2020, the Director Safety requested a level 1 ICAM investigation to be undertaken to identify if there were any systemic safety deficiencies, likely causes for the increase in occurrences and possible measures to mitigate the risk of future occurrences.

The level 1 ICAM investigation undertaken by ABC Rail Company found that:

- 75% of the occurrences involved persons that had absconded from a mental health facility that was recently opened and located within 500m of the ABC Rail Company SFT; and
- The rail corridor fencing outside the ABC Rail Company SFT for 2km was ineffective in deterring trespassers.

Corrective actions implemented by the ABC Rail Company following the investigation include:

- The creation of an interface agreement between the ABC Rail Company, Police and health facility to facilitate the early warning and notification involving patients absconding from the new facility (Corrective action 2019-052); and
- A joint initiative between the ABC Rail Company and the local council resulting in the installation of fencing and CCTV surveillance of a 2km section of the GNF Rail Corridor from the ABC Rail Company SFT (Corrective action 2019-052).

The effectiveness of these corrective actions will be monitored and analysed throughout 2020/21 and commentary will be included in the ABC Rail Company Safety Performance Report for 2020/21.

5.2 Safety Performance – National Safety Data

Commentary on the safety performance as indicated by the data reported into the National Rail Safety Database – this should provide description of anomalies, adverse or improving trends that appear in the data and actions that may be being considered or taken in response to the identified performance decline or improvement.

Given that the Regulator will have access to the data that the operator has submitted to the National Rail Safety Database under the Cat A/B and C reporting requirements, the intent of this section of the report is to provide the operator with the opportunity to demonstrate to the Regulator that any trends or spikes in the performance data are understood and are being addressed.

ABC Rail Company has internal processes in place to monitor and evaluate all incident occurrence data. From further analysis of 2019/2020 occurrence data, ABC Rail Company believes there is

merit in providing additional commentary to ONRSR on occurrence data in relation to track irregularities, rolling stock irregulates and derailments (both running line and yard derailments).

Track Irregularities

In relation to track irregularities, the relevant data is outlined in figure 3 and graph 3 below.

	2017/2018	2017/2018 N (per 100,000 train km travelled)	2018/2019	2018/2019 N (per 100,000 train km travelled)	2019/2020	2019/2020 N (per 100,000 train km travelled)	
Track and Civil Infrastructure Irregularity							
Broken Rail and Rail Defects - Detected Outside of Maintenance Inspections	15	0.60	17	0.64	23	0.89	
Broken Rail and Rail Defects - Maintenance Inspection Detected	6	0.24	8	0.30	9	0.35	
Misaligned Track	13	0.52	15	0.57	18	0.69	
Spread Track	1	0.04	2	0.08	1	0.04	







Figure 3 and Graph 3 above shows an increasing trend in the number of occurrences related to broken rail and rail defects, both detected during and outside of maintenance inspections and currencies involving misaligned track.

It is noted that as outlined in section 4 of this report, following the running line derailment on 3 July 2019 and ICAM investigation, ABC Rail Company implemented an increased frequency in ultrasonic testing (Corrective action 2019-044) and an internal auditing program to evaluate the adequacy and effectiveness of the visual track inspection process (Corrective action 2019-045).

ABC Rail Company will continue to monitor these occurrence trends and evaluate the effectiveness of controls and provide commentary in the 2020/2021 Safety Performance Report.

Rolling Stock Irregularities

In relation to rolling stock irregularities, the relevant data is outlined in table 4 and graph 4 below.

Rolling Stock Irregularity	2017/2018	2017/2018 N (per 100,000 train km travelled)	2018/2019	2018/2019 N (per 100,000 train km travelled)	2019/2020	2019/2020 N (per 100,000 train km travelled)	
Train Parting	2	0.08	4	0.15	4	0.15	
Wheel/Axel Failure	10	0.40	9	0.34	6	0.23	
Defective Bearing	36	1.44	29	1.09	18	0.69	
Braking System	16	0.64	14	0.53	11	0.42	
Other Rolling Stock Irregularity	150	5.99	143	5.39	103	3.97	
Figure 4 – Rolling stock irregularities.							





Graph 4 – Rolling stock irregularities.

The data in Figure 4 and Graph 4 shows there is a noticeable reduction in the number of rolling stock irregularities over the previous 2 corresponding reporting periods. This is particularly evident in the sub-categories of wheel/axle failure, defective bearings, braking systems and other irregularities.

