RISSB

RAIL INDUSTRY SAFETY AND STANDARDS BOARD

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Collaborative. Innovative. Trusted.

RISSB helping to foster positive organisational culture

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Abstract

RISSB's raison d'être is fundamentally to drive continuous improvement in Australia's railway/s. The cornerstone of this is RISSB's production of high quality, national standards, rules, codes of practice and guidelines. All of these impact on, and are designed to pay respect to organisational culture, however RISSB also produces other tools and materials for our railway that are specifically targeted at culture.

RISSB's ARRM (the Australian Rail Risk Model – presented at IRSC in Hong Kong last year) is a user friendly, web based tool to help individual rail companies understand their risk profiles in great detail. There is a great variety of risk approaches and maturities across Australia, and ARRM is helping to create a common culture in the appreciation and management of risk in pursuit of improved safety.

RISSB's Code of Practice – Rail Safety Investigation establishes a consistent approach to the collection and analysis of investigation data, and drawing out lessons. This is fundamental to learning from railway failures so that we can continue to reduce their occurrence. This code offers its wisdom on a backdrop of 'just culture' to maximise its value. It's a critical piece of our Railway's virtuous circle of improvement.

RISSB's Occupational Culture Work Health and Safety (OCWHaS) survey is born out of research from Australia's mining industry which evolved into 10 'Platinum Rules' to move towards best practice in work health and safety. Mining and Rail have much in common, being engineering-based, having a need for high reliability, and they are often intertwined when rail provides services to mining. The rules were used as an analytical framework in the analysis of qualitative data leading to a framework for action (a survey instrument) towards good practice for the railway.

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Introduction To RISSB

RISSB is a non-profit company established in 2007 by the Australasian Rail Association to take over from the previous 'Code Management Company' to assist the rail industry to manage rail safety and improve efficiency through standardisation, interoperability and harmonisation.

RISSB is accredited by Standards Australia's (PTY LTD) Standards Development Advisory Committee (SDAC) to write Australian national standards. This means RISSB must adhere to strict guidelines in the development process for producing standards, and therefore RISSB's standards come with significant weight.

RISSB is 100% owned by the Rail Industry, and is Governed accordingly. This keeps RISSB's focus purely on railway stakeholders. RISSB's funding comes from a combination of its member organisations, and Government/s of Australia.

RISSB is primarily responsible for the Australian Code of Practice (ACOP) which includes the production of national Standards, Codes of Practice, Safeworking Rules and Guidelines, and our development process effectively means that these are developed by industry, for industry.

The Australian Rail Risk Model

In November 2017 RISSB very proudly launched ARRM (the Australian Rail Risk Model) at AusRAIL in Brisbane. ARRM - one of the Objects in RISSB's constitution - is a very sophisticated, quantitative web-based tool which helps rail companies understand their safety risk in great detail.

