

Australian/New Zealand Standard™

Dependability management

Part 1: Guidance for management and application



AS/NZS IEC 60300.1:2015

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Part 1: Guidance for management and application

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee QR-005, Dependability to supersede AS IEC 60300.1—2004, *Dependability management, Part 1: Dependability management systems*.

The objective of this Standard is to provide guidance on dependability management of products, systems, processes or services involving hardware, software and human aspects or any integrated combinations of these elements.

This Standard is identical with, and has been reproduced from, IEC 60300-1 Ed.3.0 (2014), *Dependability management, Part 1: Guidance for management and application*.

As this Standard is reproduced from an International Standard, the following applies:

- (a) In the source text ‘this part of IEC 60300’ should read ‘this Australian/New Zealand Standard’.
- (b) A full point substitutes for a comma when referring to a decimal marker.

The term ‘informative’ has been used in this Standard to define the application of the annex to which it applies. An ‘informative’ annex is only for information and guidance.

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INTRODUCTION

This part of IEC 60300 describes the processes involved in managing dependability within an organization and establishes a framework for managing dependability activities for the purpose of achieving dependability performance.

Dependability is the ability of an item to perform as and when required. Dependability is a term used to describe the time-dependent characteristics associated with the performance of an item. Dependability includes characteristics such as availability, reliability, maintainability and supportability under given conditions of use and maintenance support requirements. Dependability describes the extent to which something can be trusted to behave as expected.

Dependability creates trust and confidence and affects the ability of an organization to meet its objectives. It is achieved by effective planning and implementation of dependability activities throughout the life cycle of items.

Dependability has a strong impact on the user's perception of the value of an item developed or provided by an organization. Poor dependability will affect an organization's capability to deliver its objectives and reduce its reputation.

Dependability management provides a systematic approach for addressing dependability and related issues from an organizational and business perspective. Dependability is often driven by technology and requires the integration of innovation with legacy products. Achieving dependability throughout the life cycle process can be influenced by market dynamics, global economics and resource distributions, changing customer needs, and a competitive environment. Strategies need to adapt to anticipated changes to sustain viability in business operations. Dependability management focuses on the needs of stakeholders in optimizing dependability to enhance organizational objectives and return-on-investments.

This standard is written specifically for application to technological products, systems, processes and services, which are referred to in this standard by the general term "item". However, much of the guidance provided is generic and can be adapted for application in various non-technological applications. In addition, the potential side effects on safety, environment and other factors should be identified, analysed and managed when optimizing dependability.

The intended audience for this standard ranges from users, owners and customers to organizations involved in and responsible for ensuring dependability requirements are being met. Organizations include all types and sizes of corporations, public and private institutions such as in government agencies, business enterprises, and non-profit associations.

NOTES

AUSTRALIAN/NEW ZEALAND STANDARD

Dependability management**Part 1:
Guidance for management and application****1 Scope**

This part of IEC 60300 establishes a framework for dependability management. It provides guidance on dependability management of products, systems, processes or services involving hardware, software and human aspects or any integrated combinations of these elements. It presents guidance on planning and implementation of dependability activities and technical processes throughout the life cycle taking into account other requirements such as those relating to safety and the environment.

This standard gives guidelines for management and their technical personnel to assist them to optimize dependability.

This standard is not intended for the purpose of certification.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

None.

3 Terms, definitions and abbreviations

For the purposes of this document, the following terms and definitions apply.

3.1 Terms and definitions**3.1.1**

availability < of an item >

ability to be in a state to perform as required

Note 1 to entry: Availability depends upon the combined characteristics of the reliability, recoverability and maintainability of the item, and in some cases, on the maintenance support performance.

Note 2 to entry: Availability may be quantified using appropriate performance measures.

[SOURCE: IEC 60050-191:2014 [1]¹, 191-41-23]

3.1.2

dependability <of an item >

ability to perform as and when required

Note 1 to entry: Dependability includes availability, reliability, recoverability, maintainability, and maintenance support performance, and, in some cases, other characteristics such as durability, safety and security.

¹ Numbers in brackets refer to the bibliography.