Internal analysis undertaken by ABC Rail Company identified that the primary reason for this improvement is the introduction throughout 2018 and 2019 of the NEXT GEN Freight Wagon class to the ABC Rail Company fleet as part of the ongoing program of rolling stock upgrades. It is anticipated that ABC Rail Company will commence procurement arrangements for the next phase of the upgrade program in late 2021. This will involve the replacement of 50% of ABC Rail Company's locomotive fleet with the remaining 50% to be upgraded by July 2023. It is anticipated that these significant capital investments in rollingstock undertaken by ABC Rail Company will result in further improvement in occurrence data trends related to rolling stock irregularities.

Derailments

Figure 5 and Graph 5 below outlines occurrence data for derailments.

Dersilment	2017/2018	2017/2018 N (per 100,000 train km travelled)	2018/2019	2018/2019 N (per 100,000 train km travelled)	2019/2020	2019/2020 N (per 100,000 train km travelled)
Deraiment						
Running Line	2	0.08	1	0.04	2	0.08
Yard	23	0.92	22	0.83	24	0.93

Figure 5 – Derailments (Running line and yard derailments).



Graph 5 – Derailments (Running line and yard derailments).

As shown in Figure 5 and Graph 5 above, there is no identifiable trend in the occurrence rates of both running line and yard derailments.

ABC Rail Company undertakes a level 1 ICAM investigation for all occurrences involving a running line derailment. All occurrences of a yard derailment are investigated in accordance with the ABC Rail Company investigation framework. ABC Rail Company notes the number of yard derailments.

These include derailments at the SFT in South Australia and at the DPFR in the Northern Territory. The ABC Rail Company Safety Division is currently liaising with the track and engineering team to identify and assess additional treatment options that may result in a reduction in the number of yard derailments.

5.3 Other

The above elements do not provide a full coverage of safety risk management performance, so opportunity will also exist for the operator to provide commentary, supported by analysis as appropriate, on any other safety issue that has been identified and are being addressed. Again, this is intended to demonstrate active management of other significant safety issues by the operator.

As mentioned in section 3 of this report, through the internal monitoring of occurrence data and feedback from security staff and incident response staff, ABC Rail Company is becoming concerned with the apparent emergence of a number of security/trespass occurrences involving members of the public using drone technology on/above or in the vicinity of the SFT, the DPFT and in the GNF rail corridor.

ABC Rail Company is currently liaising with law enforcement agencies both at a state and federal level to discuss this emerging trend and obtain further intelligence on potential controls. Further risk assessment workshops are planned during late 2020 and ABC Rail Company will provide additional commentary in future Safety Performance Reports. In addition, ABC Rail Company is raising this matter at the upcoming 2020 National Rail Safety Convention to promote industry wide awareness and discussion of this potential emerging security/safety issue.

6 Safety Initiatives

Commentary on any significant safety initiatives that will be developed and/or implemented during the coming reporting periods that may not have been covered in the above.

At the June 2020 Board Meeting, the ABC Rail Company Board approved the plan to implement 'Operation 'See something Say something', a safety initiative to encourage timely and accurate incident notification through internal reporting channels and therefore to the appropriate authorities. It is forecast that in the initial phase this may result in an increase in occurrence notifications. ABC Rail Company will be closely monitoring this and will response to any identified trends or safety issues as per the provisions in the ABC Rail Company SMS. ABC Rail Company believes this is a positive initiative that will allow enhanced evidence-based risk management and decision making. Outcomes of this initiative will be reported to ONRSR in future Safety Performance Reports.

7 Future Operational Challenges

Commentary on any future operational changes that are being considered, or have been confirmed, or any external factors impacting railway operations that are likely to significantly change the risk profile of the operator. This is intended to provide the Regulator with an awareness of changes that are likely to be associated with future notification of change or variations to accreditation.

The following details are subject to due diligence and appropriate regulatory approvals. ABC Rail Company is currently in the initial scoping phase on significant expansion and vertical integration via acquisition of existing operators to include freight warehousing, distribution and both rail and port operations in all mainland states in Australia. Further details will be provided to ONRSR as required in due course.

8 Endorsement for Submission

Clear endorsement of the content of the report prior to submission to the Regulator by an appropriate office holder within the rail transport operator.

The 2019/20 ABC Rail Company Safety Performance Report has been authorised for distribution of. by the Director Communications ABC Rail Company and endorsed by the CEO and Board of ABC Rail Company on 28 August 2020.