

# Scoping Workshop – Key Findings

## New Zealand Rail Safety Regulatory Model

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New Zealand

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## 1.0 Introduction

Waka Kotahi NZ Transport Agency (Waka Kotahi) are looking to develop a rail safety regulatory framework to meet the current demands of the railway industry and support its growth in New Zealand. To this end, Waka Kotahi engaged Abbott Risk Consulting (ARC) to design and facilitate a workshop with key industry participants to explore opportunities to improve the current regulatory approach and to identify priorities for future action.

The Workshop was held in Auckland on 7 September 2022. This report provides details of the workshop, attendees and findings.

## 1.1 Summary of Key Findings

The key findings to come out of the workshop are:

1. There is a strong commitment across industry and government to work together to improve the system of safety in New Zealand rail.
2. The current rail safety regulatory approach is not fit for purpose.
3. The current formulation of a "safety case" is inadequate as a basis for the licensing system and effective regulatory oversight.
4. There was strong support for developing the R3F model and working collaboratively to improve a shared industry view and understanding of safety risk.
5. There is a need for stronger governance in relation to the development of the National Rail Safety Standards (NRSS).
6. The significant increase in rail infrastructure investment requires a new approach to the regulation of major projects and the development and application of more mature system engineering practices by industry.
7. The complex array of regulatory agencies overseeing the management of health, safety and environmental risk inhibits industry's ability to adopt contemporary integrated management systems.

Further details on each finding are provided in Section 4.0.

## 1.2 Recommendations

It is recommended that:

1. The Ministry of Transport and Waka Kotahi, in consultation with rail participants, undertake a detailed analysis (using a RACI model or equivalent) to identify the entity(s) with lead accountabilities for key rail functions under the co-regulatory model, including:
  - a. Rail network strategic planning
  - b. Rail infrastructure program and project planning and delivery

- c. Design Authority (including ownership of railway standards and accountability for configuration management)
  - d. Strategic regulatory policy (including legislative policy)
  - e. Operational regulatory policy (eg guidelines, codes of practice)
  - f. Administration of the Rail Safety Act
2. Rail participants consider formalising an industry representative body (eg through the Australasian Railway Association) to facilitate a more structured and wholistic approach to addressing the challenges/opportunities facing the New Zealand rail network and to develop a more integrated and collaborative approach to safety risk management
3. The entity accountable for rail network strategic planning develop, in consultation with industry, a long term strategic vision for rail network performance and interoperability
4. Waka Kotahi formalise a Rail Participant Consultative Forum to regularly engage the industry with respect to safety performance under the co-regulatory model, and in particular:
  - a. the development of the Rail Regulatory Risk Framework (R3F)
  - b. the reporting and sharing of data to support good safety practices across the industry
5. The Ministry of Transport, in consultation with Waka Kotahi and industry, review the Rail Safety Act 2005 to ensure it is fit for purpose, including:
  - a. Clarity in relation to the duties under the law
  - b. the requirements of a “safety case” as a basis for the licensing regime
6. Waka Kotahi, in conjunction with the Ministry of Transport, review the structure, resourcing and regulatory approach of the Safer Rail unit to ensure it has the capacity and capability to effectively regulate within the co-regulatory model and in the context of growing rail demand and infrastructure delivery
7. Waka Kotahi develop a suite of guidance material setting out the regulator’s expectations of industry in areas such as:
  - a. The content of the licensee’s “Safety case”
  - b. The delivery of major infrastructure projects

- c. Management of specific safety risks (eg fatigue, fitness for duty, interface management).

### 1.3 Workshop Methodology

The Workshop Agenda is provided in Appendix A.

The Workshop was designed to:

- Clearly articulate and understand the drivers for change (see Section 2.0).
- Discuss and agree upon principles to underpin the regulatory approach (see Section 3.0).
- Identify what is working well and where there are areas for improvement in the system of safety. This was done by exploring current practice in New Zealand through three different prisms: risk-based regulation; the life-cycle of an asset; and an accident scenario.

Key findings from the workshop are summarised in Section 1.1 above and discussed in more detail in Section 4.0. Recommendations arising from those findings are set out in Section 1.2 above.

### 1.4 Workshop Participants

The Workshop was attended by senior executives from:

- Rail operators, including:
  - KiwiRail.
  - Auckland One Rail.
  - City Rail Link.
  - Transdev.
  - Fonterra.
- Waka Kotahi.
- The Ministry of Transport.

