Guideline

Small isolated line heritage operations – safety management system (SMS)

OFFICE OF THE national rail safety regulator

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Table of contents

1. Purpose 5

2. Background 5

3. Definitions 5

4. Legislative framework 6

5. Scope 6

6. Lessons learned 6

7. Defining context and responsibilities 7

7.1 Scope and nature statement 7

7.2 Governance and organisational structure 7

8. About the SMS 8

9. Contents of the SMS 8

9.1 Elements 2-3 Safety policy and culture 9

9.2 Element 4 Governance and internal control arrangements 10

9.3 Element 5 Management, responsibilities, accountabilities and authorities 11

9.4 Element 6 Regulatory compliance 12

9.5 Element 7 Document control arrangements and information management 13

9.6 Element 8 Review of the safety management system 14

9.7 Element 9 Safety performance measures 15

9.8 Element 10 Safety audit arrangements 15

9.9 Element 11 Corrective action 16

9.10 Element 12 Management of change 16

9.11 Element 13 Consultation 17

9.12 Element 14 Internal communication 17

9.13 Element 15 Training and instruction 17

9.14 Element 16 Risk management 18

9.15 Element 17 Human factors 18

9.16 Element 18 Procurement and contract management 19
9.17 Element 19 General engineering and operational systems safety requirements 19
9.18 Element 20 Process control 20
9.19 Element 21 Asset management 20
9.20 Element 22 Safety interface coordination 22
9.21 Element 23 Management of notifiable occurrences 22
9.22 Element 24 Rail safety worker competence 23
9.23 Elements 25-26 Security management and emergency management 24
9.24 Element 27 Health and fitness 25
9.25 Element 28 Drugs and alcohol 25
9.26 Element 29 Fatigue risk management 26
9.27 Element 30 Resource availability 27
10. Additional references 27
11. Appendix A Example organisational and responsibilities chart 28
12. Appendix B Example technical standard and structures inspection 29

1. Purpose

The purpose of this document is to provide practical guidance to small isolated line heritage operators on meeting the requirements of the Rail Safety National Law (RSNL) for implementing a safety management system. The RSNL sets the same safety requirements for all accredited rail transport operators, but the level of detail required for each operator may be different depending on the scope and nature of their operations.

This guideline compliments the *ONRSR Preparation of an SMS Guideline*. It is intended to provide specific guidance to small isolated line heritage operators on what compliance may look like for their type of railway operations.

2. Background

The RSNL sets the legislative requirements that all rail transport operators must meet to demonstrate they are managing the safety of their railway operations. Key to this is a **Safety Management System (SMS)**.

The SMS is a living, breathing documented system of safety that should be fit-for-purpose and used daily. It has 29 elements that an operator must address, that together should describe what an operator does to manage safety risks. The complexity of the system will be different for each operator, depending on the scope and nature of their operations. Small organisations have safety risks that may be the same as larger ones, but the scale and methods used to manage them may be different.

Small isolated line heritage operators should use this guideline in preparing and reviewing their SMS, and checking that what they've done complies with the requirements of the law.

3. Definitions

Definitions provided by the RSNL and the *Rail Safety National Law National Regulations 2012* (National Regulations) apply within this guideline.

- **RSNL** – means the *Rail Safety National Law* which has been enacted as a Schedule to the *Rail Safety National Law (South Australia) Act 2012 (SA)* as it applies in each state and territory.
- **National Regulations** – means the *Rail Safety National Law National Regulations 2012*.
- **s(number)** - refers to a section of the Act. Example s99 is section 99 of the RSNL.
- **Staff/ employees**– includes volunteers and paid employees or contractors
- **Rail safety worker** – means an individual who has carried out, is carrying out, or is about to carry out, rail safety work. They can also be volunteers and paid employees or contractors.

Where terms are not defined within the legislation or regulations the *Macquarie Dictionary* definition applies.

Use of the word 'should' indicates a recommendation of the ONRSR. However, the rail transport operator is free to follow a different course of action provided it complies with the legislation. Use of the word 'must' indicates a legal requirement where compliance is necessary.

4. Legislative framework

A person must not carry out any railway operations unless they are accredited (s62) or exempt from accreditation (s205) by the ONRSR. Operators must keep their current notice of accreditation or exemption as a public record and reference point for what they can and can't do.

The requirements for the SMS are detailed in the RSNL in sections 99-104. It is a requirement of accreditation that rail transport operators have an appropriate SMS in place, in the approved form. Rail transport operators are legally obliged to implement and then comply with their SMS (s101). The ONRSR can ask operators for documents and information to show they are doing this, and can take action where they are not.

Schedule 1 to the National Regulations sets the requirements for the contents of the SMS. Operators should get a copy of the Act and regulations for their state/territory of operations from the ONRSR website at www.onrsr.com.au/legislation

5. Scope

This guideline does not cover the regulatory requirements in full (such as regular reporting requirements), instead focusing on the core requirement for an SMS. Operators should be familiar with the Rail Safety Duties set out in Part 3, Division 3 of the RSNL and the requirements of their accreditation.

Who can use this guideline?
This guideline is intended only for *small isolated line heritage operators,* which are a type of tourist and heritage operator that have a unique and lower risk profile. These operators:

- do not operate on a mainline or with other rail operators on the same track
- do not connect with any other operator's railway track, but they may interface with roads and the general public
- operate at slow speeds of less than 25 km/h, at limited times and over a small isolated length of track
- may carry passengers
- are often run by volunteers and have a limited and changing workforce
- are usually small and everyone and everything is in one general location
- often have limited resources

6. Lessons learned

Small isolated heritage line operators often face common issues. An effective SMS will contribute to safe railway operations that continue to run safely as people change over time. Key lessons from the ONRSR's audits of small isolated line operators are:

- Keep your safety records and documents in one place
- Protect them and keep them with the organisation not individuals (who may leave)
- Share skills, training opportunities and knowledge with other operators
- Technical expertise is vital for making informed decisions and certifying safety and standards
- You don't have to develop formal technical standards, adapt what exists to your needs and keep a technical library

- You are legally accountable to ensure you and your staff are competent and your railway operations are safe, so do not run your railway until you are confident it is safe to do so
- If you're not sure what the requirements are, call the ONRSR

The ONRSR will audit operators at least once per year and they need to make sure they can demonstrate that their operations comply with the RSNL. How they do this won't always look the same as larger operators and it doesn't have to because each operator has different context and risks.

7. Defining context and responsibilities

As part of the application for accreditation, operators will have prepared a description of their SMS. For small isolated line heritage operators, this is a useful reference for creating and maintaining an effective SMS. In particular, the *scope and nature* and *governance and organisational structure* are short documents that can be referred back to when conducting risk assessments, setting up systems and procedures, and choosing technical standards.

7.1 Scope and nature statement

A fit-for-purpose SMS is about managing the risk specific to your railway operations. Defining the scope and nature of your operation helps to identify your context, what the risks are and how these can impact the safety of your operations. For example, it would identify where your track meets a road so when you are risk assessing a train journey that travels over that track, there is a risk of the train colliding with road traffic.

