

ASSP/ISO TR-31050-2024

Risk Management – Guidelines for Managing
an Emerging Risk to Enhance Resilience

A Technical Report prepared by ASSP and registered with ANSI



AMERICAN SOCIETY OF
SAFETY PROFESSIONALS

PREVIEW ONLY

The information and materials contained in this publication have been developed from sources believed to be reliable. However, the American Society of Safety Professionals (ASSP) as United States Technical Advisory Group (TAG) Administrator of the ISO TC262 or individual TAG members accept no legal responsibility for the correctness or completeness of this material or its application to specific factual situations. By publication of this technical report, ASSP or the U.S. TAG for TC262 does not ensure that adherence to these recommendations will protect the safety or health of any persons or preserve property.

ASSP/ISO Technical Report

**Risk Management – Guidelines for
Managing an Emerging Risk to Enhance Resilience**

A Technical Report prepared by ASSP and registered with ANSI.

Registration Date:
May 19, 2024

American Society of Safety Professionals
520 N. Northwest Highway
Park Ridge, Illinois 60068
(847) 699-2929 • www.assp.org

Published June 2024

Copyright ©2024 by American Society of Safety Professionals
All Rights Reserved.

No part of this publication may be reproduced
in any form, in an electronic retrieval system or
otherwise, without the prior written permission
of the publisher.

Printed in the United States of America

Foreword

This ANSI registered Technical Report provides guidelines for applying ISO 31000 to managing emerging risks to enhance organizational resilience. The focus is on emerging risks potentially having the most significant consequences for the organization and its objectives. Applying the ISO 31000 principles and process to managing the emerging risk requires an understanding of the different aspects of the context in which the organization operates.

This technical report is nationally adopted and registered with ANSI and is an identical adoption of the ISO Technical Specification 31050:2023, titled “Risk management – Guidelines for managing an emerging risk to enhance resilience.”

We hope this technical report will support your organization’s effort in creating a safe workspace and help you reap the benefits offered by ISO 31000.

Publication of this technical report that has been registered with ANSI has been approved by the Accredited Standards Developer, American Society of Safety Professionals (ASSP), 520 N. Northwest Highway, Park Ridge, Illinois 60068. This document is registered as a Technical Report according to the “Procedures for the Registration of Technical Reports” with ANSI. This document is not an American National Standard and the material contained herein is not normative in nature. Comments on the content of this document should be sent to ASSP, 520 N. Northwest Highway, Park Ridge, Illinois 60068.

This document is registered as a Technical Report in the U.S. TAG for TC262 publications according to the Procedures for the Registration of ANSI Technical Reports and the ANSI/ASSP Safety Operating Procedures.

This technical report was processed and approved for submittal to ANSI by U.S. TAG for TC262. Approval of the technical report does not necessarily imply (nor is it required) that all committee members voted for its approval. At the time this technical report was registered, the U.S. TAG for TC262 had the following members:

Bruce Lyon, P.E., CSP, SMS, ARM, CHMM, FASSP, Chair
Georgi Popov, Ph.D., CSP, ARM, SMS, QEP, CMC, FAIHA, FASSP, Vice Chair
Lauren Bauerschmidt, CSP, TAG Administrator
Tim Fisher, CSP, CHMM, CPEA, ARM, FASSP, TAG Assistant Administrator
Jennie Dalesandro, Administrative Technical Support

Organization Represented

Name of Representative

AIHA	Paul Esposito, CIH, CSP Mark Drozdov, SME, MS, SSM, CUSP, CRA, CMA
Amazon	Larry Riddle, CSP, CSHM, CIT
American Society of Safety Professionals	Francis Sehn, CSP, ARM Kenneth Daigle, P.E.
Arthur J. Gallagher & Co.	Lisanne Sison Shannon Gunderman, CPCU, ARM, AIS, CWCP
Barker Global Security LLC	Brent Barker
BCD Travel	Christine Connolley
Brown & Brown, Inc.	Bruce Lyon, P.E., CSP, SMS, ARM, CHMM, FASSP
M. Siegel Associates LLC	Marc Siegel, Ph.D.
Project Management Institute, Inc.	Tzarmallah Joseph
Public Risk Management Association	William (Tim) Wiseman
Safe Haven Consulting LLC	Steven Meszaros Lisa Meszaros
Salesforce	Lianne Appelt, Sc.D. Kevin Glass
Sound Transit	Ryan Lindblom
State Office of Risk Management	James Cox Stephen Vollbrecht, J.D.
University of California	Carrie Frandsen, ARM-E
University of Central Missouri	Georgi Popov, Ph.D., CSP, ARM, SMS, QEP, CMC, FAIHA, FASSP

