



SLOVENSKI STANDARD
SIST EN 14724:2004

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Space project management - Tailoring of space standards

Space project management - Tailoring of space standards

Raumfahrt-Projektmanagement - Anpassung von Normen für die Raumfahrttechnik

Management des projets spatiaux - Adaptation des standards spatiaux

Ta slovenski standard je istoveten z: EN 14724:2003

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ICS:

49.140 Vesoljski sistemi in operacije Space systems and operations

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en

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EUROPEAN STANDARD
NORME EUROPÉENNE
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Space project management - Tailoring of space standards

Management des projets spatiaux – Adaptation des standards spatiaux

Raumfahrt-Projektmanagement - Anpassung von Normen für die Raumfahrttechnik

This European Standard was approved by CEN on 1 October 2003.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 14724:2003) has been prepared by CMC.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2004, and conflicting national standards shall be withdrawn at the latest by June 2004.

It is based on a previous version originally¹⁾ prepared by the ECSS Tailoring Working Group, reviewed by the ECSS Technical Panel and approved by the ECSS Steering Board. The European Cooperation for Space Standardization (ECSS) is a cooperative effort of the European Space Agency, national space agencies and European industry associations for the purpose of developing and maintaining common standards.

This European Standard is one of the series of space standards intended to be applied together for the management, engineering and product assurance in space projects and applications.

Requirements in this European Standard are defined in terms of what shall be accomplished, rather than in terms of how to organize and perform the necessary work. This allows existing organizational structures and methods to be applied where they are effective, and for the structures and methods to evolve as necessary without rewriting the standards.

The formulation of this European Standard takes into account the existing ISO 9000 family of documents.

Annex A is informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

1) ECSS-M-00-02A

EN 14724:2003 (E)**1 Scope****1.1 Introduction**

The requirements defined in the series of European space standards are applicable to all actors working on space projects, but are intended to be viewed from the perspective of a specific project context, and tailored to match the genuine requirements of the project. The project is determined, amongst other things, by its environment, technology maturity, product class, cost and risk constraints, organizational complexity, and the procurement approach adopted for a given acquisition. The tailoring process is carried out by the relevant customer at each level in the hierarchy, in a systematic manner within the rules and constraints of the customer organization, and with due consideration of the engineering, quality and management aspects of the project.

The conclusions of the tailoring exercise are incorporated into the project requirements documents. The results of the tailoring decisions by the actor's organization leads to an optimized project implementation process, whereby actors are only constrained by requirements appropriate to their roles and responsibilities in any level within the project hierarchy.

1.2 General

This standard is part of a series of European space standards dealing with management. It defines the process of tailoring, applicable to all space standards for management, product assurance and engineering as a guideline.

This standard defines the objectives, principles, methods and processes of tailoring that are to be considered when establishing the project requirements documents.

1.3 Objective

The objective of this standard is to facilitate the application of a coherent approach to the tailoring of European space standards, their traceability and subsequent implementation for a specific project.

1.4 Applicability

The requirement for tailoring is applicable to all customers at all levels in a space project in accordance with the definitions of the customer - supplier network as defined in EN 13290-1. This standard lays down applicable principles and identifies a method for tailoring of European space standards. It does not address contributions from the supplier towards the finalization of the project requirements documents, which is envisaged as part of the contractual negotiation process.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 13290-1:1999, *Space project management — General requirements - Part 1: Policy and principles*.

EN 13701:2001, *Space systems - Glossary of terms*.

EN ISO 17666:2003, *Space systems — Risk management (ISO 17666:2003)*.

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 13701:2001 and the following apply.

3.1

tailoring

process by which individual requirements of specifications, standards, and related documents are evaluated, and made applicable to a specific project by selection, and in some exceptional cases, modification of existing or addition of new requirements

NOTE The evaluation determines the extent to which the requirements are most suitable for the acquisition or development of constituents of a space project.

