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AS/NZS 4360

PP1 ED.

Australian/New Zealand Standard®

Risk management



This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee OB/7, Risk Management. It was approved on behalf of the Council of Standards Australia on 5 October 1995 and on behalf of the Council of Standards New Zealand on 24 October 1995. It was published on 5 November 1995.

The following interests are represented on Committee OB/7:

Australian Computer Society
Australian Customs Service
Australian Institute of Risk Management
Department of Administrative Services, Australia
Department of Defence, Australia
Institution of Engineers, Australia
Institution of Professional Engineers, New Zealand
Insurance Council of Australia
Insurance Institute of New Zealand
Lincoln University, New Zealand
N.S.W. Department of Urban Affairs and Planning
N.S.W. Treasury Managed Fund
National Insurance Brokers Association
Securities Institute of Australia
The Association of Risk and Insurance Managers of Australasia
University of New South Wales

SEE AMENDMENT 1

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**Joint Amendment No. 1
to
AS/NZS 4360:1995
Risk management**

CORRECTION

The 1995 edition of AS/NZS 4360 is amended as follows: the amendments should be inserted in the appropriate place.

SUMMARY: This Amendment applies to the Inside Front cover.

Published on 5 December 1995.

AMDT
No. 1
DEC.
1995

Inside Front Cover

To the heading 'The following interests are represented on Committee OB/7' *add:*

Australian Institute of Petroleum
New Zealand Local Government Association
Ministry of Commerce, New Zealand
Ministry of Agriculture and Fisheries, New Zealand

Delete 'National Insurance Brokers Association' and *substitute* 'National Insurance Brokers Association of Australia'.



STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Amendment No. 2
to
AS/NZS 4360:1995
Risk management

REVISION

The 1995 edition of AS/NZS 4360 is amended as follows; the amendments should be inserted in the appropriate places.

SUMMARY: This Amendment applies to the Preface, Contents, Clauses 1.1, 1.2, 1.3.18, 1.3.24, 3.2, Figure 3.1, Figure 4.1, Clause 4.1.5, 4.3.1, 4.3.3, 4.4, 4.5, Figure 4.2, Clause 4.5.2, 4.5.3 and Appendix B.

Published on 5 January 1998.

Approved for publication in New Zealand on behalf of the Standards Council of New Zealand on 5 November 1997.

AMDT
No. 2
JAN.
1998

Page 2 Preface

- 1 Paragraph 1, line 3, after 'analysis,' *delete* 'assessment' and *insert* 'evaluation'.
- 2 *Delete* paragraph 7.
- 3 Paragraph 8, line 1, after 'AS/NZS 3931(Int)' *delete* 'also', and *insert* the following:
' *Risk analysis of technological systems—Application guide, which is based on IEC/CDV 56 (Sec) 410.*'

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1998

Page 3 Contents

Clause 4.4, *delete* 'ASSESSMENT' and *insert* 'EVALUATION'.

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Page 4 Clause 1.1

Line 3, *delete* 'assessment' and *insert* 'evaluation'.

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Page 4 Clause 1.2

Paragraph 2, line 2, *delete* 'assessing' and *insert* 'evaluating'.

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Page 5 Clause 1.3.18

Delete existing clause and *replace* with the following:

1.3.18 Risk assessment—the overall process of risk analysis and risk evaluation, refer to Figure 3.1.'

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Page 5 Clause 1.3.24

Line 2, *delete* 'assessing' and *insert* 'evaluating'.