The scope and nature statement is a written overview, it belongs with your SMS and is a reference point for each risk assessment you undertake and which standards you adopt, as well as being able to identify changes to your operations that require approval (these are referred to as variation of accreditation). It's a reference list of things that may impact on your operations, covering:

- the purpose of the railway operations (why) – the overall boundaries of how, when and why you operate, how operations are funded (in general terms, to ensure capacity to deliver safe operations), the extent that activities are carried out internally or contracted, details of railway assets under the effective control and management of the operator.
- nominate boundaries, limits and restriction of the railway and its assets and personnel, including track speeds, axle loads, daytime running only etc.
- the physical railway infrastructure (what and where) - location of operational and non-operational track, rolling stock types in service and not in service (e.g. diesel, electric, steam, timber wagons), local environmental factors (e.g. extreme or seasonal weather conditions), soil type (e.g. prone to collapse/ erode).
- the railway operations (how and when) - types of operations (freight and/or passenger), frequency of operations, geographic limits of operations, network rules, safety interfaces (road crossings, pedestrians, adjacent land use).

7.2 Governance and organisational structure

The structure of the organisation itself also impacts the systems and processes that need to be in place to make the SMS work. A good starting point is an organisational chart

(example at **Appendix A**), with supporting information to identify the persons responsible for the implementation of the safety management system and the relationship between these persons.

The objective is to document:

- lines of authority and responsibility (including limits of authorities)
- accountabilities for the major roles and for key safety roles
- delegations, including “nominated person/s” for rail safety compliance.

8. About the SMS

The SMS must cater for all foreseeable risks that have arisen or may arise with respect to the scope and nature of the railway’s operation, including but not limited to, the management of assets and rail safety workers. To be able to do this, the RSNL (s99) sets out specific requirements that operators must demonstrate, in summary:

- *before establishing the SMS or when reviewing it (see Element 8 on page 13), or making changes*, all affected workers and others (including WHS and union representatives) have been consulted on the proposed SMS (which also means they’ve been given a chance to input) and kept informed of the outcomes
- the SMS is in writing
- the SMS identifies each person responsible for preparing any part of the SMS, and the person/s responsible for implementing the system
- The goal is to have an SMS that provides direction on how the organisation will identify and control risks, and effectively communicate safety knowledge, which:
- meets the requirements of the 29 elements (Schedule 1 of the National Regulations)
- has been approved by the operator (chief executive/ governing body)
- allows the operator to stay up to date on what risks there are and the impact of these risks (that is, the identification and assessment of risks as per s100 of the RSNL)
- shows how the risks will be controlled (including governance, audits, expertise, resources) and includes procedures for reviewing and changing this (e.g. when there is an incident, what has to be done to fix it and to prevent it from happening again)
- has detailed records of risk assessments for each risk and a risk register
- is being used correctly (e.g. there are meeting minutes, incident reports, and updates to risk management practices that show safety information is being reported and acted upon the way it is meant to be)

These goals may be achieved by going through and addressing each element of the SMS.

9. Contents of the SMS

This section goes through each element of the SMS and provides examples of how small isolated line heritage operators may demonstrate compliance. Depending on where the operator’s risks are, some elements may be more detailed than others and ONRSR would expect to see that the SMS has been tailored to suit the risk (as per regulation 16).

Some examples provided may demonstrate compliance with more than one element, which is normal for small operators and these things only need to be done once (e.g. a single asset inspection schedule can be used for elements 19 and 21). Equally, some requirements apply to all elements, such as risk management.

Overall, good risk management, competent people, using the organisation's collective knowledge and communication are the keys to an effective SMS. The SMS does not have to be sophisticated and often the smaller the organisation, the simpler it is.

Small isolated line heritage operators should go through this section with *Schedule 1 – Content of safety management system* in the National Regulations, which provides the specific requirements for each element.

Guide to this section

Aim - clarify the requirements to sum up what the operator should be aiming for
What this may look like - examples and the types of evidence that may show compliance (specific to a small isolated line heritage operator)
Legal requirements - references the direct legal requirements in the Act and regulations

Indicates there may be a reporting requirement

Indicates a key requirement

Any reference in the requirements to the chief executive and governing body of the rail transport operator also means any other person or body that has control of the rail transport operator, if those specific titles don't apply (for example, President or Chairperson). The term used throughout this guidance is the chief executive/ governing body.

9.1 Elements 2-3 Safety policy and culture

Aim - The organisation's commitment to ensuring safety is in writing, visible, and promoted, and staff act in accordance with safety being a priority.

What this may look like

- A written statement that sets the expectation for safety. For the size of operations, depending on where the risks are, there might be one policy that covers all the elements where policy is required (e.g. fatigue, drug and alcohol, asset management etc)
- Evidence that this has been shared with personnel (for example, it's on display or in an induction book) and supported when tested, for example, a decision not to run rolling stock one day, because it is overdue for a maintenance inspection, was supported. This may be a policy displayed in a prominent place in the workplace.
- Staff and managers take opportunities to improve safety (e.g. changes to safety procedures to increase safety are proposed and accepted)
- Safety concerns of staff and members are recorded, acknowledged, acted on, and closed-out and monitored by management.
- A willingness to invest in safety, for example, personal protective equipment (PPE) is provided to all workers with the strict requirement that it is to be worn onsite
- Any notifiable occurrences (as per regulation 57) were reported to the ONRSR

- When the ONRSR asks, staff at various levels confirm that the organisation openly encourages safety feedback from all levels and issues can be reported without retribution

Never assume everything is going well !

Legal requirements

- National Regulations – regulation 17, schedule 1 cl 1-3

9.2 Element 4 Governance and internal control arrangements

Aim - Chief executive / governing body (or equivalent) have the necessary information to know what the risk profile is on any given day, and there is a documented system in place for ensuring they are informed to make good safety decisions.

What this may look like

- Chief executive/governing body can provide a current scope and nature statement
- Chief executive/governing body is aware of non-compliances or other compliance reports issued by the ONRSR and there is a process for these to be reported to them
- Key safety roles regularly report on their area of responsibility (including any new or changing risks, emerging safety issues, verification of maintenance activities and issues, any waivers from existing standards or procedures that may affect safety, update on corrective actions)
- Meeting records or other evidence that the chief executive/governing body is routinely collecting and analysing safety data including but not limited to, incident and near-hit reports (not limited to notifiable occurrences), internal & external audit reports; close-out of safety related corrective actions; timely completion of investigations; maintenance of assets has been successfully completed to schedule; worker competence and health records; D&A reports
- Chief/executive manager can obtain the status of each unit of rolling stock, what rolling stock is truly in operation, what is out of service for restoration and maintenance, and what is unserviceable (possibly removed from active service as static display only or kept for spares)
- Chief executive/governing body can assure the ONRSR of asset maintenance, for example, by showing that they manage an organisational calendar that shows when each asset was inspected, is due to be inspected and what level of inspection is required
- A process for ensuring decisions are implemented (for example, actions from meetings are given to relevant people and reported back to each meeting until complete)

Legal requirements

- National Regulations –schedule 1 cl 4

Certifying railway operations are safe on any given day

An SMS in action can be seen in a single operating day. An example of the reporting lines and responsibilities as they come together on an operating day is at **Appendix A**. In this example, the decision to run rolling stock is made after each responsible manager (or managers) have confirmed that their area of concern is in order and the assets, personnel, and the operation under their control is safe and meets all of the relevant standards. The roles and responsibilities are examples only, but may be a good framework for small isolated line heritage operators. Where this framework has been used correctly, there should be some supporting written evidence so the chief executive/governing body can show that:

- they only run when the responsible and competent persons (e.g. Track Manager, Rolling stock Manager etc) have confirmed it is safe to do so
- they have implemented systems and processes to ensure all railway operations and maintenance activities are conducted under the strict oversight of competent people
- in the case of assets, the responsible person has verified that all maintenance activities have been carried out on time and in accordance with the organisation's standards and procedures
- all rail safety workers working on a running day are competent for their tasks, healthy, free of drugs and alcohol and they are not fatigued
- persons responsible for safety have the authority to stop rail operations if they form an opinion that rail safety may be compromised

A daily checklist, signed by each responsible person and kept by the chief executive/governing body, is a good way to demonstrate safety assurance on any operating day.

