

This is a preview of "ISO 17666:2016". [Click here to purchase the full version from the ANSI store.](#)

Second edition
2016-11-15

Space systems — Risk management

Systèmes spatiaux — Management des risques



Reference number
ISO 17666:2016(E)

© ISO 2016

This is a preview of "ISO 17666:2016". Click here to purchase the full version from the ANSI store.



COPYRIGHT PROTECTED DOCUMENT

© ISO 2016, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

This is a preview of "ISO 17666:2016". [Click here to purchase the full version from the ANSI store.](#)

Contents

	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms, definitions and abbreviated terms	1
3.1 Terms and definitions.....	1
4 Abbreviated terms	3
5 Principles of risk management	3
5.1 Risk management concept.....	3
5.2 Risk management process.....	3
5.3 Risk management implementation into a project.....	3
5.4 Risk management documentation.....	4
6 The risk management process	4
6.1 Overview of the risk management process.....	4
6.2 Risk management steps and tasks.....	6
6.2.1 Step 1: Define risk management implementation requirements.....	6
6.2.2 Step 2: Identify and assess the risks.....	9
6.2.3 Step 3: Decide and act.....	9
6.2.4 Step 4: Monitor, communicate, and accept risks.....	10
7 Risk management implementation	11
7.1 General considerations.....	11
7.2 Responsibilities.....	11
7.3 Project life cycle considerations.....	12
7.4 Risk visibility and decision making.....	12
7.5 Documentation of risk management.....	12
8 Risk management requirements	13
8.1 General.....	13
8.2 Risk management process requirements.....	13
8.3 Risk management implementation requirements.....	15
Annex A (informative) Risk register example and ranked risk log example	16
Annex B (informative) Risk management plan (DRD)	18
Bibliography	20

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 documents 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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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

For an explanation on 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 the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 14, *Space systems and operations*.

This second edition cancels and replaces the first edition (ISO 17666:2003), of which it constitutes a minor revision. [Annex B](#) has been added in this edition and contains a DRD for consideration when preparing the risk management plan.

This is a preview of "ISO 17666:2016". [Click here to purchase the full version from the ANSI store.](#)

Introduction

Risks are a threat to the project success because they have negative effects on the project cost, schedule and technical performance, but appropriate practices of controlling risks can also present new opportunities with positive impact.

The objective of project risk management is to identify, assess, reduce, accept, and control space project risks in a systematic, proactive, comprehensive, and cost-effective manner, taking into account the project's technical and programmatic constraints. Risk is considered tradable against the conventional known project resources within the management, programmatic (e.g. cost, schedule), and technical (e.g. mass, power, dependability, safety) domains. The overall risk management in a project is an iterative process throughout the project life cycle, with iterations being determined by the project progress through the different project phases, and by changes to a given project baseline influencing project resources.

Risk management is implemented at each level of the customer-supplier network.

Known project practices for dealing with project risks, such as system and engineering analyses, analyses of safety, critical items, dependability, critical path, and cost, are an integral part of project risk management. Ranking of risks according to their criticality for the project success, allowing management attention to be directed to the essential issues, is a major objective of risk management.

The project actors agree on the extent of the risk management to be implemented into a given project depending on the project definition and characterization.