4 Principles of tailoring

4.1 General

The general principles for the tailoring of European space standards are as follows:

- a) Applicable standards subject to tailoring are identified by the customer.
- b) A set of applicable requirements from the identified standards are established through an integrated approach, after balanced consideration of the project phase, management, quality and technical aspects of the project, and the analysis of cost -technical drivers and risks.
- c) Tailoring is performed at each level of the project hierarchy by the relevant customer, to ensure that the requirements selected are only those necessary for the successful completion of the work under the relevant business agreement. Therefore, as a matter of principle, tailoring results in an appropriately lightened set of requirements at the lower level of the customer -supplier network.
- d) Tailoring at all levels is performed systematically in accordance with the method described in this standard.
- e) Tailoring is performed for each phase of the project to ensure that due account is taken of the necessary shift in management objectives and emphases.
- f) Overall programme requirements are taken into account while tailoring is performed during the life cycle of the project, in conjunction with specific project phases, and for the relevant agreements when the parameters change.
- g) Identification of exceptional requirements to be mandatorily applied at each level of the customer - supplier network, to ensure that higher -level customer requirements are reflected at the lower levels of the organization.
- h) Exceptionally and when justified, additional, modified or substituted requirements to those of the standards can be introduced into the project requirements documents. In all cases the overall coherence of the requirements is maintained.
- i) The tailoring process addresses the need to review and harmonize the selected requirements, to ensure that a coherent set of requirements is developed, and also to ensure elimination of requirements that are not applicable.

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4.2 Project characteristics

Project characteristics are the primary influence on the decisions taken during the requirements tailoring process. All tailoring decisions taken are driven by the characteristics identified for the project and the associated considerations.

The identification of project characteristics is the prerequisite to establish the project context, scope, scale, orientation and the key project elements important to successful achievement of objectives.

Project characteristics are defined in both programmatic and technical terms. Programmatic characteristics, with a stronger subjective element, focus on strategic aspects of the project: risk policy, political, financial, economic, and contractual. Mission, engineering, scientific and generally product-oriented factors determine the objective technical characteristics.

Examples of such characteristics in the programmatic domain are included in the example tailoring template (see annex A).

4.3 Responsibility

Tailoring is the responsibility of and performed by the relevant customer at each level of the project hierarchy, in accordance with the overall principles of the customer - supplier network. Tailoring results in the establishment of the project requirements documents that form the basis for tailoring at the next level.

A further aspect of the responsibility of the customer's organization with respect to tailoring is for the management discipline to ensure the integration and harmonization of requirements across all project disciplines.

At any level of the customer -supplier network, an appropriate authority within the actor's organization verifies the consistency of local procedures and methodologies with the application of European space standards, in order to avoid conflict between customer and European space standards' requirements.

See EN 13290-1 for a definition of the structure and responsibilities within the customer -supplier network.

5 Tailoring process

5.1 Overview

Considering the principles in clause 4, the tailoring process has several stages that shall be completed in order to develop a full set of tailored management, product assurance and engineering requirements which reflect the specific circumstances of the project in question.

The steps of the tailoring process are:

- a) identify project characteristics;
- b) analyse project characteristics and identified risks;
- c) select applicable standards subject to tailoring from related standards;
- d) select applicable requirements from related standards;
- e) harmonize management, product assurance and engineering project requirements;
- f) verify that the tailored (additional or modified) requirements are consistent with the set of European space standards and respect the policies and constraints of the organization;

g) Provide tailored requirements to project requirements documents.

The flowchart in Figure 1 depicts the sequencing of the activities of the tailoring process, together with the respective inputs and outputs and the relationships with other processes. Although this process is not prescriptive, it provides a framework to complete the tailoring process with proper consideration of all factors.

Included in the tailoring process flowchart is the concept of the “tailoring template”. The tailoring template provides a concept to enable the tailoring process. A tailoring template example is defined addressing programmatic project characteristics (see annex A).

The tailoring process involves performing the tasks of tailoring according to the logic suggested by the flowchart and the example tailoring template. The output is the record of the tailoring decisions and serves as the list of harmonized, tailored requirements that shall be the final input to the project requirements documents.

If appropriate technology is available, the tailoring templates may be completed electronically, serving both to support the addition and modification of requirements and to provide a clear means of presenting the final list of tailored standards.

