Guide: How to write a rail safety case

Rail Safety Regulation
Regulatory Services
NZ Transport Agency Waka Kotahi
20 January 2026

NZ TRANSPORT AGENCY WAKA KOTAHI
Te Kāwanatanga o Aotearoa New Zealand Government

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Introduction

Importance of rail safety

Rail accidents can result in loss of life, injuries and extensive property damage which can be devastating for those directly involved, surrounding communities, and the environment. They show why it's important to keep investing in rail safety.

Rail safety includes measures and protocols for the safe operation of trains, to protect:

- life - passengers, employees and the public
- the environment; and
- property - rail assets, infrastructure and adjoining property.

Rail infrastructure maintenance, signalling systems, train operations, and emergency preparedness are all key parts of rail safety.

Efforts to improve rail safety usually involve a regulatory regime, ongoing training for personnel, new rollingstock technology, signalling and communication systems, and proactive maintenance of infrastructure.

Purpose of this guide

This guide is for rail participants applying for a licence, and licenced rail participants needing to update their safety case.

This guide helps:

- provide detailed guidance to rail participants about their duties and obligations under the Railways Act 2005
- provide guidance on where a safety case needs to reference a rail participant's safety management system (SMS)
- reflects good practice and assists rail participants with taking practical steps to meet their responsibilities when developing a safety case
- define NZTA's expectations, which are used to assess a rail participant's safety case and safety management system. **Note** NZTA will review your SMS to verify statements made in the safety case.
- facilitate safety awareness and a commitment to safety throughout all levels of the rail participant's operations.

This guide should be used alongside the New Zealand Railways Act 2005 (the Act). It provides a framework for good practice in rail safety. In the event of an inconsistency between this guide and the Act, the Act prevails.

Users of this guide are responsible for ensuring that they comply with all laws, regulations and professional standards.

If you require further assistance to develop your safety case, please contact railregulator@nzta.govt.nz

What is a safety case?

A safety case is a clear and structured document that demonstrates that a rail participant can run their railway activities safely. A rail participant's safety case must be based on their safety management system (SMS), both of which are shared with NZTA to support their licence to operate application and show how they manage safety.

The safety case isn't the same as the rail participant's SMS, but it explains what's in the SMS and is maintained through regular and ongoing reviews.

To become a licenced rail participant, you'll need to:

1. Have a safety management system (SMS) in place
2. Put together your safety case
3. Apply to us for a licence to operate

The main purpose of a safety case is to give NZTA (and others) confidence that the rail participant has the ability, commitment and resources, to assess and effectively control rail safety risk.

The safety case shows how a rail participant uses its SMS to make sure that the railway system is safe. It explains how rail safety risks have been identified, assessed, evaluated and controlled so far as is reasonably practicable (SFAIRP). It also gives an overview of how the rail participant handles safety and demonstrates how their management systems work together to meet their safety commitments and legal requirements.

The term 'safety case' should not be confused with a 'functional safety case', which is used within railways for systems like signalling and automated train control systems. Functional safety cases focus on how these critical assets are managed over the lifecycle of the asset and include things like safety integrity levels (SILs). They're usually developed to meet international standards, such as EN 50126.

What's a safety management system (SMS)?

This guide uses the term safety management system (or SMS) when referring to a safety management system of control. The Act defines the term Safety System as:

- "a written record of all the rail participant's management and operational policies and practices that relate to the safe conduct of its rail activities; and includes the rail participant's operational and training manuals".

NZTA interprets *"the rail participant's management and operational practices"* to mean the formal arrangements for managing, assuring, and improving safety, including roles and responsibilities, arrangements for safety control, consultation with those affected, and includes continuous improvement.

Legislative context

The Railways Act sets out provisions rail participants must follow to operate safely.

Railways Act 2005 No 37 (as at 23 December 2023), Public Act Contents – New Zealand Legislation

In their SMS and safety case, rail participants demonstrate how they're following provisions. Our expectation as the regulator is that a safety case includes, where applicable, all elements detailed in this guide.

Our role as the regulator

The Government (on advice from the Ministry of Transport) sets the legislative framework for rail safety under the Railways Act. Our roles and responsibilities as the regulator are:

- Licence certain rail participants to operate in accordance with their approved safety case;
- Monitor licensees' compliance with their safety case, covering their rail safety activities, and regulatory requirements and acts where there is non-compliance;

- Monitor safety performance through safety assessments and require licenced rail participants to improve their safety management practices as necessary;
- Intervene by introducing rules where poor performance continues. This may be increasingly prescriptive if industry controls are ineffective.

Scope and application of this guide

This guide is for any rail participant requiring a licence to operate, which must be accompanied by a safety case. It's also for licenced rail participants needing to update their safety case. It may also be useful to anyone managing safety risks such as:

- Contractors;
- Designers;
- Independent safety assessors;
- Others:
    - Health and safety managers in the rail industry;
    - Staff working on the railway; and
    - Trade union representatives.

Small or heritage railways

All rail participants defined in Section 10 of the Act need to complete a safety case however, this guide was designed with larger operations in mind. The level of detail required in a safety case will change based upon the scale, size and type of rail participant.

For small or heritage railways, consideration is given to:

- **Resource limitations:** Small operators typically have fewer financial, technical and human resources than larger organisations.
- **Scalability issues:** Small operators can't justify the same level of processes, procedures, and documentation.
- **Context and environment:** The conditions, risks, and challenges faced by small operators are unique.
- **Simpler operations:** Small operators often have simpler operations and structures, making some aspects of this guide unnecessary or overly complex for their needs.
- **Risk profile:** The risk profile of small operators differs from larger operators, and they need tailored risk management processes.
- **Access to expertise**: Larger organisations often have access to specialised expertise, while small operators may not, making it difficult to comply with some of the detailed requirements of this guide.

Safety case structure – covering 32 elements

There is no requirement for a rail participant's safety case or any associated SMS to be structured, or presented, like this guide. Some elements, for example Asset Management, General Engineering and Operational Systems, Managing Safety Critical Systems and Inspections are closely linked, and it may be appropriate to present these together.

However, the safety case must address, **where applicable,** the 32 elements in this guide. To be clear - if an element is not applicable to a rail participant it does not need to be included in its safety case. If an element is applicable, it must be included.

Note that as the safety case is derived from an SMS, some elements are described in detail. This guide is not intended as a guide to developing an SMS but some of this guide may be useful in developing one.

It's not set and forget

A safety case isn't just used once to gain a licence to operate. It needs to be kept up to date and actively managed to show an ongoing commitment to maintaining safety for as long as the rail participant holds their licence.

A safety case should be treated as a living document. It needs to evolve alongside the SMS it is derived from, making sure safety stays a priority from the start through to when it is no longer in use.

A safety case needs to stay useful and accurate. It's important to:

- **Keep it up to date** - changes in the Safety Management System (SMS), roles and responsibilities, the railway environment, regulations, or new safety information may mean updates are needed;
- **Monitor safety performance** - keeping an eye on how well the system is working and watching for new risks helps make sure the safety case stays trustworthy; and
- **Review and revise** - regularly checking and updating the safety case to include new insights, lessons from incidents, and advances in technology that affect safety.

NZTA's process for reviewing a safety case

When we receive a licence application and safety case, NZTA will:

- **Confirm we've received your application**
- **Assess the safety case** to make sure it's clear, complete, and effective. When submitting your safety case for assessment please include supporting SMS documentation as necessary.
- **Decide** to accept or reject the application within 60 working days
- **Monitor ongoing compliance** to support continuous safety improvements

Note: the assessment is where NZTA looks at the quality of the safety case in your application. After the assessment, we'll either approve the licence or explain why the application has been declined.

Licences may come with specific conditions.

Changes to a safety case

Rail participants must advise NZTA of any changes to:

- Company structure;
- The SMS;
- Rail operations and the tools, processes and rules used to manage them;
- Rail usages;
- The organisation;
- Governance arrangement; and
- Accountabilities.

Significant changes

Some changes are considered significant and must be approved by NZTA before being implemented.

For **rail operators**, significant change includes:

- **Changing purpose or use**, switching from running regular train services to high-speed services; and
- **Changing the scale of operations** – for example, running more services on a line.

For **access providers**, significant changes include:

- **Changes to the network** – like using new types of signalling, or connecting to other networks;
- **Changes to the energy supply**;

- **How rail traffic is managed** – for example introducing fully automated systems for safety-critical work; and
- **How the network is maintained** – such as outsourcing maintenance to a contractor.

Note: these are just examples. A significant change can affect both infrastructure managers and transport operators. For instance, a new signalling system might create risks or require changes for transport operators.

Applying for a safety case variation

To apply to make a variation to a safety case:
(a) describe the proposed change; and
(b) provide details of the changes and highlight them in the application.

If the changes are significant, you must confirm that everyone affected has been consulted and agrees with the proposed change.

Safety case variation approval

How long it takes to review and approve a safety case variation depends on how complicated and detailed the change is. The type and size of your rail activities, along with the current scope of your safety case, will determine whether you need to submit a full variation or just notify us of the changes you are planning to make.