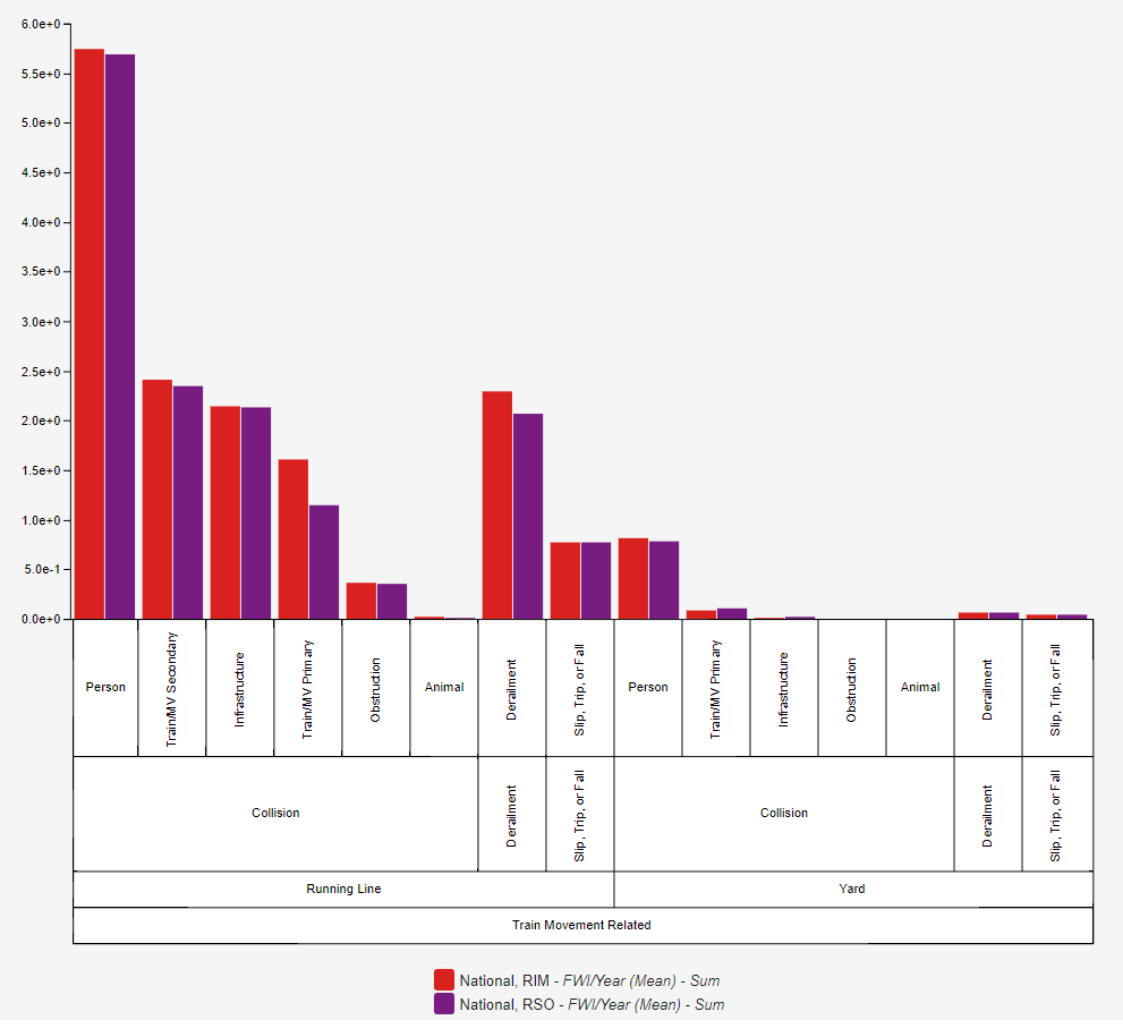
The scale of the ARRM project was significant, it began by taking in user requirements from dozens of stakeholders from right across the country. The project analysed 53,683 occurrence records in support of ARRM's 70,000 individual risk estimates - generated via more than 2000 Monte Carlo simulations with over 50 million sample points.

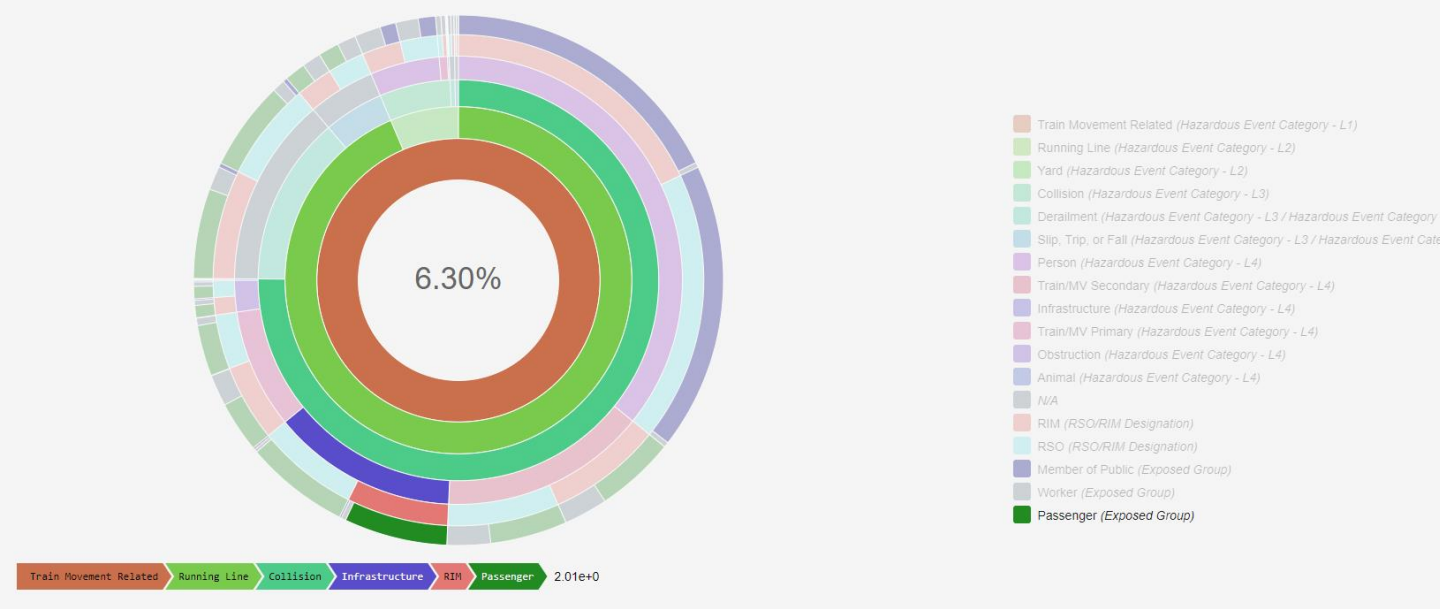
The testing and validation of ARRM has been rigorous and included the appointment of an independent reviewer. User acceptance testing included 2,882 web application interactions and over 601 query executions; testing of the website software alone included around 1000 automated tests. ARRM was also tested on over 150 devices and operating systems. The finished product models safety risk across 104 different hazardous events, each one interrogatable at multiple levels allowing users to drill down into