9.3 Element 5 Management, responsibilities, accountabilities and authorities

Aim - define the roles of people who have safety responsibilities or do rail safety work are defined and allocated with reasons for these decisions, and fit together to ensure everyone has the information and authority to do their jobs.

What this may look like

> A written statement (may be part of the safety policy in element 2) about the expectations for allocating roles (these represent your policies), for example, any person certifying safety must have technical qualifications to assess safety

> An organisational chart showing key safety roles and how they relate to other roles

> Duty statements of key safety roles that detail the roles responsibilities, accountabilities, authorities and any limit of authorities (for example, a maintainer can fix something but may not be authorised to certify it is fit to go). Additionally, if a key safety role is required to carry out other activities during abnormal, degraded or emergency modes, and ensure those additional responsibilities, accountabilities, authorities are also captured in the duty statements

> A list of roles and their required competencies (competency register) and associated records, such as personnel files, that show what competencies are required and that the people in those roles have those competencies (e.g. training certificates and other assessments)

- Templates or procedures for reporting safety issues to the roles with authorities to decide on them, and records these are being completed (may be as simple as a maintenance checklist that is completed by the technician and provided to the person who decides whether to run operations that day)
- The role description and authority has been signed by the person in the role, showing they know what is expected from them

Legal requirements

- National Regulations –schedule 1 cl 5

9.4 Element 6 Regulatory compliance

Aim - there are systems and procedures to identify and comply with safety requirements of the Rail Safety National Law.

What this may look like

- The operator has a copy of the latest RSNL Act and National Regulations (printed or electronic – these are available on the ONRSR website)
- The SMS includes references to relevant parts of the legislation to make sure all requirements are met, for example, for element 16 Risk Management, there is a checklist of what the operators must do when conducting a risk assessment based on what is set out in section 100 of the RSNL)
- When the operator receives an email from the ONRSR with an update to the legislation or another requirement, they have passed it on to relevant people and systems have been updated
- The operator has a copy of the Notice of Accreditation and clearly understands the boundaries and limitations of the accreditation (for example, proposed changes have been considered against the requirements for variation of accreditation in s68 of the RSNL) and ensures these decisions are only made by the chief executive/governing body
- Workers are aware of their safety duties (section 56)
- Responsibility for identifying safety requirements and ensuring compliance have been clearly allocated (for example, in the organisational structure it is the responsibility of the key contact – as provided to the ONRSR – to pass on ONRSR updates)
- Periodic internal audits check that the organisation is operating within its accreditation (may be part of element 10 safety audit arrangements)
- Audits are documented and reported to the chief executive/governing body

Legal requirements

- National Regulations –schedule 1 cl 6

Competence of chief executive/ governing body and key safety personnel

Having the skills and qualifications to oversee safety is important to making good safety decisions and ensuring compliance with individual safety duties under the RSNL. It is the chief executive/governing body's responsibility to ensure that personnel who hold key positions in the organisation hold the appropriate skills and experience to successfully execute their roles, including managers.

What this may look like

- Chief executive/governing body has verified the qualifications, skills and experiences of personnel holding key safety roles, including reference checks where appropriate Managers and personnel who hold key safety roles have the appropriate level knowledge, skills, experience and attitude to successfully manage their role and execute their duties
- Where rail safety work is to be undertaken then competencies are assured as per section 117 of the RSNL (also element 24 of the SMS)
- Chief executive/governing body is monitoring the performance of personnel holding key safety roles
- Chief executive/ governing body has systems and process to ensure that only appropriately competent and experienced and personnel hold these roles and the chief executive/ governing body is actively monitoring the performance of personnel holding these key roles
- This extends to all staff, including personnel who sign-off on safety plans and corrective actions, sign-off on asset fitness for service certification and, personnel who sign off on the introduction of new, or modified, safety procedures, and changes to track, rail infrastructure or rolling stock
- All responsible staff have a good mix of qualifications and experience to do their jobs and ensure good safety decisions

Legal requirements

RSNL Act – section 52, 65 (competence and capacity)

9.5 Element 7 Document control arrangements and information management

Aim - Safety records and information (such as the SMS) are kept and used by the organisation to manage safety, staff can access them but changes can only be made by authorized people.

What this may look like

> Safety records must include detailed risk assessments (see element 16) and records of competency (regulation 30)

> Files have password protection to make changes and only authorized staff have the passwords

> Staff know how to access safety documents – for example, the latest list of safety documents which includes who to ask to get a copy is displayed for all staff

> Records and information are dated (so you know when the latest version was) and kept in a central place that's protected from loss or damage (including fire/flood etc) as much as possible

- Official versions of documents are clearly authorized (such as a signature) for use and documents within the SMS are formally introduced; distributed, withdrawn or amended
- Official backup files are kept of key safety documents (it's good practice to keep several backups, including offsite)
- All documents and records associated with the SMS are correct, complete and available for the management of rail safety, including but not limited to; standards, engineering drawings, maintenance checklists, incident report, audit and investigation reports, inspection records, asset defects records, personnel records, competency records, risk assessments, minutes of meetings, policies, procedures

Legal requirements

- National Regulations –schedule 1 cl 7

9.6 Element 8 Review of the safety management system

Aim - The SMS is routinely reviewed and a Safety Performance Report is submitted to the ONRSR by the date set in the Notice of Accreditation (usually once a year).

What this may look like

- Dates for the review are scheduled in the calendar and there is a checklist for the review (representing a process) against the items listed in regulation 17(2-4) above
- The chief executive/ governing body is responsible for the review, but someone else may conduct the review for their approval
- Evidence can include handwritten or typed (any format) meeting notes, updated SMS documents, records of the feedback received during consultation, and the resulting actions
- Evidence should also show the last review was reviewed, as well as what has happened since then, including any safety incidents, breaches, audits, investigations (also look to what's happened to similar operators for anything relevant)
- Updated risk assessments and controls resulting from the review are in the risk register, and can also be shown in use
- There is a process for reviewing the SMS and someone is responsible for conducting the review and making updates
- Only one safety performance report is due each year, but an operator may conduct many reviews (for example, each week or month selected parts of the SMS are reviewed). The report should include a summary for the reporting year (for more information refer to the *ONRSR Safety Performance Reporting Guideline*)
- The safety performance report is submitted on behalf of the rail transport operator so it should be reviewed and approved by the chief executive/ governing body
- The operator should keep all documents for the review as well as the safety performance report – the safety performance report should summarise what the review found

Operators should go to the current version of the RSNL Act and check section 103 for the list of what is required in the safety performance report.