When we receive a safety case variation application and its associated safety case, we:

- **Confirm we've received it**;
- **Review the safety case** to check its quality and effectiveness; and
- **Decide** to approve or reject the variation within 20 working days. The

proposed changes to the safety case do not take effect until we've approved it.

Revoking or restricting a licence to operate

Generally, we'll only revoke (cancel) a licence if a rail participant is not meeting the conditions of their licence.

Public inspection

A safety case must be made available for public inspection (as per Section 32 of the Act).

Elements of a safety case

This section of the guide lists the **32 elements** that rail participants should think about - and include where relevant - when putting together their safety case. These elements match the requirements set out in Section 30 of the Railways Act 2005.

Also included is an index to the relevant page number for further detail on each element.

Elements	Application of s30 of the Railways Act 2005	Rail Risk Regulatory Framework (R3F)
Company information	S30(1)(a)	Governance and Leadership
Rail safety policy	S30(1)(b)	Governance and Leadership
Safety culture	S30(1)(n)	Governance and Leadership
Regulatory compliance	S30(1)(i)	Safety Assurance
Safety governance & internal control arrangements	S30(1)(c)	Governance and Leadership
Accountabilities, responsibilities and authorities	S30(1)(c)	Governance and Leadership
Reviewing the safety management system	S30(1)(l)	Governance and Leadership
Setting safety performance measures	S30(1)(h)(i)	Safety Assurance
Annual safety performance report	S30(1)(h)(ii) S30(1)(h)(iv)	Safety Assurance
Risk management	S30(1)(d) S30(1)(e)	Safety Risk Management
Human factors	S30(1)(n)	Safety Risk Management
Asset management	S30(1)(g)(i)	Operational Management
General engineering and operational systems	S30(1)(g)(i)	Operational Management
Managing safety critical systems	S30(1)(g)(ii)	Operational Management
Inspections	S30(1)(g)(i)	Operational Management
Safety critical work	S30(1)(g)(ii)	Operational Management
Safety change management	S30(1)(l)(i)	Safety Risk Management
Document control	S30(1)(l)(ii) S30(1)(g)(v)	Governance and Leadership
Consultation	S30(1)(m)	Safety Risk Management
Communication	S30(1)(g)(iii)	Operational Management

Procurement and contractor management	S30(1)(n)	Safety Assurance
Training, instruction and skills	S30(1)(g)(iii) S30(1)(g)(iv)	Operational Management
Managing interfaces and cooperation	S30(1)(f)	Operational Management
Accidents and incidents	S30(1)(h)(ii)	Safety Assurance
Emergency management	S30(1)(h)(ii)	Safety Risk Management
Security management	S30(1)(e)	Safety Risk Management
Internal auditing	S30(1)(h)(iii) S30(1)(j)	Safety Assurance
Corrective action	S30(1)(h)(ii)	Safety Assurance
Health and fitness	S30(1)(k)(i)	Safety Risk Management
Drug and alcohol policy	S30(1)(k)(ii)	Safety Risk Management
Fatigue management	S30(1)(k)(ii)	Safety Risk Management
Resource availability and sufficiency	S30(1)(c)	Governance and Leadership

Company information

When applying for a safety case, rail participants must include key company details to support their application. This includes:

1. **Type of rail participant applying:**
    - Access provider
    - Rail operator
    - Both access provider and rail operator.
2. **Company details:**
    - Legal and trading names
    - Business number
    - Details of parent company or controlling body (if applicable)
3. **Accountability and safety roles:**
    - Name and job title of the person ultimately responsible for safety (e.g. CEO).
    - Name and job title of the safety liaison officer(s) who can submit or approve changes to the safety case.
    - Details of any safety-related governing body.
    - List of key safety roles and responsibilities.
4. **Overview of operations:**
    - Type and purpose of transport (e.g. commuter, freight)
    - Types of trains operated.
5. **Overview of routes:**
    - Routes managed and operated over
    - Track length by route
    - Any access agreements in place.
6. **Overview of rail assets, including:**
    - Types of signalling and control systems
    - Safety-related infrastructure (e.g. the number and types of level crossings, tunnels, and bridges).
7. **Workforce overview:**
    - Approximate number of people involved in rail operations
8. **Passenger activities:**
    - For **rail operators** - total number of passengers carried, by route/region or type, and significant difference factors (i.e. seasonal flow variances etc).
    - For **access providers** - simply the number of stations managed, the number of employees at them and the interfaces with **rail operators** with access to the stations.
9. **Freight operations:**
    - Total freight tonnage by route and type of freight; and
    - Any special freight (e.g. dangerous goods, out of gauge).

What to include in your safety case
All the above must be included in your safety case.

Rail safety policy

A rail safety policy shows your organisation's commitment to safety. It explains your understanding of your safety responsibilities and the framework everyone is expected to follow. The policy influences everything – from how staff are chosen, to the equipment and materials used, and how work is planned and carried out.

A good policy also supports continuous improvement of your SMS, using things like performance measures, audits, investigations and research to learn and improve.

You can have a separate rail safety policy or include it in your organisation's overall safety policy. If you use one combined policy, it must clearly cover the safety of rail operations and rail passengers (if relevant).

What the policy should include:

- A clear description of your rail safety policy and how it will be put into action and monitored.
- References to the SMS that provide proof that all likely hazards have been identified, and risks are being managed so far as is reasonably practicable (SFAIRP).
- Formal sign off by the CEO (or equivalent) and, if relevant, the Board.
- Sharing the policy with all affected rail participants and contractors.
- Evidence that the policy was developed with input from those affected, to build ownership and support.
- A commitment to continuously improve and develop the SMS.
- A strong message that working safely is essential for both employees and contractors.
- Specific focus on:
    - Rail operations
    - Passenger safety
    - Public safety at rail interfaces (e.g. level crossings)

Commitment to a positive safety culture
The policy should also show your commitment to building and maintaining a positive safety culture. This includes:

- Hiring competent people
- Providing training and support
- Clear responsibilities, strong leadership, and supervision
- Encouraging teamwork and cooperation
- Open and clear communication (spoken, written, or visual)
- Creating an environment where people feel safe to raise safety concerns

What to include in your safety case

- A copy of your rail safety policy and objectives
- Show where policy controls can be found within your SMS

Safety culture

A strong safety culture is essential in rail because it goes beyond rules and focuses on shared values and everyday behaviours that prevent serious accidents. It means:

- Everyone treats safety as a priority
- People feel encouraged to speak up and report issues
- Risks are reduced before they become problems

Rail work is complex and high-risk, and mistakes can have serious consequences for staff, passengers, and the public. A positive safety culture helps people make good decisions, reduces the impact of human error, and supports safe and reliable operations. It encourages staff to take responsibility for their own safety and look out for one another. Instead of waiting for instructions, people feel confident and supported to act when they see something unsafe.
Safety culture is about the shared attitudes and values an organisation has about safety. It's reflected in everyday actions like:

- People wearing personal protective equipment (PPE), without being told to because they understand its importance
- Staff seeing the value in doing risk assessments before starting any task.
- Employees being thanked and recognised for reporting incidents, so that lessons can be learnt to prevent future risks.

Rail operations and associated risks are always changing, but one thing stays the same – the importance of a strong safety culture. A key part of this is the commitment shown by the leadership team.
At a minimum, the safety case must explain how safety culture is supported, how leadership shows its commitment and that safety values are documented. This includes:

- Strong safety leadership is essential. When leaders consistently show they believe in the organisation's values through their actions, it helps build a positive safety culture. This encourages the right behaviours and inspires others to follow. Change happens through improving systems and processes, and by developing strong safety leadership skills — both inside the organisation and with those we work with. Safety leadership needs to be visible and consistent, starting from the CEO and reaching across the whole organisation and supply chain. Showing how leaders, including middle managers, supervisors and informal leaders actively support safety — through their actions, decisions, and communication. They also provide motivation to staff to achieve goals by rewarding, inspiring and leading by example.
- Documenting the organisation's safety values and making sure they are clearly understood and consistently applied. This includes management processes, and continuous improvement within the SMS.
- Demonstrating a just culture exists – where people feel safe to speak up and report issues without fear and blame; and
- Routinely measuring safety culture - such as through formal surveys.
- Referencing where these safety culture controls are located within the SMS – so it's clear how they are embedded in day-to-day operations.

What to include in your safety case
At a minimum:

- Explain how safety culture is supported, how leadership shows its commitment and that safety values are documented. This may be documented in your organisations culture policy.
- Reference where safety culture controls are located within the SMS

Regulatory compliance

Following safety provisions helps rail participants manage risks and meet their responsibilities. By sticking to safety rules, they reduce the chance of accidents that could cause serious harm or even death.

Compliance also builds trust and credibility. When rail participants follow the law, it shows they're committed to doing the right thing. It also helps others see that their systems and controls are reliable.