individual precursors to understand the major contributors to those hazardous events. All through a user-friendly front end.

The launch at AusRAIL was an overwhelming success attracting over 200 very senior people from Australia's (and international) railways. At AusRAIL itself there were several well attended demonstration sessions. In the weeks that followed there were 12 face-to-face training sessions in the major capitals reaching around 145 users. There are now nearly 200 ARRM users (nearly 1 a day since launch) from around 25 Australian rail organisations.

ARRM now provides the railway with: the ability to access and tailor risk reports according to organisational requirements; an increased robustness of risk information due to the pooling of data across RTOs; the ability to anonymously benchmark against normalised industry peers; confidence that the industry and ONRSR are both guided by the same national safety risks – reinforcing coregulation; the underpinning of a smarter standards regime; and valuable information to support investment decisions.





Examples of ARRM outputs, the first one showing the risk profile for infrastructure manager risk (in fatalities and weighted injuries per year) vs rolling stock operators. The second one shows the overall proportion of passenger risk coming from rolling stock collision on running lines (as 'owned' by infrastructure managers).

We expect that as ARRM's usage grows it will become the de-facto standard approach to risk assessment for all railway operators in Australia. It will lead to more rigorous approaches to making safety-related investment decisions, guided by a deep understanding of safety risk (as opposed to being driven by the last incident that occurred). ARRM is bringing greater consistency in safety risk approaches across the industry, it will foster growth in risk maturity, and set up a virtuous circle of improvement leading to greater safety outcomes for the railway.

RISSB is very pleased to have delivered this complex project for the railway's benefit, on time and on budget. We're also very pleased that ARRM was a finalist in the Australasian Rail Industry Awards for the Innovation and Technology category.

The Investigations Code of Practice

This Rail Safety Investigation Code of Practice has been produced to define industry "good practice" for anyone in the Australian rail industry who is involved in, or likely to be involved in, the investigation of rail safety occurrences. It also provides guidance in the application of the code and a suite of tools to assist investigators.

