Reducing fatigue, reducing risk

Collaboration produces a new Rail Industry Safety and Standards Board (RISSB) guideline for monitoring fatigue.

Cris Fitzhardinge, Senior Standards Development Manager, RISSB

The new Monitoring Fatigue Risk Management Programs Guideline helps operators identify and monitor key fatigue-related metrics.

Images: RISSB

Fatigue is more than just feeling tired – it's a well-documented safety hazard that continues to affect the rail industry worldwide. For workers in critical roles such as train driving, signalling, and maintenance, the consequences of fatigue can be serious, and in some cases, tragic.

A recent report from Great Britain's Rail Safety and Standards Board found that fatigue was a contributing factor in 20 per cent of rail incidents.

Australia is not immune.

Investigations by the Australian Transport Safety Bureau (ATSB) into incidents such as those at Jumperkine (December 2019) and Port Hedland (March 2024), both of which involved fatigue – with the former resulting in a fatality – highlight the urgent need to improve how the industry identifies and manages fatigue risk.

"We use outcomes of such major incident investigations, as well as key safety risks from RISSB's Australian Rail Risks Model (ARRM), national interests and regulatory priorities, to identify products that are critical for industry," said Cris Fitzhardinge, Senior Standards Development Manager, Rail Industry Safety and Standards Board (RISSB).

Working closely with a development group comprising members from rail transport operators across Australia and New Zealand, RISSB has developed a new *Monitoring Fatigue Risk Management Programs Guideline.*

The guideline is designed to support rail transport operators (RTOs) in meeting their obligations under the Rail Safety National Law, which requires the implementation of effective Fatigue Risk Management Programs (FRMPs).

"The passion and drive of the development group for this guideline was evident from the first day," said Fitzhardinge.

"Everyone was keen to see this product developed so rail transport operators could better manage fatigue risk to reduce the chances of fatigue being a factor in serious incidents."

TURNING INSIGHTS INTO ACTIONS

While many operators already collect valuable data through their FRMPs, the new RISSB guideline addresses a key gap – how this information is interpreted and used to inform decisions. In some cases, fatigue risks are identified in the data but are not fully recognised or acted upon by the RTO.

RISSB's Guideline seeks to change that. By focusing on work scheduling and rostering, it helps operators identify and monitor key fatigue-related metrics, use this data to make better decisions, and ultimately redesign rosters and processes to reduce risk.

Importantly, the guideline cautions against over-reliance on biomathematical modelling tools. While such tools are useful in identifying potential fatigue windows, they should not be the sole source of insight. Other sources, such as self-reported fatigue, shift length data, and incident reports, are just as vital in painting a complete picture.

FROM THEORY TO PRACTICE

The guideline goes beyond theory, offering real-world case studies that illustrate how fatigue data has been used to make practical changes in rail operations. It also covers best practices in monitoring, continuous improvement, and training – empowering rail organisations to build a culture of safety around fatigue risk management.

"I greatly appreciate the support that RISSB has provided in developing this guideline, and I am sure there are a lot of rail industry members who will benefit from this," said Development Group member Nathan Hines, Human Factors Specialist, Transport for NSW.

SUPPORTING SAFER OPERATIONS

By improving the way rail transport operators use the data they already collect, this guideline offers a powerful opportunity to take fatigue risk management to the next level.

It represents a practical roadmap to safer operations, healthier workers, and fewer fatigue-related incidents on rail networks.

For an industry committed to continuous improvement, this is a timely and vital resource – and a strong step toward a safer future.