Regulatory compliance is important because it:

- **Reduces safety risks** – following rules helps prevent harm and serious incidents.
- **Shows commitment to good practice** – it demonstrates respect for legal and professional standards.
- **Builds trust** – stakeholders are more confident when they see rules are being followed.
- **Promotes transparency and accountability** – clear processes make it easier to see how decisions are made and who is responsible.
- **Meets legal obligations** – rail participants are required by law to comply with the Railways Act.
- **Supports risk management** – compliance helps identify and reduce potential risks.
- **Improves operational efficiency** – standardised procedures reduce errors and make work more consistent across the organisation.
- **Protects employees and others** – safety provisions are designed to keep people safe.

Regulatory compliance processes

In your safety case outline the processes you will follow to make sure you meet all legal safety requirements. These processes should identify the relevant legislation, standards, and any specific conditions you must comply with, and should include the steps (systems and procedures) to:

- Understand regulatory requirements
- Identify standards and conditions
- Put in place the right controls to ensure those requirements are met

These steps should be built into your Safety Management System (SMS). The safety case should clearly reference where each of these compliance controls can be found within the SMS, so it's easy to see how you manage your legal obligations.

What to include in your safety case

- Outline the processes you will follow to make sure you meet all legal safety requirements
- Reference where compliance controls can be found within your SMS

Safety governance and internal control arrangements

Safety governance and internal control processes are key parts of making sure safety risks are properly managed and everyone stays safe. These governance and internal processes help make sure that safety risks are understood throughout the organisation, and that the right people are making safety decisions about railway operations.

Note: Depending on how big or complex the rail organisation is, safety governance might be managed as its own area, or it might be part of a broader governance system.

At a minimum, the safety case should explain the governance and internal control processes that help rail participants with:

- **Following the rules:** safety governance sets out the policies, procedures, and standards that ensure the organisation meets legal and regulatory requirements and industry standards. Internal controls help monitor and enforce these standards and avoid non-compliance.
- **Managing risks:** processes help identify, assess, and reduce safety risks. By putting the right controls in place organisations can lower the chances and impact of accidents, or injuries.
- **Making people accountable:** safety governance clearly defines who is responsible for safety. Internal controls help make sure people and teams are doing their part to keep the workplace safe.
- **Being transparent:** good safety governance makes safety information easy to access and understand – for staff, management, regulators and the public.
- **Improving operational efficiency:** strong internal controls can make safety processes smoother and more effective. This includes how incidents are reported, investigated, and followed up with improvements.
- **Protecting reputation:** a strong safety framework shows a commitment to safety which builds trust and supports the organisation's reputation.

What to include in your safety case

At a minimum:

- Explain the governance and internal control processes that help rail participants with following the rules, managing risk, making people accountable, being transparent, improving operational efficiency; and protecting your organization's reputation.
- Reference where governance controls can be found within your SMS

Accountabilities, responsibilities and authorities

By clearly assigning accountabilities and responsibilities, rail participants can:

- **Provide clarity and focus:**
  - **Clear roles** means everyone knows what they're responsible for, helping avoid confusion or overlap
  - **Focused teams** can concentrate on their responsibilities, improving productivity and efficiency.
- **Encourage motivation and ownership:**
  - **Empowered staff** are more likely to take ownership and feel empowered when they know what their tasks are.
  - **Motivated people** tend to perform better when they understand how their work contributes to safety.
- **Support accountability and performance:**
  - **Progress can be tracked** more easily when responsibilities are clear, making it easier to track progress and performance and identify successes and areas for improvement.
  - **Make someone responsible** for the completion and quality of each task, which helps maintain standards.
- **Improve communication and coordination:**
  - **Defined responsibilities** help teams and departments communicate better and stay aligned
  - **Coordinating efforts**, especially in complex projects, becomes easier when everyone knows who's doing what.
- **Strengthen problem solving and decision making:**
  - **Issues are resolved faster** when it's clear who's responsible.
  - **Decisions are made more effectively** when accountability is clear, reducing delays and uncertainties.
- **Build trust and a positive culture:**
  - **Clear accountability** builds trust, as everyone knows that everyone is doing their part
  - **Defined responsibilities** help build a culture where people understand their duties and the importance of fulfilling them.
- **Ensure legal compliance:**
  - **Assigned responsibilities** means there are people to make sure legal and ethical standards, are met, reducing the risk of breaches.

In your safety case, outline how your organisation assigns and manages safety responsibilities. This includes documenting the roles responsible for managing safety. These roles typically include the following:

- **Accountable personnel** – the people who:
  - Set up safety governance arrangements and allocate budgets needed to ensure safety
  - Decide on the safety strategy, priorities and help shape the organisation's safety culture
  - Define safety controls (often technical experts or heads of discipline), and review or approve changes to the SMS, engineering standards and operating procedures
  - Are responsible for making sure the organisations follows SMS requirements
  - Approve work and confirm that safety-related tasks have been completed correctly
  - Approve major changes to operations or systems
  - Accept the level of safety risk associated with railway operations
- **Responsible personnel** – the people who:
  - Carry out safety-related tasks and are expected to complete them properly and safely.

Note: When giving someone responsibility for a safety-related task, it's important to make sure the person(s) has both the **authority** and **skills** to do it properly. If someone is responsible but doesn't have the power to make decisions or the right expertise, it can lead to delays, poor decisions, and increased risk for the organisation.

What to include in your safety case

- At a high-level outline how your organisation assigns and manages safety responsibilities including documenting the roles responsible for managing safety.
- Reference where accountabilities and responsibility controls can be found within your SMS.

Reviewing the safety management system (SMS)

By reviewing their SMS, licenced rail participants can be confident they are:

- Improving safety performance,
- Complying with legal and regulatory requirements,
- Preventing incidents
- Supporting a culture of ongoing safety improvement.

Regular reviews also help keep the SMS **relevant and up to date** - making sure it reflects current operations and risks.

Formal reviews support:

- Identifying areas for improvement
- Ensuring safety processes are working as intended
- Updating procedures to reflect changes in operations, technology, or regulations
- Reinforcing accountability and responsibility across the organisation

Formal reviews of the Safety Management System (SMS) help rail organisations:

- **Stay compliant** - Regular formal reviews make sure the SMS meets all laws and regulatory requirements and that any changes in regulations are identified and addressed.
- **Spot gaps and weaknesses** - Reviews can uncover outdated procedures or areas that need improvement, helping spot safety hazards before they lead to incidents.
- **Keep improving** - Safety is an ongoing process. Formal reviews support continuous improvement by identifying better ways of working and applying best practices.
- **Manage risks effectively** - A thorough review checks whether current risk controls within the SMS are working and ensures that all risks are properly identified and managed.
- **Prevent incidents** - Looking at past incidents and safety data helps identify root causes of safety issues and stops them from happening again.
- **Engage staff and improve training** - Reviews often involve staff, increasing their understanding of safety and helping identify training needs.
- **Show management commitment** - Regular reviews demonstrate managers' commitment to safety, which boosts morale and strengthens safety culture.
- **Ensure good documentation and accountability** - Reviews confirm that safety procedures are clearly documented, which supports legal compliance and audit readiness.
- **Allocate resources wisely** - Identifying areas for improvement helps direct resources – like staff, equipment, and funding – where they're needed most.
- **Build stakeholder confidence** - Regular reviews show stakeholders, regulators and the public that the organisation is committed to safety.

In your safety case, describe the formal review processes in place for the SMS. These reviews help make sure that all safety-related policies, procedures, processes and practices stay relevant, accurate, and up to date.

SMS reviews are planned and documented and carried out regularly to keep the system effective and up to date. These reviews may be triggered by a range of events or needs, including:

- **Independent reviews** - carried out by people not directly involved in day-to-day operations, to provide an objective view.
- **New safety developments** - such as the introduction of new systems, technologies or processes.
- **Lessons learned** - both internally or externally, from industry best practice, incidents or accident investigations
- **Audit findings and investigations** - to address any issues or recommendations that arise.
- **New or changing risks** – when new risks are identified or the risk profile of operations changes.
- **Changes that impact the SMS** - such as organisational changes, new legislation, or operational updates.
  Performance monitoring - when safety performance trends decline or targets are not being met.

Before undertaking reviews, rail participants should consult with stakeholders such as:

- employees,
- contractors,
- other affected people and rail participants,
- parties to any safety interface agreements,
- safety representatives,
- emergency services (when reviewing emergency plans).

After reviews:

- **Corrective actions** should be taken to address any recommendations or issues found.
- **Review findings** should be documented, and the outcomes summarised in safety performance reports.

What to include in your safety case

- Describe the formal review processes in place for the SMS
- Reference where SMS review processes and controls can be found within your SMS.

Setting safety performance measures

By setting clear safety goals and ways to measures them, licenced rail participants can check how well they are managing safety in their operations, and the performance of their SMS. These safety measures can help make responsibilities clearer, motivate people, and support a culture of ongoing improvement and proactive risk management.

