RISSB

RAIL INDUSTRY SAFETY AND STANDARDS BOARD

Reliability, Availability, Maintainability (RAM)

Guideline

This Rail Industry Safety and Standards Board (RISSB) product has been developed using input from rail experts from across the Rail Industry. RISSB wishes to acknowledge the positive contribution of all subject matter experts and DG representatives who participated in the development of this product.

The RISSB Development Group for this guideline consisted of representatives from the following organisations:

Abbott Risk Consulting	ARTC	Downer Group
DIT SA	DoT Victoria	Frazer-Nash Consultancy
KPMG	Mott MacDonald	Rail Projects Victoria
PTA WA	TfNSW	V/Line

Development of this guideline was undertaken in accordance with RISSB's accredited processes. It was approved by the Development Group, endorsed by the Standing Committee, and approved for publication by the RISSB Board.

I commend this guideline to the Australasian rail industry as it represents industry good practice and has been developed through a rigorous process.

Deb Spring
Chief Executive Officer
Rail Industry Safety and Standards Board

Notice to users

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RISSB welcomes suggestions for improvements and asks readers to notify us immediately of any apparent inaccuracies or ambiguities, please contact us via email at info@rissb.com.au or write to Rail Industry Safety and Standards Board, PO Box 518, Spring Hill, QLD 4004, Australia.

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Document control

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Approval

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Appendix Contents

1 Introduction

1.1 General

This document describes reliability, availability and maintainability (RAM) processes that provides guidance to all interested parties responsible for the delivery of railway services on implementing a RAM program to ensure RAM related risk are effectively managed.

1.2 Objectives

This guideline provides a consistent approach for the process of selection and use of appropriate RAM strategies for railway assets and systems, based on industry accepted international standards.

1.3 Scope

This document is relevant to all organisations responsible for the identification, control, and reporting of RAM related risks. These include, but not limited to, rail transport operators, governmental agencies, and delivery organisations.

The document provides a recommended approach to developing, managing, and delivering a customised RAM program for all of railway. Throughout this guideline, reference will be made to existing standards to recommend good practice.

While this guideline is limited to RAM, relevant recommendations will be given on the effective integration of RAM with system safety (RAMS) and human factors to highlight integrated management approach.

1.4 Who should use this guideline?

This guideline provides assistance to RAM managers and professionals who are involved in the development of RAM programs for their organisation and represents good practice in the Australian railway industry. The guidance provided will assist in producing well-considered and appropriate RAM specifications which will lead to meeting business objectives to highlight integrated management approach.

1.5 How to use this guideline

This guideline provides details to support rail organisations in addressing RAM obligation and is intended to provide a starting point for developing a RAM program. Throughout this guideline, reference will be made to the appropriate existing standards which will provide additional support. Each organisation needs to carefully consider the applicability of this guideline, and its impact on the entire system and its whole of life management to identify solutions that represent the best value.

1.6 Defined terms and abbreviations

Defined terms with specific or unique application within this guideline are listed:

availability
ability of an item to be in a state to perform a required function under given conditions at a given instant of time or over a given time interval, assuming that the required external resources are provided (EN 50126-1:2017)

ALDT

administrative and logistics delay time

CAPEX
capital expenditure