Legal requirements

- RSNL Act – sections 99, 102, 103
- National Regulations – regulation 17, schedule 1 cl 8

9.7 Element 9 Safety performance measures

Aim - Safety performance is measured and meaningful to monitor the success of safety management

What this may look like

- For small organisations with few incidents and small scale operations, indicators need not be a long list
- There should be indicators for key safety activities that enable the chief executive/governing body to quantify the monitoring of safety.
- It is good practice to have lead indicators such as measuring the number of internal audits carried out as planned, the number incidents reviewed or investigated within a suitable time, the number of corrective actions effectively closed out within a suitable time, the number of safety meeting held as specified, etc
- Lag indicators such as the number of incidents are a count of things that went wrong and counted after the fact, and although lag indicators have their place, operators should seek out lead indicators that help gauge the success of their safety management.
- Indicators may be recorded in any way but it may be useful to include a report in regular management meetings for routine review.
- Chief executive/manager should be aware of the trends to safety performance indicators.

Legal requirements

- National Regulations –schedule 1 cl 9

9.8 Element 10 Safety audit arrangements

Aim - Audits are routinely undertaken to check that procedures and other requirements in the organisation's SMS are being followed

What this may look like

- Audits prioritise where the greatest safety risks are, for example, if the biggest risk is that ageing infrastructure will fail then there are more audits to check that the maintenance and inspections schedule is being followed
- Audits are undertaken by skilled persons (not necessarily certified auditors) other than those responsible for the area, task or procedure to ensure independence. This can be within the organisation or by someone from outside, for example, by sharing resources or swapping auditing with another heritage railway operator
- The audit procedure should include getting the list of safety documents and other safety records (such as incident reports)
- There is a formal audit schedule as part of the audit program
- The audit program and schedule may be combined with the review of the SMS if that is easier for scheduling, but there should be a record that this is how it is done (for example a 'review/audit schedule')
- Internal and external audit reports are kept, any corrections or changes made, and responsible staff have been informed of the outcomes

Legal requirements

- National Regulations – schedule 1 cl 10

9.9 Element 11 Corrective action

Aim - Any safety issues are fixed and there is a procedure for doing this

What this may look like

- An example of a corrective action is changing a safety control after there was almost an incident, which showed the current control needed adjustment
- Written instructions for recording any corrective actions taken, how these are tested (reviewed), and implemented (which includes identifying who is responsible). For example, in determining a corrective action a risk assessment is conducted, the action is then discussed with workers for their views, the action and how it will be implemented is reviewed and approved by the responsible manager, all affected staff are informed and trained on any updated procedures
- There is a list or other record of corrective actions and their status, which shows they have been identified, reviewed, monitored and closed by the chief executive/governing body (not the staff themselves)
- A procedure for giving priority to the greatest safety risk might include to add corrective actions to the regular safety meetings for the chief executive/ governing body to consider with other safety issues (such as audit reports, notifiable occurrences etc)
- The chief executive/ governing body has approved its closure and authorised updates to the SMS as required

Legal requirements

- National Regulations – schedule 1 cl 11

9.10 Element 12 Management of change

Aim - Change is identified and managed to ensure safety, and reported to the ONRSR if required

What this may look like

- Minutes of meetings or demonstrated awareness to show that proposed changes are decided by the chief executive/ governing body
- Change decisions must be considered against their accreditation and the scope and nature of their operations, and supporting risk assessments of the effects of the changes and proposed safety controls (including long term impacts)
- Consultation is undertaken (element 13) and rail safety workers and employees are informed and trained to understand and deal with the proposed change (element 15), including being clear on their roles and responsibilities
- Chief executive/ governing body is familiar with the requirements for a notification of change and variation of accreditation (see the *ONRSR Notification of Change Policy*) and complies with these as required
- Any change that may affect risk, such as modifications to ageing assets, are updated on the risk register
- The change is reviewed, for example, as part of the review of the SMS

Legal requirements

- RSNL Act – section s 68-72, 99
- National Regulations – regulation 9, schedule 1 cl 12

9.11 Element 13 Consultation

Aim - Affected people are consulted when the SMS is reviewed or changed

What this may look like

- As part of the review of the SMS procedure, there is a list of who must be consulted (fitting the criteria in section 99(3) of the RSNL) and consultation is scheduled into the review process (element 8)
- All stakeholders are included and given the opportunity to input
- A good starting point for identifying internal stakeholders would be the organisational chart
- The scope and nature statement and any interface agreements may be a useful reference for identifying external stakeholders
- The same list of affected people (for a small organisation this may be all employees) may be used in the management of change
- Consultation may be in any form but must be documented (such as an agenda and minutes)

Legal requirements

- RSNL Act – section 99
- National Regulations – schedule 1 cl 13

9.12 Element 14 Internal communication

Aim - There is a system and procedure in place for informing staff at all levels, and contractors, about safety

What this may look like

- For a small organisation, internal communication should be fairly simple. Examples may include a new staff induction, displaying the safety policy of the premises, keeping relevant training manuals from the SMS with the work areas etc
- An example for contractors may be a sign in procedure which includes a briefing on safety requirements and how to report a safety issue whilst on site
- Encouraging staff to share safety stories, either formally or informally, is also part of good communication and a positive safety culture (element 3)

Legal requirements

- National Regulations – schedule 1 cl 14

9.13 Element 15 Training and instruction

Aim - Staff with safety responsibilities are trained and instructed on how to meet their safety responsibilities

What this may look like

- For example, there is a ‘new employee’ procedure where new employees are trained on the SMS and their safety responsibilities
- As part of the management of change, corrective actions and any other changes that impact the SMS staff that need training are identified and there is evidence they were trained (as required) on anything new or different. For example, if the SMS was reviewed and it was agreed (including through consultation etc) that workers could no

longer bring their children into the workshop, then this was emailed to workers and a sign has been put up at the workshop entrance.

- When asked, staff demonstrate that they understand the risk they may encounter
- Note: there may be similar requirements under work, health and safety legislation

Legal requirements

- RSNL Act – section 117
- National Regulations – schedule 1 cl 15

9.14 Element 16 Risk management

Aim - Safety risks are identified, assessed, and eliminated or controlled.