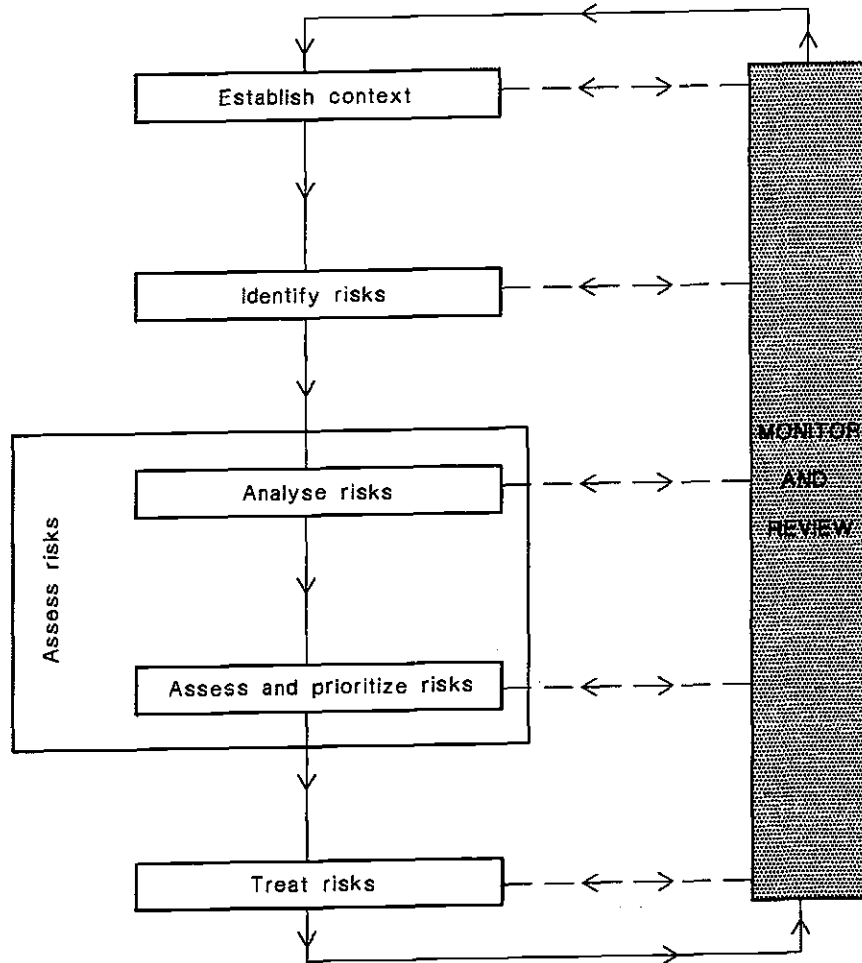
AMDT
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1998

Page 8 Clause 3.2