Contents

	Page
Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Emerging risks	2
4.1 Nature of emerging risks.....	2
4.2 Characterization of emerging risks.....	3
4.2.1 General.....	3
4.2.2 Knowledge aspects.....	4
4.2.3 Measurement aspects.....	5
4.2.4 Time dimension.....	5
4.2.5 Volatility aspects.....	6
4.3 Development of emerging risks.....	6
4.4 Relationship between managing emerging risks and organizational resilience.....	6
5 Principles	7
5.1 General.....	7
5.2 Integrated.....	8
5.3 Structured and comprehensive.....	8
5.4 Customized.....	8
5.5 Inclusive.....	8
5.6 Dynamic.....	8
5.7 Best available information.....	8
5.8 Human and cultural factors.....	9
5.9 Continual improvement.....	9
6 Process	9
6.1 Applying the ISO 31000 process to emerging risks.....	9
6.2 Communication and consultation.....	9
6.3 Scope, context and criteria.....	10
6.3.1 Scope and context.....	10
6.3.2 Criteria.....	11
6.4 Risk assessment.....	12
6.4.1 General.....	12
6.4.2 Identifying emerging risks.....	12
6.4.3 Analysing emerging risks.....	13
6.4.4 Evaluating emerging risks.....	14
6.5 Risk treatment.....	15
6.6 Monitoring and review.....	15
6.7 Recording and reporting.....	16
7 Enhancing resilience by managing emerging risks	16
7.1 Capability development.....	16
7.2 Emerging risks and resilience indicators.....	18
8 Risk intelligence cycle and managing emerging risks	20
8.1 Overview.....	20
8.2 Applying knowledge to decisions on emerging risks.....	21
Annex A (informative) Examples of changes in context that can be sources of emerging risks	22
Annex B (informative) Example of emerging risks description or recording template	23
Annex C (informative) Systemic risks	25

Annex D (informative) **Example factors that can influence managing emerging risks**.....26
Annex E (informative) **Knowledge and risk intelligence cycle for managing emerging risks**.....28
Annex F (informative) **Example of a completed resilience indicator template**32
Bibliography.....34

PREVIEW ONLY

This document is copyright protected and may not be reproduced or distributed to any other party.

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 262, *Risk management*, in collaboration with Technical Committee ISO/TC 292, *Security and resilience*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Emerging risks are characterized by their newness, insufficient data, and a lack of verifiable information and knowledge needed for decision-making related to them. As these risks can develop with the potential for large threats and opportunities, appropriate management of emerging risks should be established as a part of an organization's risk management. It should include changes in circumstances or conditions related to multiple aspects of the organization's external context and the implications for its internal context.

Emerging risks can include, for example:

- risks arising from unrecognized changes in organizational contexts;
- risks created by innovation or social and technological development;
- risks related to new sources or previously unrecognized sources of risk;
- risks from new or modified processes, products or services.

Consequences of emerging risks can include, for example:

- exposure to unforeseen hazards and threats with uncertain outcomes;
- increased exposure to hazards and threats from known risk sources;
- lost or gained opportunities.

Managing the emerging risk should be knowledge-focused and dependent on the need to accumulate verifiable data and information, especially when these are limited or inconsistent. With interpretation, this information forms knowledge and creates intelligence for strategic, tactical and operational decision-making.

To this aim, this document provides guidelines for applying ISO 31000 to managing emerging risks to enhance organizational resilience. The focus is on emerging risks potentially having the most significant consequences for the organization and its objectives. Applying the ISO 31000 principles and process to managing the emerging risk requires an understanding of the different aspects of the context in which the organization operates. In particular, this applies to the following:

- the continual scanning of changing circumstances or conditions that can result in an emerging risk helps to develop knowledge and provide the intelligence needed for strategic, tactical and operational decision-making;
- the identification of changes in an organizational context is often an early indicator or signal that identifies vulnerabilities and the sources of emerging risks;
- managing emerging risks relies on the application of the ISO 31000 principles under conditions of extreme uncertainty, increasing volatility, complexity and ambiguity within the multiple aspects of the context in which the organization operates.

Specific guidance is provided on:

- how to understand the nature and characteristics of emerging risks (see [Clause 4](#));
- how the principles of risk management apply to emerging risks (see [Clause 5](#));
- how the ISO 31000 risk management process is applied to emerging risks (see [Clause 6](#));
- how resilience can be enhanced by managing emerging risks (see [Clause 7](#));
- how to use the risk intelligence cycle for emerging risks (see [Clause 8](#)).

Further details are provided in [Annexes A](#) to [F](#).

The application of this document helps organizations to benefit from:

- increased awareness, reducing the likelihood of failing to anticipate emerging risks;
- early recognition of emerging risks and increased level of preparedness and resilience;
- timely dissemination of data and exchange of information among stakeholders;
- alignment of actions on emerging risks across all aspects of organizational contexts.

PREVIEW ONLY

Risk management — Guidelines for managing an emerging risk to enhance resilience

1 Scope

This document gives guidance on managing emerging risks that an organization can face. This document complements ISO 31000.

This document is applicable to any organization, at any stage and to any activity of the organization. Its application can be customized to suit different organizations or the context of different organizations.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 22300, *Security and resilience — Vocabulary*

ISO 22316, *Security and resilience — Organizational resilience — Principles and attributes*

ISO 31000, *Risk management — Guidelines*

IEC 31010, *Risk management — Risk assessment techniques*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 22300, ISO 22316, ISO 31000, IEC 31010 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

resilience attribute

feature or characteristic of an organization's ability to absorb and adapt to a changing context

3.2

knowledge

outcome of the assimilation of information through learning

Note 1 to entry: Knowledge can be acquired through research, experience or education.

Note 2 to entry: Knowledge includes information, facts, principles, theories and practices related to a field of work or study.

Note 3 to entry: Knowledge can be individual or collective. Collective knowledge is gained from people collaborating and releasing their tacit and subconscious knowledge.

[SOURCE: ISO 56000:2020, 3.4.1]