Safety performance factors and measures help rail organisations improve how they manage safety. Specifically, they lead to:

- **Better safety standards** - Clear expectations help raise safety performance across the organisation.
- **Clear focus and direction** - Everyone knows what they are workings towards, with shared safety goals.
- **Motivation and engagement** - People are more likely to take part in safety practices, when they understand the goals and can see the results of their efforts.
- **Measurement and accountability** – Progress can be tracked, and people can be held responsible for their part in keeping things safe.
- **Smarter use of resources** - Helps identify where time, money and effort should be allocated to improve safety.
- **Continuous improvement** - Regular reviews help the organisation learn and adapt (based on past performance and emerging trends) to improve safety performance over time.
- **Benchmarking and best practices** - Allows for comparison with industry standards and best practices and helps adopt the most effective safety methods.
- **Better communication and transparency** - Everyone understands the safety goals and why they matter.
- **Improved learning** - A clear framework helps the organisation learn from incidents and make changes to prevent them in the future.

In your safety case, outline the key areas you monitor to make sure safety is managed well. These are called safety performance factors. Your organisation should include measures to track how targets will be achieved. The safety case should reference where the safety performance targets are found in the SMS.

Developing measures

Measures should help improve safety performance. Here are some practical ways to make this happen:

- **Include safety targets in a safety plan** and share it with all staff so everyone knows what their goals are.
- **Work with staff, their safety reps and managers** to make sure targets are realistic and can be measured
- **Make the board and senior leaders responsible** for meeting safety targets.
- **Setting personal safety targets for managers** so they're directly involved in improving safety.
- **Regularly report progress** to the people affected stakeholders, so they stay informed and engaged.
- **Show how safety targets link to wider business goals** – if safety targets aren't met, your organisation risks not meeting its overall objectives.

Safety measures should include clear targets and follow the SMART (specific, measurable, attainable, realistic and trackable) approach meaning they should be:

- **Specific** – clearly state what is being measured
- **Measurable** – track progress with numbers and data
- **Attainable** – the target can be reached
- **Realistic** – it makes sense to your organisation
- **Trackable** – you can monitor progress over time.

For example, instead of saying “a sample group will be randomly tested for alcohol”, a SMART target would be “20% of rail safety workers will have an annual alcohol test”.

This makes the goal clear, measurable, and easier to manage.

Safety targets should be:

- **Sensible** - They should directly relate to railway operations and give useful information to monitor and improve safety over time.
- **Measurable** - You should be able to measure them in a clear and practical way track progress and improve safety.
- **Timely** - You should be able to check and act on the results at the time.

Safety targets should include both lead and lag measures to help track how well safety is being managed and improved.

Lead measures help predict future safety performance. They focus on the actions and behaviours that help prevent incidents before they happen. In safety management, lead measures are often preventive steps and safety initiatives.

Examples of lead measures include:

- The number of safety training sessions held
- Safety audits and inspections completed
- Near miss reports - tracking these helps spot potential issues before they result in accidents
- Attendance at safety meetings - tracking attendance at safety meetings can reflect the organisation’s commitment to safety culture
- How well safety initiatives are put in place - like programmes to reduce risks. For example:
    - the number of SPADs - by giving drivers extra training and holding briefings on the findings of a SPAD investigation
    - reducing slips, trips and falls at stations - by improving how surfaces are maintained and training cleaning staff.

Lag measures show past safety performance. They are used to evaluate the results of safety activities and help assess the effectiveness of lead measures.

In safety management, lag measures usually include things like:

- The number of incidents or injuries.
- Lost time injury rate (LTIR)
- Signal passed at danger (SPAD) rates
- Worker compensation claims
- Passenger injury rates.

Using both lead and lag measures gives a balanced approach to managing and improving safety.

- **Lead measures** help prevent incidents before they happen by focusing on actions and behaviours
- **Lag measures** show what’s already happened and help assess whether these actions worked.

Lead measures can be **adjusted based on what lag measures reveal**, creating a cycle of learning and improvement.

By using both, organisations can:

- Spot problems early
- Learn from past incidents

- Improve safety over time

This balanced approach helps build a safer and more productive workplace.

Safety target rates should be normalised to give better context

This means adjusting the raw numbers so they're more accurate and meaningful. For example, instead of just counting how many incidents happened, you might report the number of incidents per 100,000 hours worked.

This helps you:

- Compare safety performance more accurately
- Understand trends over time
- Avoid unfair comparisons between large and small organisations

Normalising data make it easier to see what's really going on and where improvements are needed. It also helps make comparisons across different industries and time periods, and with benchmarking against industry standards or historical data.

It's helpful to use normalised safety performance rates because they give more accurate and fair comparisons than just using raw numbers.

This means adjusting the data to account for things like how many people work in the organisation, how many hours they work, or how much exposure they have to risk.

Common examples of normalised safety rates include:

- **Lost time injury rate (LTIR):** Number of injuries that caused time off work, per 1 million hours worked
- **Severity:** Number of lost workdays per 1 million hours worked
- **Passenger injury:** Number of injuries per 1 million passenger journeys
- **Rail operation incident:** Number of incidents (SPADs, derailment, collisions) per 1 million train kilometres
- **Infrastructure performance:** Number of issues (like broken rails) per 1,000 train kilometres
- **Public safety:** Number of public trespass or level crossing incidents per 1 million people.

What to include in your safety case

- The key areas/measures you monitor to make sure safety is managed well.
- Reference where the safety performance targets can be found within your SMS.

Annual safety performance report

An annual safety performance report shows an organisation is open, responsible, and serious about safety. It helps prove:

- **Transparency** – sharing safety results openly
- **Compliance** – meeting legal and safety requirements
- **Accountability** – showing who is responsible for safety outcomes
- **Continuous improvement** – learning from past performance to make things safer

It also supports better decision-making and helps build a strong safety culture across the organisation.

Benefits include:

- **Performance tracking and analysis:**
  - Spot trends and patterns in safety performance over time to identify areas for improvement.
  - Use detailed data analysis to make informed, data-driven decisions that strengthen safety protocols and procedures.
- **Transparency and communication:**
  - Regular reporting builds trust with employees, management and regulators, by showing the organisation's commitment to safety
  - Reports act as a communication tool, sharing safety performance, achievements, and areas for improvement
- **Regulatory compliance:**
  - Keep thorough records of safety activities and incidents to support audits and inspections.
- **Continuous improvement:**
  - Benchmark performance against industry standards and peers to find best practices and gaps.
  - Reviewing the past year's performance helps set realistic safety goals and targets for the upcoming year.
- **Accountability and responsibility:**
  - Hold management accountable for safety performance and highlight their role in maintaining and improving standards.
  - Encourage employee participation in safety programmes and promote responsibility and ownership among employees.
- **Resource allocation:**
  - Use data to where more resources- training, equipment, or staff – are needed.
  - Ensure resources are directed to areas that will have the biggest impact on safety.
- **Enhanced safety culture:**
  - Regular reporting increases safety awareness and encourages active engagement in safety initiatives.
  - Highlighting achievements and milestones boosts morale and reinforces positive behaviour.
- **Risk management:**
  - Identify recurring hazards and risks, so they can be proactively managed.
  - Assess the effectiveness of existing safety measures and highlight areas where additional preventive measures are needed.
- **Strategic planning:**
  - Use insights from the report to guide long-term safety planning, integrating safety goals with the overall business objectives.

- Insights from the report can inform the development of new safety policies and updates to existing ones.

In your safety case, explain how you report on safety each year and show how safety measures and performance factors indicators in your SMS are being met.

The Annual safety performance report should include:

- How big your work force is and what kind of work they do
- Details of any non-licensed service providers doing work for you
- The amount of rail activity you carry out
- The type of rail activities you are responsible for
- Any rail safety accidents and incidents you have experienced

What to include in your safety case

- Explain how you report on safety each year and show how safety measures and performance factors indicators in your SMS are being met.
- Reference where the controls for annual reporting can be found within your SMS.

Risk management

Effective risk management:

- Identifies potential hazards and takes steps to remove or reduce them SFAIRP.
- Applies those principles throughout the entire life of an asset or system's design, construction, commissioning, maintenance and decommissioning.

Risk management is not a set and forget process

Risks change over time, so risk management must be active and ongoing. It's a continuous, real-time process that adapts to changing conditions and new information.

Risk management requires:

- **Continuous monitoring** - keep an eye on operations, environments, and processes to spot new risks and check if current safety measures are working.
- **Real-time data** - use up-to-date information from sources like safety performance data, incident reports, audits, and employee reports, to help make informed decisions.
- **Adaptive strategies** - regularly update risk management strategies based on new insights, technology, and changes in regulations or operations.
- **Proactive approach** - anticipate hazards and address them before they cause incidents, rather than reacting after accidents happen.
- **Involving everyone** - get all staff engaged, make sure they know safety protocols, and encourage them to report hazards and suggest improvements.
- **Incident response** - having robust plans in place to respond quickly and effectively to incidents, reducing harm and aiding quick recovery.
- **Learning and improvement** - learn from incidents, near-misses, and industry best practices to improve safety and reduce future risks.
- **Flexibility** - being ready to adjust safety measures quickly when new risks arise or when introducing new machinery and processes.
- **Regulatory updates** - keep up to date with safety provisions and standards and implement changes immediately.
- **Integrating technology** - use tools like real-time monitoring systems, predictive analytics, and automation, to make risk management more effective and responsive.

Safety risk management is dynamic and ongoing. It's a process that constantly adapts to protect people, property, the environment and the organisation.