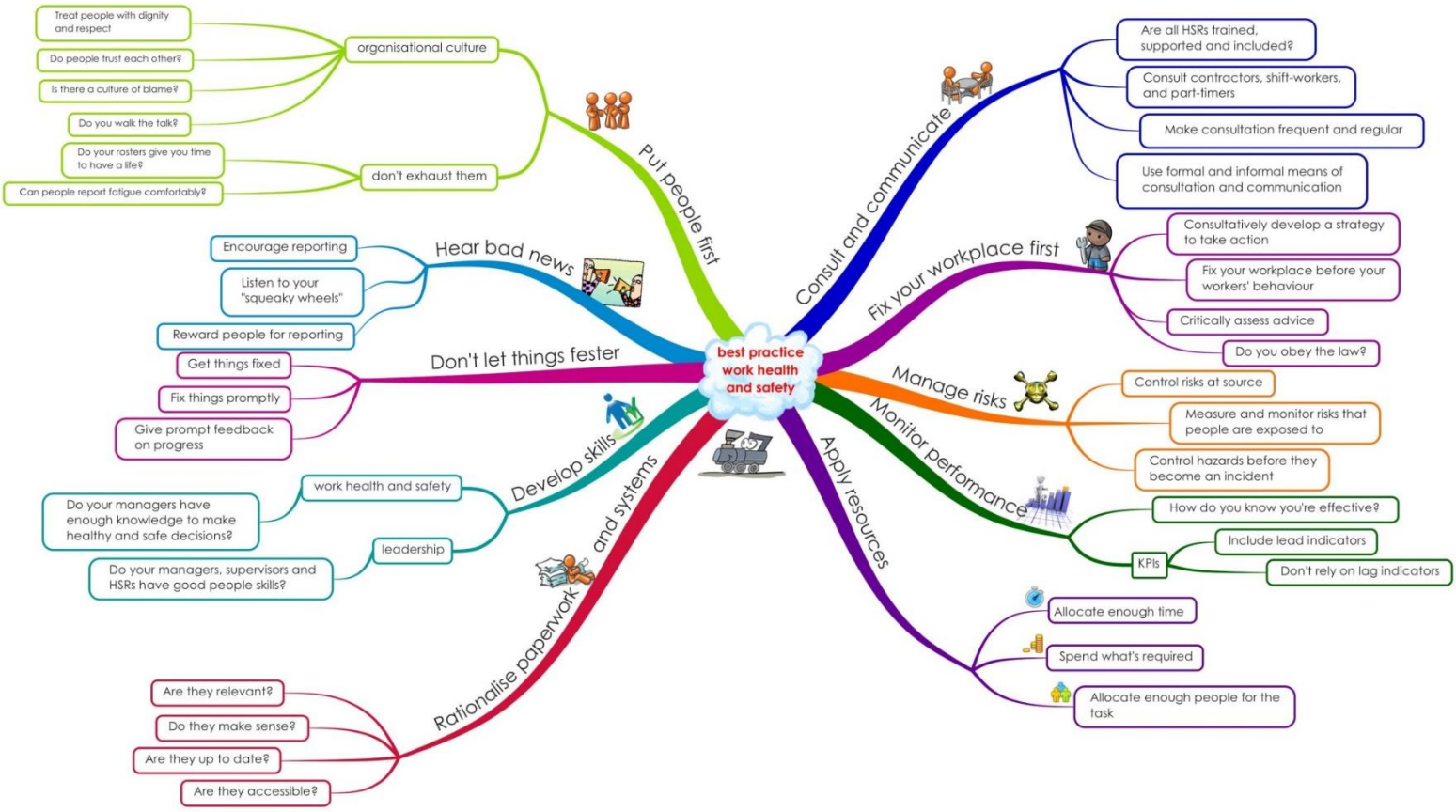
The aim of the code is to establish a consistent approach to the collection and analysis of investigation data. It builds on the best practices already used by various organisations in the industry and promotes a 'just culture' approach for all investigations. No matter which rail organisation is involved or where the occurrence took place, the code provides a simple, standard method of investigation.

The Occupational Culture Work Health and Safety (OCWHaS) survey

The OCWHaS Survey is a 40-item survey designed to assess organisational culture and work health and safety.

It is derived from the 10 Platinum Rules for good organisational culture for a healthy and safe workplace – which themselves evolved out of work done by the Mines Safety Advisory Council (MSAC) and the New South Wales Department of Trade and Investment. They produced the document 10 Platinum Rules - Digging Deeper, extensive analysis of work health and safety in the NSW mining industry (Shaw et al., 2008).

Out of these pieces of work, the OCWHaS is structured around the following model of good practice of organisational culture for a healthy and safe rail industry.



The OCWHaS was developed for, and validated in, the Australian Rail Industry to help develop interventions aimed at improving work health and safety.

Conclusion

RISSB remains committed to its mission to continuous improvement in rail safety. The work that RISSB does may not always overtly be about culture, but at RISSB we're all absolutely aware that through the adoption of our Standards / Codes of Practice / Guidelines we're having an impact on culture. With that awareness we write those documents with culture in mind to achieve optimal outcomes for the railway.