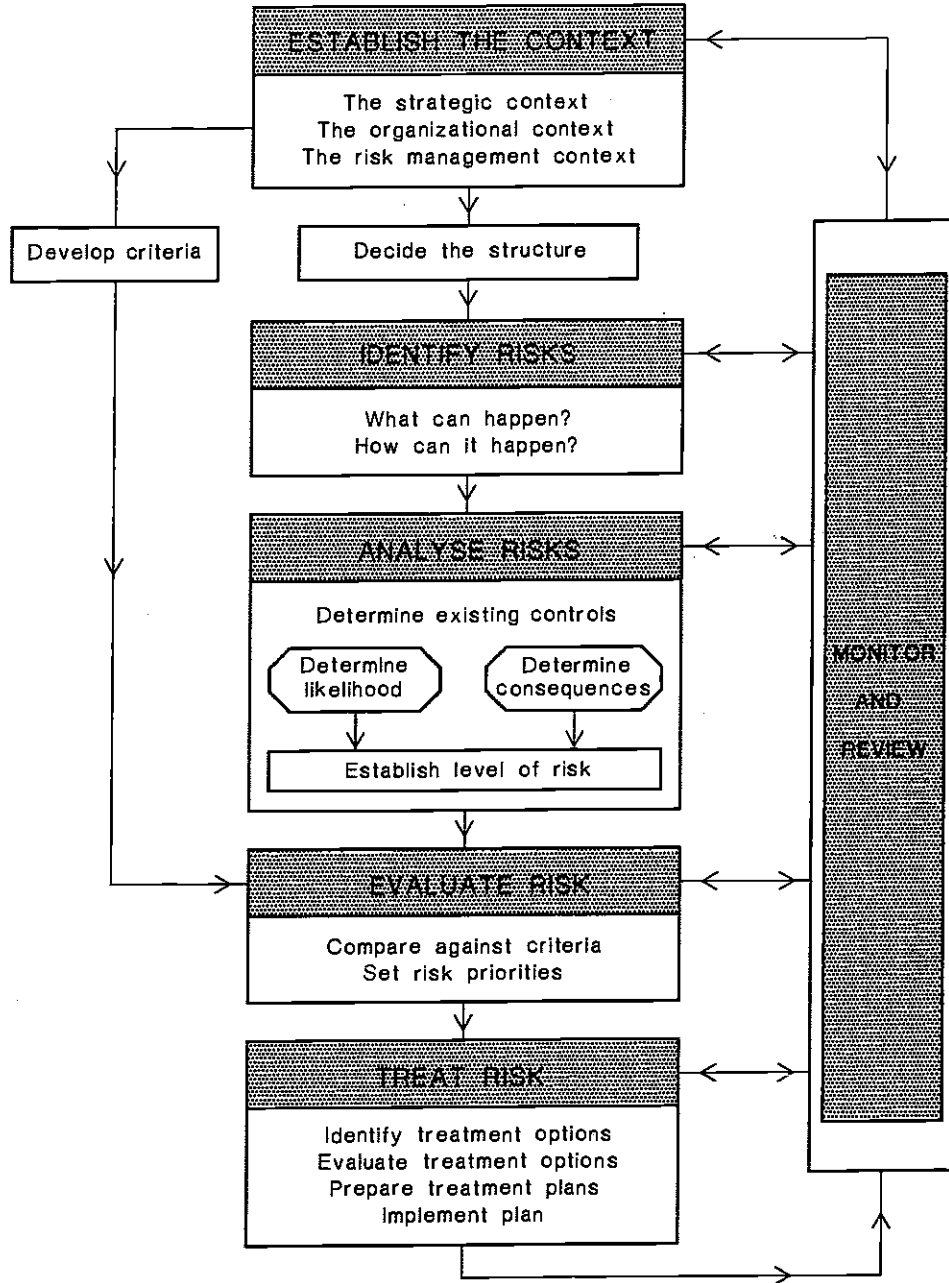
Item (a), line 3, *delete* 'assessed' and *insert* 'evaluated'.