A full list of attendees can be found in Appendix B.

### 2.0 Drivers of Change

There was widespread agreement on the drivers of change and the need for the current approach to rail safety regulation to adapt and change to meet those challenges. The key drivers include:

- The rapid growth in rail activity (both passenger and freight).
- The recent commitment to significant investment in rail infrastructure and rolling stock after many years of relatively little investment activity.

- An increase in the number of rail industry participants and increased complexity in managing safety between the above and below rail operators and through the supply chain.
- The rapid technological change and innovation occurring in the rail industry.
- The increasing societal expectations around safety and, more generally, around industry performance.

### 3.0 Regulatory Principles

The Workshop reviewed the draft regulatory principles proposed by Waka Kotahi to help drive a new approach to rail safety regulation. These are:

- An active co-regulatory model.
- A risk based regulatory approach – R3F.
- Tū ake, tū māia (Stand Up, Stand Firm).
- Real-world regulation.

One of the aims of this session was to ensure all parties had the same understanding of the rationale for these principles and their significance in influencing behaviours - not only within the regulator, but across industry.

ARC found that there was strong alignment in participants' understanding of, and support for, the proposed principles.

#### 3.1 Active Co-Regulation

The Workshop considered the following broad definition of co-regulation:

*“Co-regulation typically refers to situations where industry develops and administers its own arrangements.*

*The Government provides legislative backing to enable the arrangements to be enforced.*

*The Regulator holds industry to account in complying with arrangements.”*

Under a co-regulatory model, the regulator sets predominantly performance or principles-based requirements, allowing industry to determine the more prescriptive means by which they can meet those requirements.

The rationale for this model is that:

- Risks should be managed by those who are best placed to control those risks.
- Prescriptive standards set by regulators do not adapt well to specific or localised risk factors and are less responsive to innovation and change.

However, the successful implementation of a co-regulatory model is challenging in the context of a complex safety system such as rail, where many parties contribute to safety outcomes. These include parties who influence safety through the life-cycle of the asset from planning, design, construction, operation, maintenance and de-commissioning.

Safety is therefore a shared responsibility between these parties.

The workshop noted that this shared responsibility is explicitly referenced in the *Australian Rail Safety National Law* (RSNL)<sup>1</sup> which defines those parties as including:

- Rail transport operators (rail infrastructure managers and rolling stock operators).
- Rail safety workers.
- Persons who design, commission, construct, manufacture, supply, install, erect, maintain, repair, modify or decommission rail infrastructure or rolling stock.
- Persons who supply rail infrastructure operations or rolling stock operations to rail operators.
- Persons who load or unload rail freight.
- The regulator.
- The public.

The RSNL notes that the level and nature of each person's responsibility with respect to safe rail operations is dependent on the nature of the risk to rail safety that the person creates and the capacity of that person to control, eliminate or mitigate those risks.

Unlike the New Zealand *Rail Safety Act*, the RSNL places explicit obligations on these parties to participate in, be consulted on and be involved in, the formulation and implementation of measures to manage risks to safety.

In confirming support for the principle of co-regulation, the workshop noted that co-regulation demands:

- Integrated risk management across industry.
- The reporting and sharing of data to support good safety practices.
- A culture of collaboration and consultation with respect to safety risks.

A clear understanding between the regulator and regulated entities of the standards required of rail participants to meet their safety duties.

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<sup>1</sup> Australian *Rail Safety National Law*, Section 50



### 3.2 Regulatory Approach – R3F

The Workshop acknowledged the work by Waka Kotahi in developing the Rail Regulatory Risk Framework (R3F) and strongly supported the concept of risk-based regulation as an underpinning principle for the regulatory framework.