In your safety case, explain the risk management processes you use to identify, assess and control safety risks, SFAIRP.

Note: Not all railway operations are the same, so different risk management approaches may be needed. For example, the way you manage low-probability, high-consequence risks (like train collisions) will be very different from how you manage high-probability and low-consequence events (like paper cuts from admin work).

We expect to see that:

- Risk management is treated as a critical activity, and the SMS supports this by ensuring that risks are identified, assessed, either eliminated or controlled.
- The risk management system and its procedures follow the AS/NZS ISO 31000 Risk Management standard.

- The principle of SFAIRP is clearly demonstrated.

Note: For more information on eliminating or reducing safety risks SFAIRP, see the *Practical guidance for conducting health and safety assessments toward meeting SFAIRP obligations in the Railways Act* (National Rail Industry Advisory Forum, 2023). This guide explains how to interpret and apply 'so far as is reasonably practicable' and the standard expected to meet under the Railways Act.

What to include in your safety case

- Explain the risk management processes you use to identify, assess and control safety risks, SFAIRP
- Show that the SMS was developed by:
    - Identifying safety risks linked to railway operations, including planning how to work with other operators to manage shared risks.
    - Carrying out a comprehensive and systematic assessment of those risks.
    - Specifying control measures used to manage the risks so they are reduced SFAIRP.
    - Tracking risk treatment activities through to completion.
    - Regularly monitoring and reviewing how effective those controls are.
    - Communicating and consulting with stakeholders and subject matter at all stages of the risk management process.
    - Reporting on the overall risk profile and SMS effectiveness to those managing railway operations and those accountable for accepting operational risk, including governing bodies.
- List all significant risks and any critical systems. **Note:** the safety case may use generic wording for significant risks e.g. derailment, collision. The SMS must document these in detail.
- Reference where the controls for risk management can be found within your SMS.

Human factors

Human factors are an integral part of safety critical environments. Understanding and managing them leads to:

- **Fewer errors** - understanding how people think and behave helps identify areas where mistakes can happen. Designing systems that account for human limitations reduces the chance of errors.
- **Better communication** - clear, concise communication is essential for safety, especially in high-stress situations.
- **Improved training** - insights into human behaviour help create training that better prepares people for real-world scenarios, including emergencies and complex situations.
- **Better design** - design equipment, workspaces, and processes to be user-friendly and reduce human error. This includes ergonomic designs that prevent fatigue and strain.
- **Stronger safety culture** - understanding what motivates people helps build a culture where safety is valued and prioritised.
- **Better risk management** - analysing human behaviour helps predict potential risks and develop strategies to prevent them, moving from a reactive to proactive approach to safety.
- **System resilience** - people play a key role in creating systems that can adapt to unexpected changes and keep operating safely, even when things go wrong.

As a minimum, your safety case must explain the people management processes you use to identify and control human risk factors SFAIRP. It should show that:

- People management is treated as a critical activity, and the SMS includes procedures to ensure people are considered during the development, operation and maintenance of the SMS.
- Risk assessments take into account both human strengths and limitations.
- Work and task procedures are designed with people in mind - good design enhances performance and reduces the chance of errors caused by human limitations.
- People are considered during investigations, change management and emergency planning.
- There is enough expertise in place to manage human factors effectively.

What to include in your safety case

At a minimum:

- Explain the people management processes you use to identify and control human risk factors SFAIRP.
- Reference where the human factor controls can be found within your SMS.

Asset management

Note: The topics of Asset Management, General Engineering and Operational Systems, Managing Safety Critical Systems and Inspections are closely linked and should be read together. Asset management and engineering management each play distinct but connected roles in overall safety management.

Asset Management (in safety terms) focuses on lifecycle of physical assets (like machinery, infrastructure, equipment) to get the most value and performance out of them. This includes buying, operating, maintaining, renewing, and eventually disposing of assets.

It also means managing safety risks associated with asset failure. Techniques like reliability-centred maintenance, condition monitoring, and predictive maintenance help make sure assets operate safely and work efficiently.

Engineering Management (in safety terms) focuses on design and aspects of safety. This includes designing, developing and implementing of safety systems and processes.

It ensures safety is built into engineering design from the start, using methods like:

- Failure Modes and Effects Analysis (FMEA)
- Hazard and Operability Study (HAZOP)
- Fault Tree Analysis (FTA)

These techniques help identify hazards, assess risks, and put controls in place.

Engineering management often involves creating or improving systems and processes to meet safety goals. In rail, it's especially important to introduce or integrate it with existing systems. It can also include research and development of safety features, such as automation or smart systems to prevent accidents and improve operational safety.

Asset management and engineering management both aim to keep operations safe, but they approach it differently:

- **Asset management** focuses on operations and maintenance.
- **Engineering management** focuses on design and technical solutions.

Effective safety management needs both working together. For example:

- Data from asset performance can guide engineering design improvements or change the frequency of inspections.
- New engineering solutions can improve asset performance and safety.

Together, they create a continuous improvement cycle:

- Asset management ensures assets are maintained and safe throughout their lifecycle and provides feedback on performance.
- Engineering management uses that feedback to improve design and safety features.

Both are essential for achieving high safety standards.

Additionally, asset management and engineering management also help identify:

- Safety critical systems that need higher safety controls, if they fail.
- Which assets and/or activities require a robust inspection regime

Benefits of Asset management:

- **Improved safety** - Systematic asset management helps find and reduce risks associated to railway assets, making operations safer for passengers and staff.
- **Preventative maintenance** - Regular checks and maintenance reduce the chance of failures that could cause accidents.
- **Better reliability and performance** - Good management minimises unexpected breakdowns and service disruptions, ensuring reliable operations.
- **Longer asset life** - Regular maintenance and timely upgrades extend the life of assets.
- **Data-driven decisions** - Asset management provides useful data and insights for better decision-making and planning.
- **Risk management** - Proactive risk assessment identify weaknesses in assets and put measures in place to mitigate to reduce risks.

What to include in your safety case

At a minimum:

- Describe the asset management processes your organisation uses to ensure the safe use of rail infrastructure and rolling stock.
    - Asset management systems should cover every stage of the asset lifecycle, including design, construction, procurement, commissioning, operation, maintenance and decommissioning.
- Reference where the asset management controls can be found within your SMS.

General engineering and operating systems

Engineering management shows that there are control processes in place at every stage of the rail infrastructure and rolling stock lifecycle. It is vital for ensuring safety, reliability, compliance with regulations, and continuous improvement.

It also plays a key role in maintaining and improving the overall performance and sustainability of the railway system.

Your safety case must describe the general engineering processes in place (this can be an international standard) to manage rail infrastructure, rolling stock and the connections between them. These should include:

- design - including specification, preliminary design, detailed design, design control, verification, validation and interface management
- procurement
- fabrication
- construction and installation
- implementation, test and commissioning
- monitoring and maintenance, including technical maintenance plans
- system operation
- system modification, including approvals and management of changes to technical maintenance plans
- demolishing and decommissioning
- disposal.

What to include in your safety case

- Describe the general engineering processes in place (this can be an international standard) to manage rail infrastructure, rolling stock and the connections between them.
- Reference where the general engineering controls can be found within your SMS.
- Include a link to the engineering management standard(s) you use.

Managing safety critical systems

Safety critical systems are those where failure could cause serious harm, accidents or death. Identifying and managing these systems shows an understanding of which systems need extra care and stronger safety measures.

Safety critical systems are built to be reliable and to keep working even if something goes wrong. They include backup features and fail-safe mechanisms to reduce the risk of failure. In railways, key safety critical systems include:

- Signalling systems
- Critical parts of track infrastructure
- Vital communication systems, like those used to manage train movements and respond to emergencies
- Train control systems, including automatic train protection and automatic train control systems
- Essential rolling stock components like brake and train door locking systems
- Level crossing systems
- Essential power supply systems
- Emergency response systems.

Note: Safety critical controls are crucial because they help prevent serious incidents or reduce their impact. These controls go beyond standard safety measures. They might be the only protection against a specific risk, or they might cover several causes, or outcomes of an incident or multiple incidents. Because they are so important, they need extra monitoring and reporting to ensure they're working well and are properly maintained.

What to include in your safety case

- Identify safety critical systems and explain how they are managed and controlled, making sure it's done SFAIRP. Describe:
    - Whether the system is subject to Safety Integrity Levels (SILs), and what that SIL level is
    - If there's a functional safety case for the system
    - Which industry standard the system follows – for example, EN 50126: Railway Applications. The Specification and Demonstration of Reliability, Availability, Maintainability and Safety (RAMS), Systems Approach to Safety etc.
- Reference where the safety critical system controls can be found within your SMS.

Inspections

Strong inspection programmes are essential for rail safety and offer many benefits, including:

- **Finding problems early** - regular inspections help spot defects and wear and tear in tracks, rollingstock and other equipment before they become serious issues
- **Preventative maintenance** - early detection means repairs are carried out, to prevent accidents or significant service disruptions
- **Improving safety** - inspections help identify hazards and unsafe conditions, reducing the chance of accidents
- **Making sure everything works properly** - inspections confirm that all components of the railway system are functioning correctly, ensuring the safety of passengers and staff
- **Planning maintenance** - inspections help in prioritising maintenance and repairs based on how urgent and serious the issue is
- **Managing risks** - inspections help identify potential risks and hazards in railway operations.