Item (d), line 1, *delete* 'Assess' and *insert* 'Evaluate'.

Delete existing Figure and *replace* with the following:



Delete existing Figure and replace with the following:



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Page 12 Clause 4.1.5

- 1 *Delete* existing Clause title and *replace* with the following:
'Develop risk evaluation'
 - 2 Paragraph 1, line 2, *delete* 'assessed' and *insert* 'evaluated'.
-

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Page 12 Clause 4.3.1

Paragraph 1, line 4, *delete* 'assessment' and *insert* 'evaluation'.

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Page 13 Clause 4.3.3

Paragraph 1, line 2, *delete* 'evaluated' and *insert* 'assessed'.

Item (iii) *delete* 'assessments' and *insert* 'evaluations'.

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Page 14 Clause 4.4

Delete line 1 of the Clause, including the title, and *replace* with the following:

'4.4 RISK EVALUATION Risk evaluation involves comparing the level of risk found'.

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Page 15 Clause 4.4

Paragraph 2, line 1, *delete* 'assessment' and *insert* 'evaluation'.

Paragraph 2, line 2, *delete* 'assessment' and *insert* 'evaluation'.

Paragraph 2, line 3, *delete* 'assessment' and *insert* 'evaluation'.

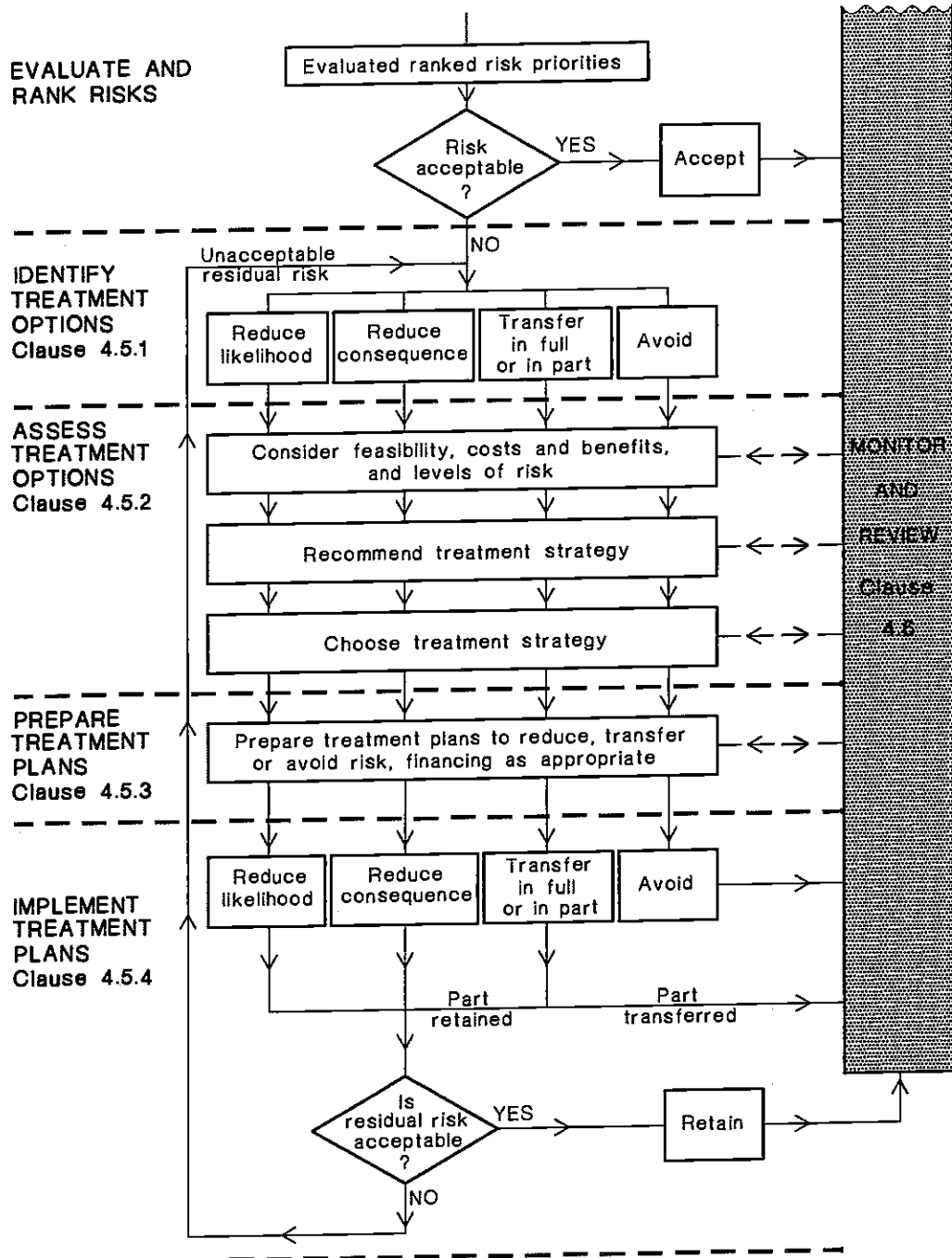
Paragraph 3, *delete* 'assessment' and *insert* 'evaluation'.

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Page 15 Clause 4.5

Line 2, *delete* 'evaluating' and *insert* 'assessing'.

Delete existing Figure and replace with the following:



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Page 17 Clause 4.5.2

Delete line 1 of the Clause, including the title, and *replace* with the following:

'4.5.2 Assessing risk treatment options Options should be assessed on the basis of'.

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Page 18 Clause 4.5.2

Paragraph 5, line 3, *delete* 'evaluation' and *insert* 'assessment'.

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Page 18 Clause 4.5.3

Paragraph 3, line 1, *delete* 'evaluating' and *insert* 'assessing'.

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Page 21 Appendix B

Step 4, line 6, after '* the analysis and', *delete* 'assessment' and *insert* 'evaluation'.

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Risk management

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee OB/7 on Risk Management with the objective of providing a generic framework for identification, analysis, assessment, treatment and monitoring of risk. Accordingly, it should be read in conjunction with other applicable or relevant Standards.

This Standard specifies the elements of the risk management process, but it is not the purpose of this Standard to enforce uniformity of risk management systems. It is generic and independent of any specific industry or economic sector. The design and implementation of the risk management system will be influenced by the varying needs of an organization, its particular objectives, its products and services, and the processes and specific practices employed.

Risk management is an iterative process consisting of well-defined steps which, taken in sequence, support better decision-making by contributing a greater insight into risks and their impacts. The risk management process can be applied to any situation where an undesired or unexpected outcome could be significant or where opportunities are identified. Decision makers need to know about possible outcomes and take steps to control their impact.