What this may look like

- A risk register may be in any format (for example, an excel spreadsheet or word document or other)
- A procedure for risk identification that makes sure all parts of the organisation are carefully considered, including technical, operational and organisational issues (such as loss of expert staff)
- A comprehensive risk assessment must provide the link between, the likelihood of the hazard being realised, the severity of the consequence of the hazard if realised and is expressed as risk (ie: risk = likelihood and consequence). It should include considerations for normal, abnormal, degraded and emergency situations.
- Risk identification and assessment should reference the scope and nature statement, which provides the framework for assessing against
- Workers and other stakeholders have input to the risk management process
- Systems and procedures to ensure the register is up to date may include the review of the SMS
- The chosen controls and the reasons for choosing them are documented, including the reasons for not choosing other controls
- Risk control measures are effective and in place
- The method used to manage risk is proven good-practice and provides for a depth of defences
- Where there is a positive safety culture, the whole organisation seeks out risks and ensures safety *so far as is reasonably practicable*

Legal requirements

- RSNL Act – section 46, 47, 99, 100
- National Regulations – schedule 1 cl 16

9.15 Element 17 Human factors

Aim - A wide range of issues affecting how people perform tasks in their work and non-work environments are taken into account

What this may look like

- As part of the risk assessment process, the impact of people is considered as they may be the safety risk. This includes consideration of how people do their work and how the working environment may contribute to human error, and how people will safely interact

with machinery and systems. For example, a driver losing consciousness is a risk that may increase the likelihood of derailment or collision.

- Inclusion of a 'human' consideration in the procedure for risk assessment with evidence this has been well considered when conducting a risk assessment. For example, the control for a driver losing consciousness is to ensure that drivers do not have health issues that may increase the chance of this
- The operator can demonstrate that they consider the effects the operational tasks and equipment have on the performance of their rail safety workers. For example, by assessing the number of activities a driver is expected to carry out at the same time and minimizing this to avoid distraction

Legal requirements

- National Regulations – schedule 1 cl 17

9.16 Element 18 Procurement and contract management

Aim - To ensure safety is maintained in a contract arrangement, including that roles and responsibilities are clearly defined and agreed

What this may look like

- If contracting is not applicable then no action is required though it's advisable to keep a copy of the requirements in case this changes in the future
- The rail transport operator has maintained responsibility for the safe conduct of their railway operations, despite whether activities are contracted or undertaken 'in-house' (ie contractors should comply with their SMS)
- Contractors are treated like part of the organisation and know what their safety requirements and responsibilities are to comply with the SMS
- Chief executive/ governing body has a list of things to consider when considering a contract that meets these requirements (the *ONRSR Effective Control and Management Guideline* has a checklist) and whether the end product or service meets their needs

Legal requirements

- RSNL Act – section 262
- National Regulations – schedule 1 cl 18

9.17 Element 19 General engineering and operational systems safety requirements

Aim - A documented set of standards and procedures for engineering and operational systems safety, suitable to the railway operations.

What this may look like

- There are technical standards for (at least) the following areas:
  - Rail Infrastructure (e.g. at what point is the gauge spread sufficient to cancel rail operations)
  - Track – rails, sleepers, fixings, joints, plates, bolts, ballast, formation, and drainage (e.g. what types of ballast are needed)
  - Other railway infrastructure – bridges, culverts, retaining walls, station platforms, signals, booms and gates (e.g. maximum axle load over bridges)
  - Rolling stock (e.g. braking capability is sufficient for size of rolling stock)
  - Operational system i.e. rulebook

- For all of the above railway assets the operator must have documentation where relevant including (but not limited to):
  - Asset description and location
  - Technical performance specifications and drawings
- Standards and procedures that have been taken from other sources or developed (where manufacturer's standards aren't available) have been reviewed and assessed by the responsible competent person(s) to be appropriate for the specific infrastructure and operations in use.
- Standards, procedures, test/checklists and engineering drawings are available for each of their assets, and these form part of the SMS (remember these may be as complex or simple as they need to be).

Legal requirements

- National Regulations – schedule 1 cl 19

9.18 Element 20 Process control

Aim - To ensure that engineering and safety standards and procedures (element 19) are being complied with

What this may look like

- Evidence, such as maintenance records and/or reports, that rolling stock is inspected and maintained in accordance with the chosen standards. For example, a calendar that marks out when rolling stock must be serviced (maintenance schedule) what type of service is required (this may change as parts age), and that it has been completed (maintenance report).
- Records that show that standards have been maintained over time, for example, through staff changes
- Equipment that is used in maintaining equipment is checked that it is fit for purpose and correctly calibrated. For example, the gauge bar is checked to ensure it isn't bent and incorrectly measuring.
- Formal records, including sign-off on safe-to-operate are completed and stored – Examples of these are at **Appendix B**

Legal requirements

- National Regulations – schedule 1 cl 20

9.19 Element 21 Asset management

Aim - An asset management policy and processes to ensure that rolling stock and rail infrastructure are fit for purpose, from acquisition, use, to decommission

What this may look like

- Written descriptions of the requirements that eliminate or minimise risk to safety for rolling stock and rail infrastructure through:

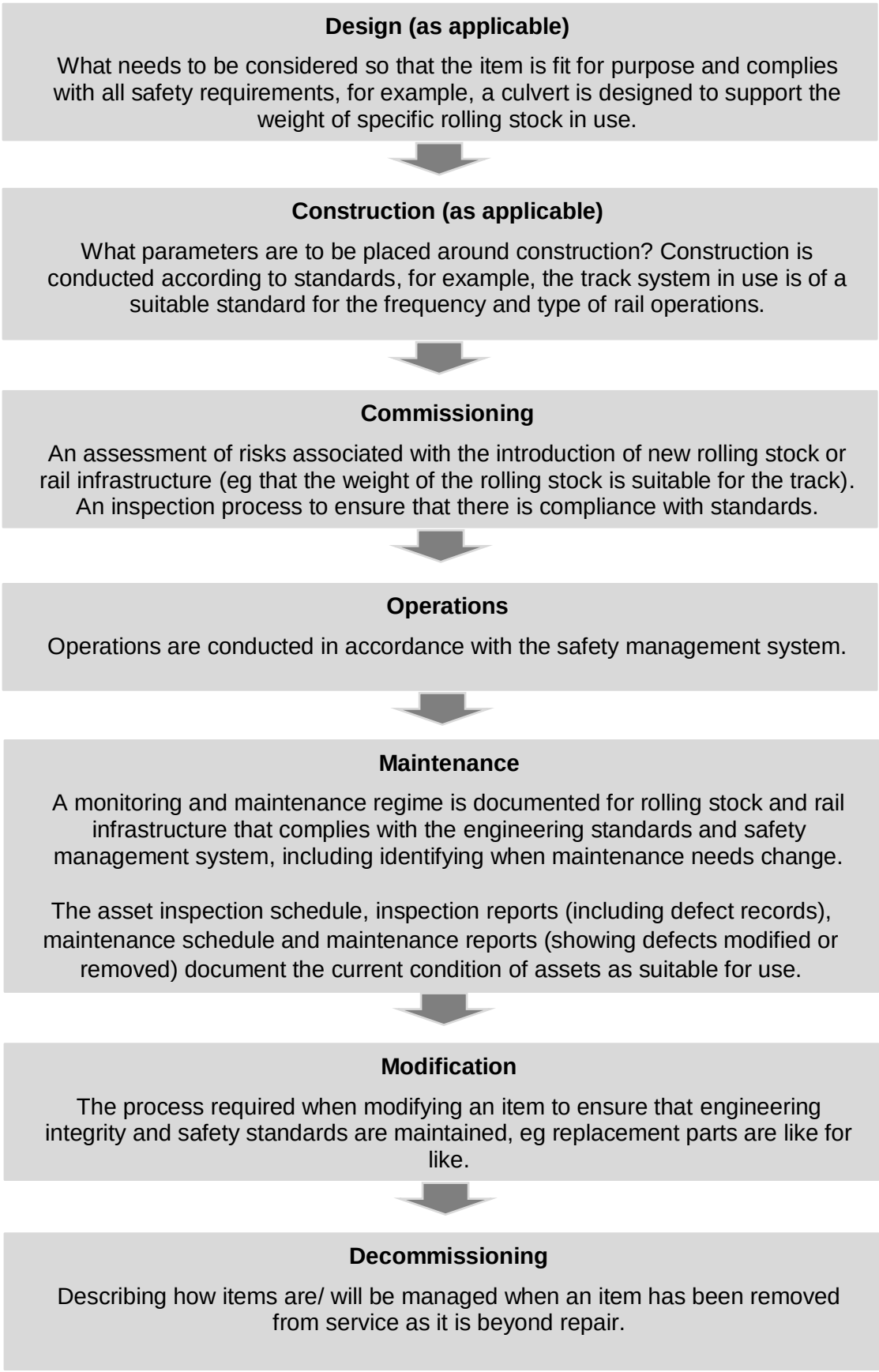


Figure 1 - a useful reference is the *ONRSR Asset Management Guideline*.

9.20 Element 22 Safety interface coordination

Aim - Safety risks at interfaces with roads are identified and managed in a coordinated way

What this may look like

- An interface agreement (for safety) is in place with the road manager for any connected road, including pedestrian crossings
- The agreement must support the evaluation, testing (for example, testing boom gates after a long period of disuse) and (where appropriate) revision of measures in relation to identified risks and incidents considered; the responsibilities of the parties for these; procedures for communications with each other; and a process for keeping the agreement up to date (section 105(1) of the RSNL)
- Where the public/patrons have easy access to track the risk of railway operations on operating days should be considered and assessed (for example, where there are irregular operations it may be necessary to alert people that operations are now active)
- Supporting procedures (these may be addressed through other SMS elements) for meeting the requirements of any interface agreements (for example, to assess risks at an interface the risk management procedure is followed with input from the other party)
- When asked, the rail transport operator can demonstrate that they understand their activities across the interface and supporting safety considerations

Legal requirements

- RSNL Act – section 105-111
- National Regulations – schedule 1 cl 22

9.21 Element 23 Management of notifiable occurrences

Aim - Safety incidents (“notifiable occurrences”) are managed, investigated and reported internally and to ONRSR

What this may look like

- The organisation is receiving and acting on incident and near-hit reports received from all personnel and stakeholders
- Written instructions that list what notifiable occurrences are (as listed in regulation 57), the instruction for any workers involved in a notifiable occurrence to call the chief executive/ governing body and the ONRSR immediately, and to preserve the scene (also involve ambulance/ police where necessary)
- An incident register/list is kept up to date
- Staff are trained and aware of their internal reporting responsibilities (and external if they are to report to ONRSR). For example, induction includes going through the process of what that person must do if there is an occurrence
- Evidence of investigation of notifiable occurrences (such as staff reports and technical reports reported to the chief executive/ governing body and any corrective actions have been followed through)
- Note that it is good practice to investigate all incidents, not just notifiable occurrences
- New risks or emerging trends are reflected in the organisations risk register and associated risk assessments

- Records of written reports provided to the ONRSR have been kept and there are related updates to the incident register, and (if required) updates to the SMS (possibly as per the corrective action procedure in element 11)

Legal requirements

- RSNL Act – section 121
- National Regulations – regulation 57, schedule 1 cl 23

Operators must use the *Notifiable Occurrence form* to provide written reports of category A and B occurrences to the ONRSR within 72 hours. Note that category A occurrences must be reported immediately (via the ATSB) by phone to 1800 011 034.

9.22 Element 24 Rail safety worker competence

Section 117 of the RSNL makes it a legal requirement that the rail transport operator has ensured that rail safety workers are competent and there are records of this. This is critical to each element of the SMS, particularly for any technical or asset maintenance work or certification.

Aim - A competent workforce is deployed

What this may look like

- A register or list which shows what rail safety work is performed by personnel, including contractors, volunteers or visitors
- This work has been risk assessed and the skills and qualifications necessary for the tasks have been identified (including review of the Australian Qualifications Framework to see if it is practicable to get training under this)
- The assessment should include when the task involves normal, abnormal, degraded and emergency situations
- Personnel records with evidence that the worker has the necessary skills and qualifications (such as certificates issued under the Australian Qualifications Framework or reference checks to confirm experience) for the rail safety work they are doing
- The competency of each rail safety worker aligns with their allocated responsibilities and accountabilities

Records must have details of (as per regulation 30):

- the rail safety training undertaken by each rail safety worker, including when the training was undertaken and its duration; and
- the qualifications and competencies of each rail safety worker, including, if applicable—
  - the units of competence attained by the worker; and
  - the level of qualification attained; and
  - if and when a re-assessment of competence is to be conducted; and
  - if and when re-training is due; and
  - the date any re-training is undertaken; and
- the name of the organisation who conducted the training or re-training; and
- the name and qualifications of the person who assessed the competence of the rail safety worker.

Each rail safety worker must also carry identification that an officer of the ONRSR can use to confirm who the person is and check their competencies with the operator (section 118)

Legal requirements

- RSNL Act – section 117, 118
- National Regulations – regulation 30

9.23 Elements 25-26 Security management and emergency management

Aim - Security and what to do in case of emergency have been considered and plans are in place to protect staff and passengers and reduce the impact of an emergency

These plans need not be long but there should be evidence that the main situations have been identified and plans are in place with people who have responsibilities under them

What a security management plan may look like

- A list of risks and measures to protect people (staff and passengers) from theft, assault, sabotage, terrorism and other criminal acts of other parties and from other harm and how these will be managed (security management plan). For example, a risk may be that the track is sabotaged to cause an accident, this may be mitigated through checking the track as part of the procedure for checking that operations are safe prior to running on any given day
- As with any risk, the responsibilities for managing it should be allocated (perhaps listed in role descriptions and in the risk register)
- Security incidents are included in the procedure for reporting a safety incident, so there is a procedure for recording, reporting and analysing these (for example, as a notifiable occurrence and/or as part of the review of the SMS) and reporting occurrences to the Operations Manager
- The plan identifies other relevant parties and they are consulted as necessary. For example if a security risk is 'sabotage of a railway crossing', then it may be included on the interface agreement when discussed with the road manager(s) and railway Operations Director.