Note: It's well known that physical assets need regular inspections. But it's just as important to check how people are doing their work. This helps make sure they're following the correct processes and communication protocols.

The primary objectives are to make sure tasks are performed safely, efficiently and according to procedures. Watching people work also helps identify training needs, show where processes could be improved, and helps boost productivity.

Ways to inspect how tasks are done include observing people work, analysing tasks, doing interviews, and reviewing performance data.

What to include in your safety case

- Describe the inspection processes used to help rail participants identify which assets, components, systems and work activities or processes need to be inspected.
- Reference where inspection controls can be found within your SMS.
- Reference where in the SMS the following can be found:
    - Where inspections and tests happen, how they are done, how detailed they are, and how often they are carried out. The frequency should take into account things like consider operational criteria, rate of deterioration, what could happen if it fails, and how often safety issues occur.
    - Processes that make sure inspections and tests are done on schedule and in response to specific events.
    - Links to processes for taking corrective action when required.

N.B. The amount of detail you include will depend on the size of your organisation, the technical expertise you have, and how you review reports contractors give you.

Safety Critical Work

Safety critical work refers to tasks where failure could result in serious harm or death. By identifying and managing these tasks, licenced rail participants show they understand which parts of their work need extra care and stronger safety controls.

These are tasks or roles that, if done incorrectly, inadequately or carelessly, could lead to serious accidents. People in these roles must adhere to strict procedures, receive proper training, and work under strict safety rules to keep things safe and reliable.

Note: Understanding which tasks are safety-critical helps you design clear, step-by-step procedures that make sure the work is done accurately and safely.

What to include in your safety case

At a minimum:

- Explain the safety critical work processes in place to help licenced rail participants identify and manage these tasks, as SFAIRP.
- Reference where the controls for safety critical work can be found within your SMS.

Safety Change Management

Change management is a key part of a SMS. It helps licenced rail participants identify and control change related safety risks. This keeps operations stable and ensures safety procedures still work well. It also makes sure staff are properly trained and informed about any new or updated processes. Good change management supports:

- **Reducing risk** - changes to processes, equipment, staff or procedures can bring new risks or exacerbate existing ones. Change management helps identify, assess and manage these risks before the changes are implemented.
- **Improving safety over time** – having a structured process for change allows a systematic review of safety management and improves safety performance over time.
- **Clear communication** - ensures everyone affected by the changes knows what is happening, why it's happening, and what their roles are in maintaining safety standards
- **Keeping records and accountability** - documenting changes and their impacts creates a clear audit trail, which is essential for investigations and learning from incidents.

Change management is a vital part of a SMS. It helps make sure changes are made safely, systematically and in a controlled way - protecting workers, the public and the environment.

At a minimum, your safety case should explain the change management processes that help licenced rail participants identify and properly manage change related risks. The processes should:

- Spot any new or increased risk caused by a project or change
- Identify the right controls to manage these risks and make sure safety performance isn't affected
- Match the level of risk assessment to the level of risk
- Make sure staff and managers have the skills and resources to meet their safety responsibilities (a training plan can help with this)
- Only make changes after you have assessed any safety risks
- Involve, brief and consult staff and their representative about the changes
- Meet any relevant standards
- Monitor the impacts of the change after it in place
- Clearly state who is responsible for each of the above - before, during and after the change.

Note: Changes to railway operations can impact people inside the organisation and those outside it. That's why it's important to manage these changes carefully so that operations stay safe and operated SFAIRP. Managing the entire lifecycle of operational changes is essential.

Changes may vary in how complex and risky they are, so the change management process needs to be flexible- more detailed and thorough for bigger or riskier changes.

What to include in your safety case

At a minimum:

- Explain the change management processes that help licenced rail participants identify and properly manage change related risks.
- Reference where the controls for managing safety-related changes can be found within your SMS.

Document control

Document control is a key part of a SMS. It makes sure that only the most up-to-date and accurate documents are used, helping to avoid errors and inconsistencies that could affect safety. Benefits of good document control include:

- **Traceability and accountability** - a clear audit trail of changes, reviews and approvals helps when investigating safety issues.
- **Better communication** - ensures everyone has access to the right information to do their job safely, which provide clear and consistent instructions and procedures.
- **Emergency preparedness** - having well-organised and controlled documents means you can respond quickly and effectively in an incident.
- **Continuous improvement** - helps capture lessons learned from incidents or audits and documents and updates procedures accordingly.
- **Training and competence** - controlled documents are used in training to make sure staff learn the latest safety standards and procedures.
- **Minimising risks** - reduces chance of using outdated or incorrect information, which could lead to unsafe practices and accidents.

Good document control is a core part of a strong SMS. It ensures safety information is accurate, easy to find and used consistently across the organisation.

Note: Your document control processes should also take into account the requirements of the Public Records Act 2005.

Further guidance

Rail participants may choose to align their document control processes with internationally recognised quality management standards. If so, further guidance can be found in the latest version of ISO 9001 Quality management systems - Requirements.

What to include in your safety case

At a minimum:

- Explain the policy or standard you use to manage all documents and information related to railway operation safety risks
- Reference where the document controls can be found within your SMS.

Consultation

Consultation brings together the knowledge and experience of all stakeholders, helping create a safer and more collaborative work environment. It provides many benefits, including:

- **Better risk identification** - people doing the work can often spot risks that managers might miss. Consultation ensures risk assessment is comprehensive.
- **Smarter safety solutions** - involving those affected in safety discussions leads to more practical and effective ideas and solutions.
- **More buy-in and ownership** - when people are part of the decision-making, they're more likely to take ownership of and follow safety procedures.
- **Clearer communication** - consultation helps make sure safety messages are understood.
- **Improved morale and trust** - when people feel heard, they're more likely to trust leadership and support a strong safety culture.
- **Identifying training needs** - talking with staff can reveal gaps in knowledge or skills, leading to more targeted and effective safety training programmes.
- **Continuous improvement** - regular feedback keeps the SMS up to date and responsive.
- **Harm prevention** - early discussions about safety concerns can fix issues before the cause harm.
- **Using resources wisely** - consultation can identify more efficient, practical and cost-effective safety measures.

Note: Consultation is an ongoing and active process that opens up both formal and informal communication between the organisation and its stakeholders - such as employees, the public or others who may be affected. Effective consultation means seeking and sharing information and listening to each other's concerns so the best outcome can be achieved.

As a minimum, we expect your safety case to outline the consultation processes that help licenced rail participants properly engage with all stakeholders. This ensures a well-rounded approach is taken when setting up, reviewing or changing the SMS.

What to include in your safety case

At a minimum:

- Outline the consultation processes that help licenced rail participants properly engage with all stakeholders.
- Reference where consultation protocols can be found within your SMS.

Communication

Communication processes, both internal and external, are essential for a successful SMS. Effective communication helps safety information flow seamlessly throughout organisations, building awareness, compliance, and supporting a proactive approach to safety. Effective communication brings many benefits through:

- **Clear instructions** - everyone receives clear and simple easy-to-follow safety procedures, reducing the risk of misunderstandings and mistakes.
- **Risk awareness** - regular updates help people understand potential hazards and how to mitigate them.
- **Timely reporting** - robust communication processes make reporting of accidents, near-misses, and hazards quicker and easier, so action can be taken.
- **Emergency preparedness** - in emergencies, effective communication is critical for coordinating responses and evacuations and keeping everyone informed.
- **Training and education** - communication is key to delivering safety training and making sure people understand and apply safety practices in their work.
- **Feedback and improvement** - open communication lets people provide feedback on safety issues, which can improve safety practices and the SMS.
- **Consistency** - standardised processes help ensure that safety messages are consistent and understood across the organisation.
- **Engagement and culture** - regular two-way communication builds a strong safety culture where everyone feels responsible for safety.
- **Record-keeping** - documenting safety-related communications helps with audits, investigations, and continuous improvements.

Your safety case must describe the communication systems and processes that support timely and targeted two-way exchange of information relating to the SMS.

These systems and processes should help people access all the information they need to manage risks effectively, provide way to give feedback, and allow incidents and accidents to be reported to those responsible.

What to include in your safety case

- Describe the communication systems and processes that support timely and targeted two-way exchange of information relating to the SMS.
- Reference where the communication controls can be found within your SMS.

Procurement and Contractor Management

Procurement and contractor management processes are critical components of a SMS. They minimise risks and promote a culture of safety across the supply chain and contractor network. Key benefits are:

- **Quality assurance** - making sure materials, equipment and services meet safety standards help prevent failures or accidents due to substandard supplies
- **Compliance** - all parties must comply with safety provisions and standards, including industry-specific guidelines, legal requirements and organisational safety policies.
- **Risk management** - checking suppliers' and contractors' safety records and practices identifies and reduces risks before they start work.
- **Accountability** - clearly defining safety responsibilities ensures suppliers and contractors are accountable for maintaining safety standards throughout their engagement.
- **Continuous improvement** - regular monitoring and evaluation of supplier and contractor performance helps improve safety practices and identify areas for improvement.
- **Stakeholder confidence** - strong procurement and contract management builds trust with employees, customers and regulators.