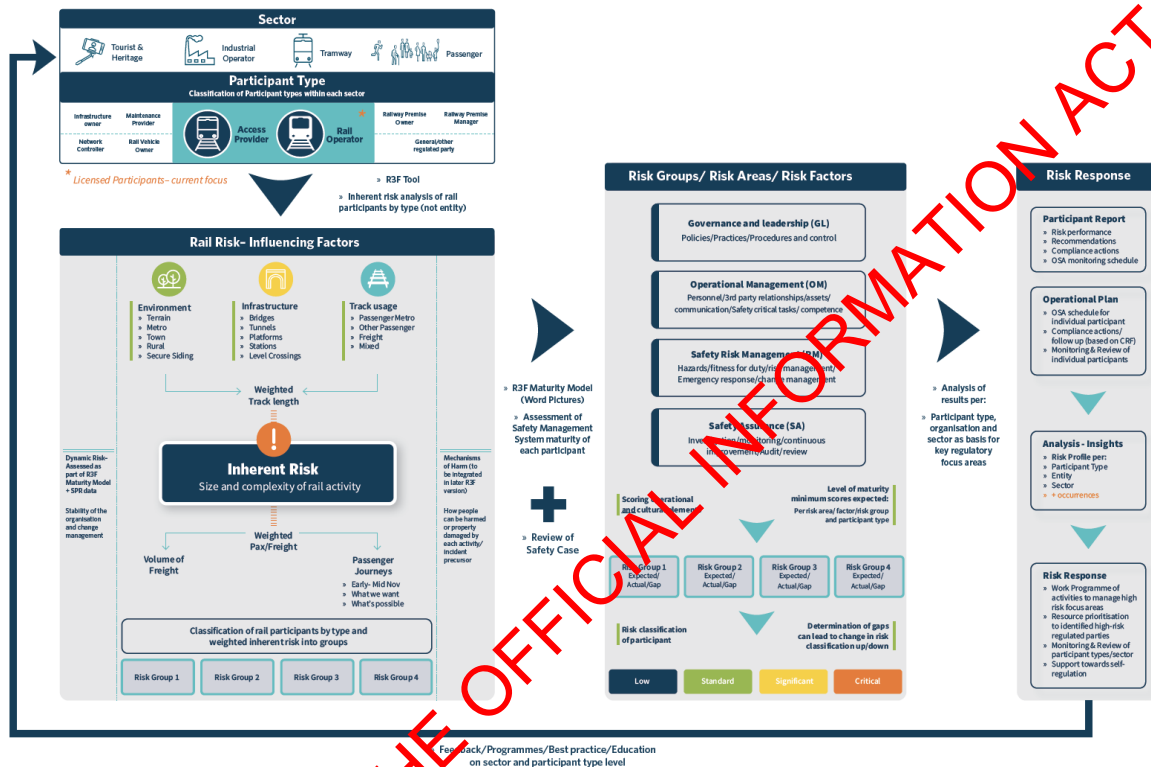


Figure 1: The Rail Regulatory Risk Framework (R3F)

### 3.3 Tū ake, Tū māia

The Workshop noted and supported the principle of Tū ake, tū māia – to Stand up, Stand Firm – and Waka Kotahi's commitment to good regulatory practice.

### 3.4 Real-World Regulation

The Workshop supported the description of Real-World Regulation set out in the Regulatory Strategy 2020-25. It also acknowledged that this effectively captures the key elements of good regulatory practice.

## HOW WE WORK AS A REAL-WORLD REGULATOR

*We are grounded in  
te ao Māori*



*Our regulatory approach is firm and fair,  
applying principles of good practice*



Figure 2: Working model for a “Real World Regulator”

## 4.0 Findings

While there were some differences in emphasis, there appeared to be a strong alignment about the below findings and how they might set the scene for future collaboration in the maturation of the rail safety regulatory framework.

### 4.1 Finding 1: Collaboration

**There is a strong commitment across industry and government to work together to improve the system of safety in New Zealand rail.**

Industry participants welcomed the initiative of Waka Kotahi in organising the workshop and encouraging a “re-set” in the way that the regulator and industry respond to the challenges facing the sector.

All parties committed to continuing the dialogue and ensuring they re-convene at least annually to discuss progress.

### 4.2 Finding 2: Regulatory Framework

**The current rail safety regulatory approach is not fit for purpose.**

The “drivers of change” are necessitating a new approach to rail safety regulation in New Zealand.

While the introduction of general safety duties in the *Rail Safety Act* is supported, it has caused confusion about who holds those duties and how the obligation to reduce risk, so far as is reasonably practicable (SFAIRP), can be demonstrated and agreed between the risk owner and the Regulator.

For the Regulator, simply adding resources in response to growing demand is not the answer. There is a need for a shift to risk and evidenced-based regulatory practice. There is also a need for a more nuanced understanding of industry’s accountability for effectively managing risk within a co-regulatory model.

For industry, there is a need for a more integrated and collaborative approach to safety risk management. This should be based on better data and analysis, and a commitment to consultation with other parties who may be affected by business decisions.