Legal requirements

- RSNL Act - section 112
- National Regulations - regulation 18, schedule 1 cl 25

What an emergency management plan may look like

- A list of possible risks that could cause an emergency and the consequences if they happened, for example, what if the bridge collapsed and the train derailed into the river below?
- With the list should be the methods for minimising the effects of the emergency, for example, a procedure is in place for the first person on site to call emergency services and the chief executive/governing body (this could be as simple as instructions in the driver's cabin with the emergency services phone numbers)
- Any response procedure should include a list of phone numbers and contacts for each type of emergency, for example, fire services, the gas/electricity company
- Evidence that emergency services were involved in preparing the plan.
- Accompanying procedures for keeping, maintaining and testing the plan
- Staff have been briefed on the plans and they are tested routinely in-house and with relevant emergency services

- All employees and contractors and external agencies have been provided with a copy of the plan

Legal requirements

- RSNL Act - section 113
- National Regulations - regulations 19-20, schedule 1 cl 26

9.24 Element 27 Health and fitness

Aim - Rail safety workers are fit for duty as per the *National Standard for Health Assessment of Rail Safety Workers*

What this may look like

- There are risk assessments of rail safety work (for example, what would be done for competency) and rail safety worker health assessment categories have been selected in accordance with the *NTC National Standard for Health Assessment of Rail Safety Workers*
- There is a routine process for ensuring that rail safety workers have the required level of physical and mental health and fitness to undertake their work and this is checked periodically
- Records in personnel files of health assessments

Legal requirements

- RSNL Act - section 114
- National Regulations - regulation 27, schedule 1 cl 27

The *NTC National Standard for Health Assessment of Rail Safety Workers*is available from the ONRSR website.

9.25 Element 28 Drugs and alcohol

Aim - The risk of drugs and alcohol are managed to ensure they do not impact railway operations

What this may look like

- Policy, processes and records are maintained that support the organisation's monitoring of rail safety workers for the effects of drugs and alcohol and prevent affected personnel from carrying out rail safety work
- Similarly this recognises prescription medications that are required for rail safety workers to do their jobs effectively, for example, insulin
- At induction and periodically, rail safety workers are provided with a written statement or set of rules and briefing about the expectations for drugs and alcohol in the workplace (for example: any workers that come to work hung-over will be immediately relieved of their duties that day)
- Rail safety workers are aware of the organisation's requirements and disciplinary procedures, as well their legal requirements (for example, under section 128 of the RSNL they may be prosecuted for attempting to do rail safety work with any presence of alcohol in their system)
- Rail safety workers are reporting prescription medication or drug and alcohol related problems that may impact the safety of the railway operations, and the person allocating work is managing them appropriately (for example, by allocating low risk work to them)

- A program for testing drugs and alcohol (internally or by a contractor), and procedures for doing so and managing the results, is in place and is based on a risk assessment of drugs and alcohol in the workplace (for example, if there is almost no risk that rail safety workers will be under the influence, then testing may be less often)
- Only authorised people have access to (and do not share) personnel records to make sure that personal information about drug and alcohol testing, counselling, treatment or rehabilitation are kept confidential
- Monthly returns include details of drug and alcohol testing

Legal requirements

- RSNL Act - sections 115 and 128
- National Regulations - regulation 28, 56, 57 (occurrence reporting), schedule 1 cl 28 (note there are additional requirements for operations in NSW)

Also refer to the ONRSR's *scalability of drug and alcohol management program requirements* fact sheet for examples of how the program can be suited to different risks.

The *Monthly Return form* is available on the ONRSR website and must be completed and submitted for each month of accreditation.

9.26 Element 29 Fatigue risk management

Aim - The risk of fatigue is managed to ensure it does not impact railway operations

What this may look like

- Policy and procedures are maintained that support the identification of workers affected by fatigue and describe what actions the operator will take to ensure rail safety workers are free of fatigue before carrying out rail safety work
- An example of a process may be that workers are asked about any other work or activities they have routinely, when preparing rosters and are also required to notify the chief executive/ governing body where that changes
- Risks from workers who commute long distances or work long hours should be considered as part of the identification of workers (in particular those workers who may have worked somewhere else before coming to work for the operator)
- Rail safety workers are aware of the operator's requirements and are not affected by fatigue before they carry out rail safety work or the effects have been managed (for example, they have been given lower risk work for that day)
- Evidence that the types of risks that must be considered (listed in regulation 29) have been and any changes to rostering have been made accordingly
- Operators in NSW comply with schedule 2 of the National Regulations

Legal requirements

- RSNL Act – section 116
- National Regulations - regulation 29, 57 (occurrence reporting), schedule 1 cl 29, schedule 2 (note there are additional requirements for operations in NSW).

Also refer to the ONRSR's *scalability of fatigue risk management program requirements* fact sheet for examples of how the program can be suited to different risks.

9.27 Element 30 Resource availability

Aim - A good estimate of the resources to implement and maintain the SMS, including people and equipment required, can be demonstrated and there are plans in place for ensuring these resources. For example, what happens if you only have five people and you need six?

What this may look like

> A starting point may be the evidence for competence and capacity provided in the application of accreditation

> An example of a procedure for estimating may be an instruction, written statement or notes to go to the risk register to identify what controls are necessary to ensure safety, and listing the people, asset and financial resources required from that. It may also be evidenced in a business plan.

> If the SMS cannot run without certain maintenance skills, for example, then there should be a plan in place to ensure those skills are always available (such as training more than one person) and, if they are not then a process in place for ensuring safety (for example, a contractor will be hired to certify rolling stock before each operating day until internal skills are available again)

> Rail operations are scaled to available/ affordable resources

Legal requirements

> RSNL Act – section 99, 65 (competence and capacity)

> National Regulations - schedule 1 cl 30

10. Additional references

This guideline should be read in conjunction with the following ONRSR publications available at www.onrsr.com.au:

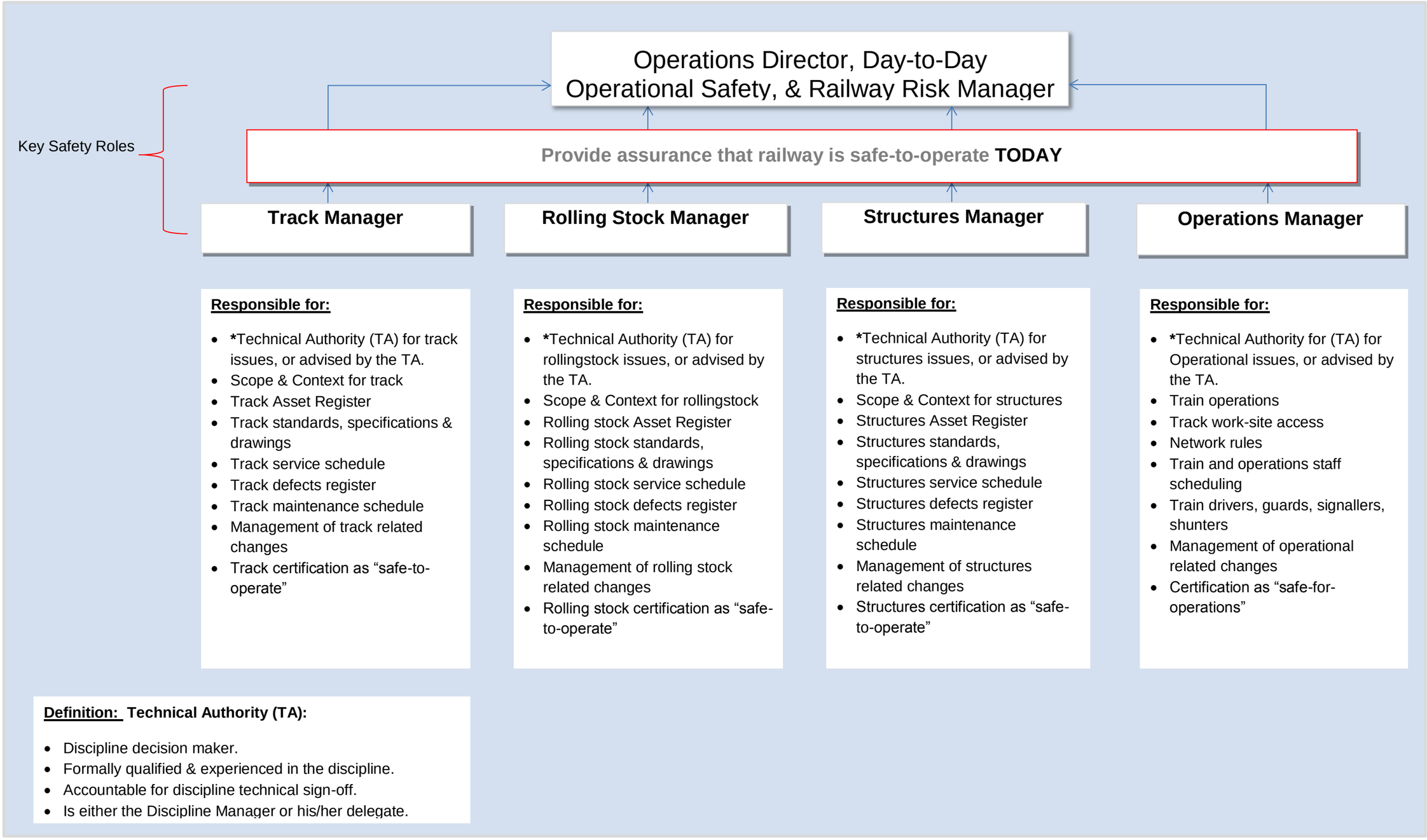
> *Preparation of a rail safety management system guideline*
> *Meaning of duty to ensure safety so far as is reasonably practicable guideline*
> *Effective control and management of railway operations guideline*
> *Competence and capacity guideline*
> *Asset management guideline*
> *Safety performance reporting guideline*
> *ONRSR Regulatory Approach*

Other relevant resources for developing technical standards published on the internet:

> Australian Rail Track Corporation: http://extranet.artc.com.au/
> John Holland Rail: http://www.jhrcrn.com.au/what-we-do/engineering-standards/
> Sydney Trains and Asset Standards Authority: (TfNSW): http://www.asa.transport.nsw.gov.au/ts

NOTE: These websites may be used as source material for typical current rail main line technical standards, however if used these should be acknowledged, adapted to suit the specific scope and nature of the small isolated line heritage operator concerned, and the risk profile of the operator.

11. Appendix A
Example organisational and responsibilities chart



12. Appendix B
Example technical standard and structures inspection

To be read in conjunction with the example in Appendix A.

Scope:

The primary scope includes timber openings, culverts, bridges and retaining walls that provide support to the track.

The secondary scope includes other track-side structures (e.g. platforms, signal foundations, track-side retaining walls, and drainage structures).

Records:

All structures in both the primary and secondary scope above shall have documented the following data:

Basic description including at least (as relevant):

- Nominated track loading for the line, including typical rolling stock operating speeds, details of consists with axle loads and spacing,
- Kilometrage of the structure,
- Structure type description and noting whether the structure supports track loads,
- Details of next Periodic Structures Inspection due and last Periodic Structures Inspection completed dates. Similar details for any Special Structures Inspection,
- Details of defects found from each Periodic Structures Inspection and Special Structures Inspection, intervention limits for defects, priority for repairs, when repair works are planned and when they are completed,
- Details of next Periodic Engineering Inspections due and last Periodic Engineering Inspections completed dates,
- Report from each Periodic Engineering Inspections, priority for proposed repairs, when repairs are proposed and when completed, and
- Certificate of structural adequacy including (where relevant) current as-is track load rating and/or track speed restrictions prepared by the Track Structures Manager or Engineer.

Daily pre-run inspection for track & structure serviceability

Frequency:

Prior to the first run of every day of passenger operations.

Purposes:

By rail motor, hi-rail or trike - check to confirm that:

- Track Top, Line, Twist, Curvature and Ride Quality comply visually and by feel with operating standards.
- There are no obstructions that would compromise adequate clearance for train operations and that there is no unusual visible damage or blockage of drainage structures, no stock on line or new wombat holes.
- There is no significant loss of ballast or track support.

> Record that the inspection was done and note any relevant observations.

Undertaken by:

> Nominated qualified Track Inspector.

> A written report is to be provided to the Operations Director prior to making the decision whether or not to operate on the day.

> Abnormal or degraded conditions should be reported to the Track Manager for a decision on operational safety.

Periodic and special structures inspections

Frequency:

Periodic Structures Inspections are to take place at maximum 1-year intervals unless a shorter interval is adopted due to defects condition or by Structures Manager's or Structures Engineer's recommendation.

Special Structural Inspections are also to take place following any incident (e.g. derailment or high rainfall event) that could be expected to have damaged any of these structures, and following any minor repair works to structures to confirm that rail passenger operations can continue.

Purposes:

To confirm (with respect to track supporting structures):

> That ballast retention at the structure is effective,

> Transoms are supported,

> Waterway is unobstructed,

> All structural members are in place, properly connected, and comply with structures defects standard intervention limits.

> To record current defect observations and to compare them with previously recorded observations,

> Prioritize and scope proposed maintenance works, and

> To confirm that there is no significant damage or defect that could impact on the safety of rail operations.

> Damage or defects that are suspected of impacting on operations safety are to be referred to the Structures Engineer for advice on urgency and for details for repairs.

Undertaken by:

> Nominated qualified Structures Inspector.

> A written report is to be produced and filed with structures documents.

Periodic and special engineering inspections

Frequency:

Periodic Engineering Inspections are to take place at maximum 3-year intervals unless a shorter interval is adopted due to defects condition or by Structures Engineer's recommendation.

Special Engineering Inspections shall be made following any event causing significant damage to the structure, to certify structural adequacy and following completion of major repairs or following construction works to certify fitness for purpose of the structure prior to recommencing operations.

Purposes:

To confirm structure can continue to support required: self-weight, earth pressure, ballast, track and rolling stock loads.

> The Structures Engineer shall undertake a periodic inspection and track vehicle load rating evaluation of the major structural members taking into account the current level of defects, and

> Prepare a schedule of remedial works for the structure with priority and recommended time to complete the works.

> A written report is to be provided to the Operations Director and Structures Manager.

> The structures defects and the repair schedule are to be recorded in the defect management system and repair works programme.

> Any significant deviation from the recommended repair programme must be approved in consultation with the inspecting Structures Engineer. The structures engineer shall determine any impact of the programme change to the serviceability of the structure or any need for additional special engineering inspections or operational restrictions prior to completion of the works.

Undertaken by:

> Nominated qualified Structures Engineer.

> A written report is to be produced and filed with structures documents.