At a minimum, your safety case should explain the processes and controls in place for managing procurement and contractors. This includes any external suppliers involved in providing construction, operation, maintenance, modifying or decommissioning of safety related and/or safety critical equipment for railway operations.

Note: Contracting out work does not remove or shift the rail safety accountability held by the licenced rail participant.

What to include in your safety case

At a minimum:

- Explain the processes and controls in place for managing procurement and contractors, including any external suppliers involved in providing construction, operation, maintenance, modifying or decommissioning of safety related and/or safety critical equipment for railway operations.
- Reference where procurement and contractor management controls can be found within your SMS.

Training, instruction and skills

Training is a key element of a SMS. It helps make sure that people understand safe procedures, develop the right skills, and a proactive approach to safety across the organisation.

Training is more than running courses - it also includes having adequate systems in place to manage the competence of rail safety workers. This is crucial in a SMS for several reasons, including:

- **Knowledge and awareness** - training ensures that rail safety workers understand the safety policies, procedures and provisions, and how to identify and mitigate hazards
- **Skill development** - gives workers the skills they need to use safety equipment and respond to emergencies.
- **Behavioural change** - regular training encourages safe behaviours and attitudes among staff. Regular training helps establish safety as a core value within the organisation.
- **Compliance** - it ensures workers comply with SMS requirements and only carry out tasks they are trained and competent to perform
- **Risk reduction** - trained workers can identify and manage risks before they result in accidents.
- **Emergency preparedness** - training helps workers respond quickly and effectively in emergencies, protecting lives, property and the environment.
- **Continuous improvement** - ongoing training keeps safety practices up to date with new information, technologies, and incident analyses.
- **Confidence** - training increases workers' confidence in doing their jobs safely, which improves morale and productivity and the commitment to maintaining workplace safety.

Note: Training (including instruction and skills development) is often part of a wider system for managing worker competence, rather than being treated as standalone training.

As a minimum, your safety case should outline the training processes used to make sure rail safety workers have the skills and competence needed to do their work safely, contribute to a positive safety culture, and an effective SMS.

What to include in your safety case

At a minimum:

- Outline the training processes used to make sure rail safety workers have the skills and competence needed to do their work safely, contribute to a positive safety culture, and an effective SMS.
- Reference where training controls can be found within your SMS.
- Describe the checks in place to confirm that rail safety workers understand their roles and responsibilities.

Managing interfaces and cooperation

A lot of safety risk comes from the point where different rail participants interact. That's why it is essential for rail participants and their stakeholders to work together to keep the system safe.

External parties (like emergency services, the public at level crossings or stations, adjoining roads or construction projects) can also introduce risk to licenced rail participants.

Critical note: At these connection points (interfaces), more than one organisation may have duties and responsibilities, and, sometimes these can overlap. All rail participants are equally responsible for co-operating with each other to manage these shared risks. However, the access provider has the ultimate and overall accountability for their rail infrastructure.

This does not give them accountability for other rail participants. It requires the access provider to determine, in conjunction with other rail participants, accountabilities or responsibilities for the interface risks and controls. Every participant must understand their role in the implementation of the control, including the information required by each party to manage risks. Access providers must design the controls so that other rail participants can meet standards and targets.

What to include in your safety case

At a minimum:

- Describe any interface risks
- Explain the processes in place to manage those risks
- Identify who is responsible.
- Show how all parties involved contribute to this process.
- Include a register of interface agreements
- Reference where interface management controls can be found within your SMS.

Accidents and incidents

Robust processes for reporting, recording and responding to accidents and incidents are critical parts of an SMS for several reasons, including:

- **Compliance and accountability:** Meeting legal and safety obligations thorough investigations and show your organisation takes safety seriously.
- **Identifying root causes**: There's a safety management saying, "never waste an accident or incident". Every event is a chance to identify the underlying factors that led to the accident, so you can prevent it from happening again.
- **Improving processes and procedures:** Investigations can reveal weaknesses in processes and procedures. This helps you make safety improvements.
- **Learning and development**: The insights gained from incidents can be used in training and education, helping build a culture of continuous learning and safety awareness.
- **Building trust:** When investigations are thorough and transparent it builds trust with rail safety workers, stakeholders, and the public. It shows you're serious about managing risks.

Note: This element relates to how accidents and incidents are reported, recorded, and investigated. It does *not* cover emergency response actions like making sites safe - those are covered separately under emergency management (see next page).

What to include in your safety case

At a minimum:

- Describe how your organisation manages the reporting, recording and investigation of accidents and incidents. This includes how you co-ordinate joint investigations with other rail participants.
- Reference where accident management controls can be found within your SMS.

Emergency management

Emergency management is a key part of a licenced rail participant's SMS. It helps make sure the organisation is ready to respond to emergency events like natural disasters, major accidents, or other crises. Being prepared means developing plans, running practice drills and making sure resources are available when needed.

Including emergency management in your SMS strengthens an organisation's ability to protect people, assets and operations. It also supports a more comprehensive approach to safety and risk management.

Here are some of the main benefits:

- **Reducing risks:** By identifying possible hazards and risks early, you can take steps to prevent or mitigate their impact
- **Response coordination**: Clear roles, responsibilities and communication channels help ensure a fast and organised response when emergencies happen; minimising confusion and delays during an emergency.
- **Safety and wellbeing:** The primary goal is to keep everyone safe - staff, customers and the public. Emergency management plans minimise harm.
- **Business continuity:** Good emergency management planning includes ways to keep essential services or critical functions going or getting them back up quickly.
- **Building resilience**: Planning and preparation makes your organisation resilient and better equipped to handle crises and recover from them. This supports long-term stability and sustainability.

At a minimum, your safety case should describe your organisation's emergency management plan and the processes you have in place. These should match the level of risk in your operations.

The goal is to make sure your organisation is ready for things to go wrong - and that staff have clear instructions to reduce the impact of an emergency.

You also need to show that your organisation has the systems, procedures and resources to put the plan into action if an emergency occurs.

Because rail incidents are often complex and involve multiple agencies, your emergency management plan should be developed in partnership with emergency services that would respond to a significant incident.

When putting together your emergency management plan, it's important to consult with:

- **Emergency services** - fire, police, and ambulance services.
- **Other rail participants** - especially those who might be affected by how the plan is implemented.
- **People or organisations who may need to help during an emergency** - this includes utility providers like water, sewerage, gas, electricity or telecommunication, and possibly public transport providers.

Your emergency management planning must cover the information that emergency services need to plan their responses to rail incidents. This helps them act quickly and effectively when something goes wrong.

It is also important to include the parts of the SMS that support emergency response– like staff training for emergencies and regular testing of your plans.

Access providers must make sure that their emergency procedures are coordinated with other rail participants and any contractors who may be involved.

When developing your emergency response plans, think about the types of situations your organisation might face. These could include:

- **Train collisions**
- **Fires** on trains or stations
- **Loss of critical infrastructure** like tunnels or fire and life safety systems
- **Accidents that damage the rail network**
- **Access for emergency services**
- **Suspicious packages**
- **Dangerous goods** such as harmful substances or material that could damage the environment
- **Severe weather events**
- **Evacuation procedures**, which will vary depending on the type of emergency - for example evacuations during a flood will differ from those during an earthquake.

What to include in your safety case

At a minimum:

- Describe your organisation's emergency management plan and the processes you have in place. These must show that your organisation has the systems, procedures and resources to put the plan into action if an emergency occurs.
- Outline the parts of the SMS that support emergency response– like staff training for emergencies and regular testing of your plans.
- Reference where emergency management controls can be found within your SMS.

Security management

Security management is a critical part of a SMS. It shows that your organisation is taking reasonable steps to protect people, assets and operations from security threats.

Here are the main benefits:

- **Keeping people safe:** Security management helps protect passengers, staff, and contractors from threats like terrorism, vandalism, and other criminal activity.
- **Protecting infrastructure:** Rail networks include critical infrastructure - tracks, stations, tunnels, bridges, and signalling systems. Security measures help prevent sabotage, theft, and damage.
- **Avoiding service disruptions:** Security incidents can cause delays or even stop services. Good security planning helps reduce those risks and ensures services can continue.
- **Incident response and recovery:** A strong security system includes clear plans for dealing with incidents and getting operations back to normal quickly.
- **Building public trust:** Passengers are more likely to use rail services if they feel safe. Strong security boosts public confidence in the rail system.
- **Integrating with safety management:** Security is a critical part of overall safety. Integrating it into your SMS helps manage all types of risks, including those caused by people.
- **Emergency preparedness:** Security management also supports emergency preparedness - through training drills and coordinating with police and emergency services.

Note: Security of railway operations includes both physical and cybersecurity threats.