In summary, the Workshop agreed collectively that the current rail safety regulatory approach is not fit for purpose.

### 4.3 Finding 3: Licensing Regime

**The current formulation of a “safety case” is inadequate as a basis for the licensing system and effective regulatory oversight.**

Workshop participants, and most notably the industry representatives, are of the view that the current formulation of “safety cases”, which underpin the regulatory licensing scheme

in New Zealand, is inadequate. Rather than the contemporary concept of a “safety case” which sets out the safety argument for a particular operation, the current safety cases are more akin to high level safety management plans.

Further, the safety cases do not provide the Regulator with sufficient visibility of the licensee’s safety and risk management systems and practices. This lack of visibility about the standards to which a licensee can be held to account means there is a discrepancy in expectations between the licensee and the Regulator on what is acceptable in managing risk (including at what point the “SFAIRP” argument has been made).

Industry representatives felt that this asymmetry results in the Regulator taking a more risk averse view of acceptable risk than what would be required within the concept of a “SFAIRP” argument.

Industry representatives also noted that the Regulator does not focus sufficiently, in their view, on the performance of non-licensed industry participants through the supply chain. The workshop agreed, however, that this is an issue of capacity of the Regulator and that it is understandable that regulatory resources are predominantly focused on licensed access providers and rail operators.

The workshop concluded that a review of the current safety case regime is a high priority. This should include:

- Clearer guidelines about the requirements of the safety case with a stronger focus on safety and risk management systems and processes to be adopted by the licensee.
- The introduction of a provision in the license, setting out the scope (including limitations) of the activities for which a licensee has approval.
- The development of guidelines for the industry regarding the Regulator’s expectations when duty holders are developing a safety argument that their operations are safe, SFAIRP.
- Clear articulation of what the Regulator is “attesting to” when approving a license i.e., to the competence and capacity of the licensee to manage risk, in accordance with their approved safety case.

#### 4.4 Finding 4: Risk Management

**There was strong support for developing the R3F model and working collaboratively to improve a shared industry view and understanding of safety risk.**

The workshop explored several issues relating to risk and safety management.

It was agreed that further work, on a collaborative basis, is needed to develop the R3F model and, particularly, the safety performance data needed to underpin the model.

A more mature risk model would facilitate:

- Better targeting of resources by the Regulator on matters that are important from a risk perspective (i.e., activities that are both non-compliant **and** potentially harmful).
- The development of industry-wide safety strategies by rail participants with support from the Regulator.
- The opportunity for individual operators to benchmark their own safety performance against de-identified industry levels.

There was some discussion about the use of the term “critical risks”, in the context of safety risk management. While participants had different perspectives on the use of the term, all agreed that a risk-based approach to safety regulation and management requires a different analytical approach to high consequence, but low likelihood, risks. These risks are not captured in the analysis of data focusing on occurrences that are, by definition, more frequent.

#### 4.5 Finding 5: Standards

**There is a need for stronger governance in relation to the development of the National Rail Safety Standards (NRSS).**

The workshop briefly addressed the issue of rail industry standards. It was agreed that the process for developing and adopting standards has not kept pace with structural changes in the industry. This is especially true for the separation of above rail operations from access provision.

The workshop noted that the NRSS is no longer operating and that there has been a change in the governance of the NRSS. The development, management and application of standards requires further thought within the safety regulatory framework. This is to ensure that there is clear accountability for their development and application.

There is also a need to update the standards to reflect changes to rail operations and new technologies. The workshop did not go into any depth regarding how this might be progressed.

#### 4.6 Finding 6: Major Projects

**The significant increase in rail infrastructure investment requires a new approach to the regulation of major projects and the development and application of more mature system engineering practices by industry.**

Workshop participants reflected that the traditional approach to rail regulation was to focus on the day-to-day safety of existing operations. This is because there had been relatively little major investment in rail infrastructure and rolling stock for some considerable time.

However, over the past decade, there has been a substantial increase in new investment in rail and a boom in rail construction activities. This has changed the risk profile of the industry, particularly in relation to managing constant change, operating in a construction environment and often in disruption mode. Additionally, such works bring more contractors onto a network, placing more emphasis on access controls,

licensing/capability, verifications of contractor capability and assurance controls in general.