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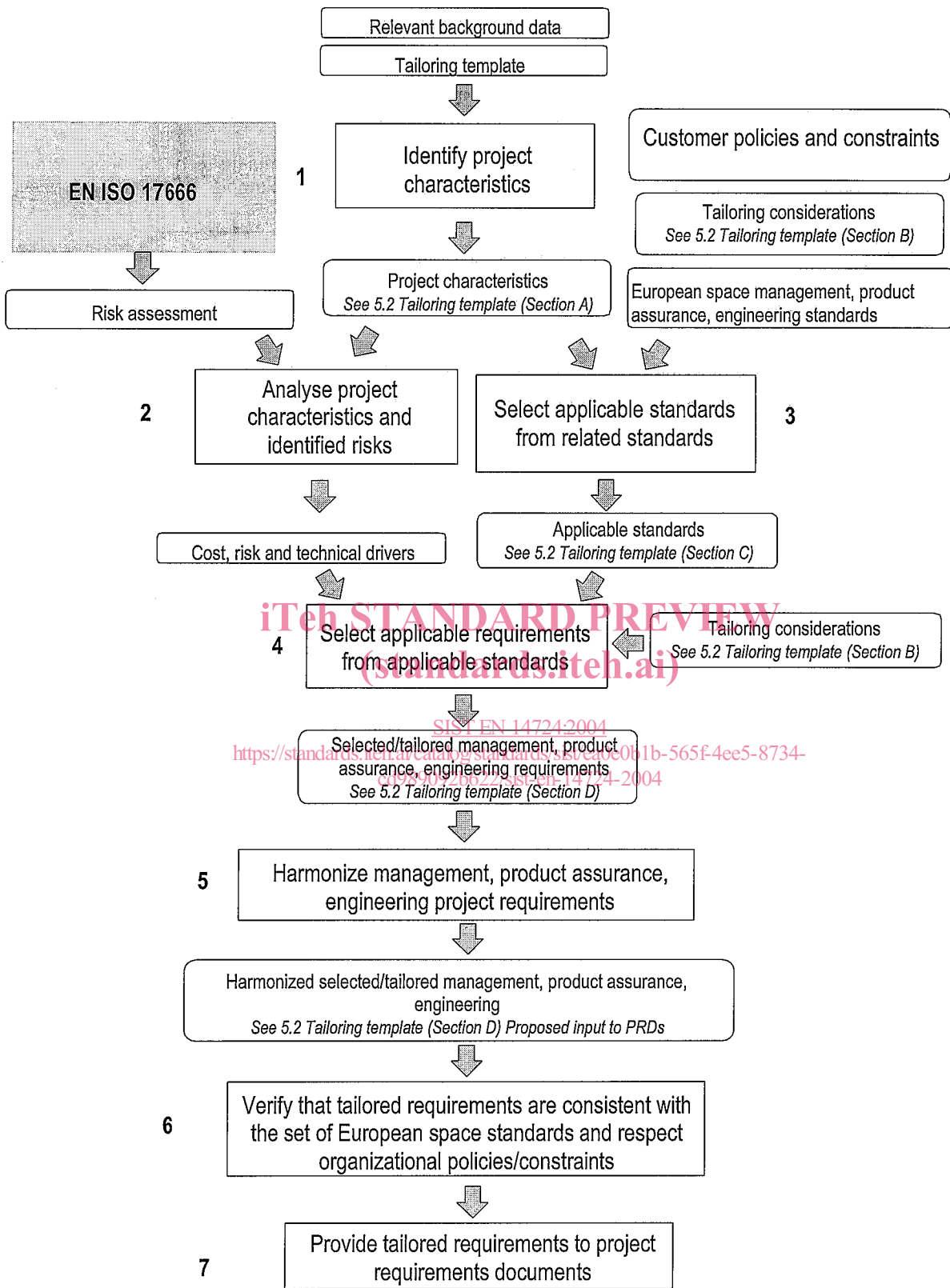


Figure 1 — Tailoring process flowchart

5.2 Tailoring template

The following is an example of a tailoring template with a description of the columns in it.

	(Section A)	(Section B)	(Section C)		(Section D)				
	Programmatic or technical characteristic	Tailoring considerations	Related standards	Related reqmts	Applicability				Comments on exceptions
					Y	N	M	A	
✓				✓	✓	✓	✓	✓	

Programmatic or technical characteristic
(Section A) Attributes of the project that defines its context and most significant features, and together with the tailoring considerations, are the key drivers in the tailoring of standards and requirements. Characteristics are defined at both programmatic and technical domains together with the impact they have on other relevant characteristics and with those they are influenced by.

Tailoring considerations
(Section B) Tailoring considerations are factors to consider that have a bearing on selection of requirements in the light of the associated project characteristic. They detail how the project characteristic shall be taken into account when selecting and applying standards and requirements. Considerations are based on accrued experience, lessons learned from previous projects, and best practice, and are provided as examples only, to aid deliberation. 14724:2004

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Related standards
(Section C) Standards which are related to the project characteristic and tailoring considerations, and are identified in the tailoring template, for determining their applicability.

Related requirements
(Section D) Requirements identified in the applicable standards that have a bearing on the project characteristic and associated consideration, and are identified in the tailoring template, for determining their applicability.

✓ Indicates the selection of the characteristic or related standards and requirements that are made applicable to the project.

Related requirements applicability
(Section D)

Y	Yes
N	No
M	Modified
A	Additional requirements