TECHNICAL REPORT

ISO/TR 23462

First edition 2007-07-01

Space systems — Guidelines to define the management framework for a space project

Systèmes spatiaux — Lignes directrices pour définir le cadre de management pour un projet spatial

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Published in Switzerland

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Foreword

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In exceptional circumstances, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide by a simple majority vote of its participating members to publish a Technical Report. A Technical Report is entirely informative in nature and does not have to be reviewed until the data it provides are considered to be no longer valid or useful.

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.

ISO/TR 23462 was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 14, *Space systems and operations*.

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Introduction

Many documents exist which address programme/project management, and elements of these are also addressed in ISO 14300-1 and ISO 14300-2. This Technical Report complements the aforementioned documents by providing an overall concise, single source approach for establishing the basis for managing a specific programme/project.

The aim of this Technical Report is to:

- help the programme/project manager to prepare the programme/project specific management framework, as an input to be used for developing detailed programme/project management plans;
- promote consistency and best practice in an organization;
- minimize planning omissions, thus reducing risks;
- be used as a top level document, in conjunction with the application of standards in space programme/project management;
- facilitate a harmonized approach to decision making in the field of space programme/project management.

This Technical Report supports the application of ISO 14300-1 and ISO 14300-2.

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Space systems — Guidelines to define the management framework for a space project

1 Scope

This Technical Report provides a framework within which an organization can establish the basis for the development of programme/project management specifications and plans when undertaking the execution of a specific programme/project. It enables the programme/project manager to establish the criteria for programme/project success and to secure the organization's commitment to the programme/project manager's management approach for the overall programme/project and its constituent elements. It includes guidelines leading to the establishment of a programme/project management framework, and identification of practices to be applied. Following these guidelines also results in traceability of the considerations and decisions on why and how the programme/project is conducted according to its specific characteristics.

This Technical Report provides a holistic approach for programme/project managers to apply their organization's programme/project management practices when defining the management framework for programme/project planning alt is based on a systematic method of

- defining the programme/project objectives and success criteria.
- identifying and elaborating the specific characteristics of their programme/project,
- specifying the management elements needed.
- establishing and agreeing the management approaches to be implemented,
- compiling these into a programme/project management framework document.

The guidelines in this Technical Report are applicable to any organization undertaking the execution of space programmes/projects.

2 Terms and definitions

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

2.1

management approaches

considerations developed for management elements

NOTE Management approaches are used in establishing the programme/project management framework.

2.2

programme/project management framework

collection of management approaches defined for programme/project management elements

NOTE The programme/project management framework is used as a reference basis upon which to establish programme/project management plans.

2.3

programme/project characteristic

description of an attribute, specific to a programme/project

NOTE Programme/project characteristics are considered when determining management approaches to the programme/project management elements.

2.4

programme/project management element

part of programme/project management, relevant to the setting-up, planning and associated processes, for which the management approaches are elaborated

3 Process to establish the programme/project management framework

The process and the steps involved in the preparation of the programme/project management framework are illustrated in the flowchart in Figure 1.

This flowchart guides the programme/project manager, the project team and other actors through the interdisciplinary and iterative activities of defining objectives, characterization and planning for the performance of the functions relevant to each identified programme/project management element. The approaches incorporated into the programme/project management framework document, which are subject to agreement by the organization hierarchy, support actors and customers where applicable.

4 Process implementation guidelines DARD PREVIEW (standards.iteh.ai)

4.1 General guidelines

The guidelines in this section are numbered. Each numbered guideline is composed of the wording of the guidelines proper, and accompanied by an explanatory text attached to the general guideline (aim) and to the expected output.

4.2 Establishing the programme/project management framework document

4.2.1 General

The programme/project management framework document preparation should be performed in accordance with the seven-step process illustrated in Figure 1.

- Aim: to perform systematically the tasks required for the establishment of the programme/project management framework.
- Expected output: programme/project management framework document.

4.2.2 Step 1: Defining programme/project objectives and success criteria

The programme/project manager should define the mission objectives: overall technical, cost and schedule performance, and the related mission success criteria. This should include the assessment and comparative analysis of options, taking into account parameters for safety, reliability and quality, aiming at defining as many verifiable requirements at this stage of the project as possible.

- Aim: to ensure that all actors clearly understand the goals of the programme/project.
- Expected output: documented description of the overall programme/project objectives, tied to the mission success criteria.

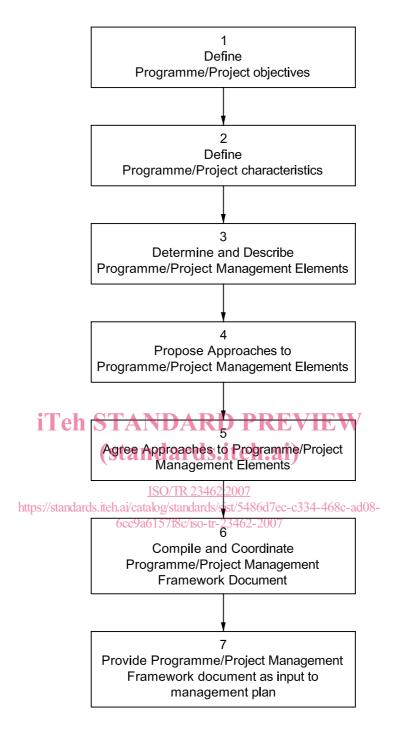


Figure 1 — Process to establish the programme/project management framework

4.2.3 Step 2: Defining programme/project characteristics

The programme/project manager should identify and describe the characteristics of the programme/project to be taken into account when developing the programme/project management framework document by completing the checklist provided in Table 1. This step should include the development of complex (theoretical and experimental) substantiation of the basic characteristics of the project, development in coordination with subcontractors the initial data for improvement of the project characteristics, generation of a block diagram of the project and identification of acceptable principles for the management of the project as a whole and its basic components.