The Workshop found that there are several opportunities for improvement in the approach to regulating and managing the safety of major new projects:

- Better guidance to the industry on the expectations of the Regulator. This includes the system engineering principles to be adopted in the management of major projects (e.g., safety in design, human factors, assurance processes).
- Early engagement with the Regulator in the planning, design, and delivery of major projects.
- Early and more meaningful engagement by major project delivery teams with operator/maintainers<sup>2</sup>.

This will reduce the regulatory risk that the final safety argument for the project is rejected by the Regulator. It also reduces the likelihood that the operator/maintainer does not accept the assets when handed over on commissioning into service.

#### 4.7 Finding 7: Regulatory Support for Integrated Management Systems

**The complex array of regulatory agencies oversighting the management of health, safety and environmental risk inhibits industry's ability to adopt contemporary integrated management systems.**

Industry representatives pointed to the plethora of regulatory requirements and regulatory authorities that impact on their business, including, for example:

- Rail safety.
- Work health and safety.
- Dangerous goods / hazardous waste.
- The environment.
- Electrical safety.

This complexity has the potential to impose unnecessary regulatory burden on industry due to duplicative or inconsistent requirements amongst regulators. This also has the potential to inhibit industry's ability to adopt integrated safety, risk, environment and quality management systems.

The Workshop supported collaboration between regulatory authorities to work to reduce inconsistency, duplications, or confusion regarding their respective regulatory requirements.

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<sup>2</sup> The Workshop highlighted the early engagement of the operator of the City Rail Link by the project team as an example of good practice in this regard.

## Appendix A Workshop Agenda

### New Zealand Rail Safety Regulatory Model

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Time	Activity	Lead
9.30 - 9.45	Welcome	Kane Patena
9.45 - 9.50	Rules of Engagement!	ARC
9.50 - 10.30	Whanaungatanga Each person to take 2-3 minutes to answer the following questions: <ul style="list-style-type: none"> <li>What is the greatest opportunity for reform of the rail safety regulatory system?</li> <li>What do you want to achieve out of today?</li> </ul>	ARC
10.30 - 10.50	Drivers of Change <ul style="list-style-type: none"> <li>And what's the problem we're trying to fix?</li> </ul>	ARC
10.50 - 11.10	BREAK	
11.10 - 12.00	Proposed Regulatory Principles <ul style="list-style-type: none"> <li>Active Co-regulatory Model</li> <li>Regulatory Approach – R3F</li> <li>Tu Ake, Maia (Stand Up, Stand Firm)</li> <li>Real-world Regulation</li> </ul>	ARC
12.00 - 12.45	PRISM 1: Risk Based Regulation	ARC
12.45 - 1.30	LUNCH	
1.30 - 2.15	PRISM 2: Life Cycle of the Asset	ARC
2.15 - 3.00	PRISM 3: Accident Hypothetical	ARC
3.00 - 3.20	BREAK	
3.20 - 4.00	Insights <ul style="list-style-type: none"> <li>Things we want to keep</li> <li>Things we could improve</li> </ul>	All
4.00 - 4.20	Wrap up <ul style="list-style-type: none"> <li>Key outcomes/observations</li> <li>Next Steps</li> </ul>	ARC Gini Welch



## Appendix B Workshop Attendees

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## **Waka Kotahi**

Kane Patena, General Manager of Regulatory  
Gini Welch, Senior Manager Safer Rail  
Natalie Wyatt-Renney, Manager Rail Support  
Paul Cockerton, Lead Advisor Rail Systems  
David Shepherd, Manager Rail and Freight  
Paul Browning, PA to Senior Manager Safer Rail

## **Ministry of Transport**

Amber McGovern-Wilson, Transport (Policy)  
Richard Manning, Transport (Senior Adviser - Supply Chain)

## **Rail Participants**

Alastair Cumming, Kiwirail (Head of Zero Harm)  
Darryn Robin, Kiwirail (Head of Systems Standards and Governance)  
Paul Dalessio, Auckland One Rail (CEO)  
Cameron Brodie, Auckland One Rail (Head of HSQE)  
Dan 'Chuck' Norris, Fonterra (General Manager Global Critical Risk)  
Ian Ladd, Transdev (Managing Director)  
Ivor Smith, Transdev (GM Quality, Safety, and Environment)  
Luke Basilicata, Transdev (Fleet Engineering Manager)  
Russell McMullan, City Rail Link (GM Assurance and Integration)

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