At a minimum, your safety case should explain how your organisation manages security risks. This involves:

- **Having a detailed security management plan** that outlines how security threats are identified, managed, and responded to.
- **Carrying out regular activities** to make sure your organisation is following the plan and staying up to date with current security requirements.

What to include in your safety case

At a minimum:

- Explain how your organisation manages security risks.
- Reference where security controls can be found within your SMS.

Internal auditing

Auditing is a key part of a licenced rail participant's SMS. It helps make sure the system is working well, meeting legal requirements, and keeps improving over time.

Here are the main benefits of auditing:

- **Staying compliant:** Audits check that the organisation is following the safety case and SMS.
- **Identifying hazards:** Audits can uncover safety hazards that aren't obvious, helping prevent accidents and incidents before they happen.
- **Improving safety performance:** Regular reviews highlight areas for improvement, leading to safer practices.
- **Promoting accountability:** Audits show what's working well, helping hold people and organisations accountable for safety, building a strong safety culture.
- **Identifying strengths:** Audits also show what is working well, helping record and recognise good practice.
- **Supporting continuous improvement:** Audit results provide useful feedback and data that helps refine and improve the SMS over time.
- **Enhancing communication:** Audits often involve different teams and stakeholders, encouraging better collaboration on safety.
- **Building trust:** Regular audits show your commitment to safety, which builds trust with staff, customers and regulators.

Note: The SMS explains how a rail participant meets their duty to ensure safety, SFAIRP. A licenced rail participant must meet these standards and make sure that every task is performed the right way, by people who are properly trained and competent.

What to include in your safety case

At a minimum:

- Describe the audit processes your organisation uses to:
    - Audit SMS processes that pose the greatest safety risks
    - Check whether your organisation is following the SMS
    - Assess how well the SMS is working to reduce or eliminate safety risks
    - Identify opportunities to improve safety.
- Reference where audit controls can be found within your SMS.

Corrective action

Corrective action is a critical part of a rail participant's SMS. It helps organisations learn from mistakes, fix problems, improve safety practices and create a safer work environment for everyone.

A safety management system should always be improving. Taking corrective actions fosters a culture of continuous improvement, helping your organisation evolve and adapt to new challenges and keep safety standards high.

What to include in your safety case
At a minimum:

- Explain the processes your organisation uses to manage corrective actions.
- Reference where corrective action controls can be found within your SMS.

Health and fitness

The health and fitness of rail safety workers is a vital part of a licenced rail participant's SMS. It plays a key role in keeping railway operations safe, improving performance, and protecting both workers and the public.

Here's why it is important:

- **Public safety:** Healthy and fit workers help create a safer railway environment for everyone.
- **Managing stress:** Rail safety workers often deal with stressful situations, especially during emergencies. Good mental health helps them stay calm and make smart decisions.
- **Safety performance:** Workers are responsible for keeping railway operations safe. Their physical and mental fitness directly affects how well they can do their jobs.
- **Staying alert:** Rail safety worker often work involves high-risk tasks and environments where focus and attention to detail is critical.
- **Handling physical tasks:** Many roles involve physical activity like lifting, climbing and walking long distances–so physical fitness is essential.

What to include in your safety case
At a minimum:

- Explain the processes in place to keep staff healthy and fit.
- Reference where health and fitness controls can be found within your SMS along with any information about specific industry or other health and fitness standards they comply with.

Drug and alcohol policy

Drug and alcohol policies are a vital part of a SMS. They help protect lives and keep railway operations running safely and reliably.

Here's how drug and alcohol policies support safety:

- **Protecting safety:** Impairment from drugs or alcohol can lead to poor decisions and slower reaction times, increasing the risk of accidents.
- **Maintaining public trust:** Strong drug and alcohol policies show the public that safety is taken seriously, helping build public trust in the rail system.
- **Supporting wellbeing:** A clear drug and alcohol policy promotes a healthier work environment and encourages people to seek help if they are struggling with substance abuse.
- **Preventing accidents:** Past incidents have shown that substance use can contribute to accidents. Robust policies help reduce this risk.

What to include in your safety case

At a minimum:

- Describe the drug and alcohol policies and processes your organisation has in place to ensure, SFAIRP, that workers don't carry out work while impaired by alcohol or drugs.
- Recognise that the term "**drug" includes both illicit drugs and prescribed medications.**
- Include how your organisation manages the risk associated with prescribed drugs–usually by identifying potential risks and putting strategies in place to reduce these risks.
- Reference where these drug and alcohol policies are documented in the SMS.
- Include any relevant industry standards or other drug guidelines your organisation follows.

Fatigue management

Fatigue management is a critical part of a licenced rail participant's SMS. It helps keep rail operations safe and reliable, protecting employees, contractors and passengers.

Fatigue refers to physical and mental tiredness that can affect a person's ability to work safely. Several work-related factors that influence fatigue levels, including:

- **How long a worker has been awake**
- **How overtime is managed**
- **The type of the work being done** - for example, repetitive tasks or tasks needing high concentration.
- **Workload and working environment**
- **Rosters that don't allow enough sleep between shifts**
- **Sleep disruptions**, such as being on-call
- **How often breaks are taken**
- **Recovery time between periods of work**
- **Travel time to and from work**

Managing fatigue is essential. Here are the key benefits:

- **Safety:** Fatigue reduces focus and reaction time, increasing the risk of accidents.
- **Accident prevention:** Many rail incidents have been linked to fatigue. Management strategies help reduce the risk of accidents caused by tired or overworked people.
- **Wellbeing:** A good fatigue management approach supports a healthier work environment; more satisfied workforce and helps reduce burnout and turnover rates.
- **Public confidence:** Passengers expect safe and reliable services. Managing fatigue shows your commitment to safety.
- **Long-term sustainability:** Well-rested workers are more effective and more likely to stay in the job, helping maintain a skilled workforce.

What to include in your safety case

At a minimum:

- Describe the processes in place to manage fatigue risks and ensure workers are fit for duty.
- Reference where in the SMS these fatigue controls exist.
- Include any specific industry or other fatigue management standards for fatigue management.

Resource availability and sufficiency

Making sure your organisation has sufficient resources - both people and equipment - is a key part of an SMS. It helps keep railway operations safe, reliable, and efficient benefitting passengers, staff, and the wider community.

Here are the main benefits:

- **Safety:** Well-trained staff, reliable equipment, and sufficient infrastructure, are essential for safe operations. A lack of resources can lead to delays in maintenance, equipment failures, and increased safety risks.
- **Efficiency:** With enough resources, trains run on time, and maintenance and repairs are done properly and promptly.
- **Passenger experience:** A well-resourced railway system provides better service. Clean and comfortable and punctual trains help customer satisfaction.
- **Meeting demand:** As more people use rail services, having enough staff, rolling stock and infrastructure is key to safely expanding the network.
- **Environmental impact:** Sufficient resources allow for more sustainable practices, like energy-efficient trains and better waste management.

What to include in your safety case

At a minimum:

- Describe the resource processes your organisation uses to ensure it has enough resources to operate safely and effectively.
- Reference where resource management processes can be found within your SMS.

Acknowledgements

We thank everyone who contributed their time, expertise, and effort in developing this guide.

Special thanks to:

- The Office of the National Rail Safety Regulator, Australia, particularly for their Safety Management System Guideline, which informed the development of this guide;
- The Rail Industry Safety Standards Board, Australia, and their many documents, which are sometimes referred to within the guide, as additional reference materials; and
- The National Transport Commission, Australia, particularly for their *National Standard for Health Assessment of Rail Safety Workers*, which are referred to within this guide.

Appendix 1:

This guide and other standards

This guide does not replace and (where applicable) should be used in conjunction with other safety information, such as:

- Australian/NZ Standard AS/NZ ISO 31000 Risk Management;
- Other International Standards i.e. **EN 50126**;
- Industry Codes i.e. Practical guidance for conducting health and safety assessments toward meeting **SFAIRP** obligations in the Railways Act (National Rail Industry Advisory Forum, 2023); and
- Examples of documents that provide knowledge about hazards and risks and ways to manage them:
    - National Standard for Health Assessment of Rail Safety Workers published by the Australian National Transport Commission;
    - UK Rail Safety and Standards Board (RSSB);
    - International Organization for Standardization (ISO);
    - European Standardization Organizations (EN);
    - European Committee for Electrotechnical Standardization (CENELEC); and
    - International Union of Railways (UIC)

Using standards

There are two types of standards: mandatory and non-mandatory.

Mandatory standards

Mandatory standards are set in law, legislation or regulation.

Non-mandatory standards

Non-mandatory standards are not set in law. They are developed by industry groups, standards-setting bodies, associations, committees, groups or institutions.

Since there are currently no mandatory standards, this guidance focuses on how non-mandatory standards can be used to help ensure safety, SFAIRP.

General principles for using non-mandatory standards:

- If a relevant standard exists, it should be used.
- Choose standards that offer higher levels of safety over those offering less.
- Use the most relevant and applicable standard - railway-specific standards should be used before standards from other industries or generic standards.
- Use the latest version of a standard not an outdated one.
- Use New Zealand standards where available and applicable. If not, overseas standards may be used.
- Use the entire standard, not just selected parts or sections.