Risk management is recognized as an integral part of good management practice. To be most effective, risk management should become part of an organization's culture. It should be integrated into the organization's philosophy, practices and business plans rather than be viewed or practised as a separate program. When this is achieved, risk management becomes the business of everyone in the organization.

If for any reason it is not possible to integrate risk management across an entire organization, it may still be possible to apply it successfully to individual departments, processes or projects.

The terminology used in this Standard has been chosen to be acceptable across as wide a range of risks and risk management disciplines as possible. Words which have slightly different meanings in different branches of risk management have been avoided and replaced by words which might be less commonly used in current practice but which could be defined to have a precisely common meaning. An example is the term risk treatment which is defined to cover more than is usually meant by the term 'risk control'.

The terms 'risk analysis', 'risk evaluation' and 'risk assessment' are variously and interchangeably used in other local and overseas standards and official documents. Since the word 'evaluation' was felt to imply seeking numerical values, which was held not to be essential in analysing risk, this Standard has elected to use the term 'risk analysis' to mean the objective judgement of a level of risk and 'risk assessment' for the decision-making process whereby a level of risk is compared against criteria and risks are prioritized for action. Unfortunately this differs from the Interim Standard AS/NZS 3931(Int), *Risk analysis of technological systems—Application guide*, which is based on IEC/CDV 56(Sec) 410. AS/NZS 3931(Int) uses evaluation to mean the decision making process, and analysis to mean the combination of the two steps. *SEE AMENDMENT 2*

AS/NZS 3931(Int) also defines the risk management process to start at risk analysis without the first two steps of establishing the context and identifying risks. This definition of the risk management process was not followed in this Standard because it was not sufficiently generic to risk management, as practiced across all disciplines and did not allow sufficient weight to be given to the initial steps necessary to establish management of all risks. *SEE AMENDMENT 2*

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

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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard

Risk management

SECTION 1 SCOPE, APPLICATION AND DEFINITIONS

1.1 SCOPE This Standard provides a generic guide for the establishment and implementation of the risk management process involving the identification, analysis, assessment, treatment and ongoing monitoring of risks. *SEE AMENDMENT 1*

1.2 APPLICATION Risk management is recognized as an integral part of good management practice. It is an iterative process consisting of steps, which, when undertaken in sequence, enable continual improvement in decision-making.

Risk management is the term applied to a logical and systematic method of identifying, analysing, assessing, treating, monitoring and communicating risks associated with any activity, function or process in a way that will enable organizations to minimize losses and maximize opportunities. Risk management is as much about identifying opportunities as avoiding or mitigating losses. *SEE AMENDMENT 2*

This Standard may be applied at all stages in the life of an activity, function, project or asset. The maximum benefit is usually obtained by applying the risk management process from the beginning. Often a number of differing studies are carried out at different stages of a project.

NOTE: This Standard may be applied to a very wide range of activities or operations of any public, private or community enterprise, or group. Examples are given in Appendix A.

1.3 DEFINITIONS For the purpose of this Standard, the definitions below apply.

1.3.1 Consequence—the outcome of an event or situation expressed qualitatively or quantitatively, being a loss, injury, disadvantage or gain.

1.3.2 Cost—of activities, both direct and indirect, involving any negative impact, including money, time, labour, disruption, goodwill, political and intangible losses.

1.3.3 Event—an incident or situation, which occurs in a particular place during a particular interval of time.

1.3.4 Event tree analysis—a technique which describes the possible range and sequence of the outcomes which may arise from an initiating event.

1.3.5 Failure mode and effects analysis (FMEA)—a procedure by which potential failure modes in a technical system are analysed. An FMEA can be extended to perform what is called failure modes, effects and criticality analysis (FMECA). In a FMECA, each failure mode identified is ranked according to the combined influence of its likelihood of occurrence and the severity of its consequences.

1.3.6 Fault tree analysis—a systems engineering method for representing the logical combinations of various system states and possible causes which can contribute to a specified event (called the top event).

1.3.7 Frequency—a measure of likelihood expressed as the number of occurrences of an event in a given time. See also **Likelihood** and **Probability**.

1.3.8 Hazard—a source of potential harm or a situation with a potential to cause loss.

1.3.9 Likelihood—used as a qualitative description of probability and frequency.



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