

Aerospace series - Programme Management - General  
guidelines for acquisition and supply of open systems

## EESTI STANDARDI EESSÕNA

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ICS 35.080, 49.020

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ICS 35.080; 49.020

English Version

## Aerospace series - Programme Management - General guidelines for acquisition and supply of open systems

Série aérospatiale - Management de Programme -  
Recommandations générales pour l'acquisition et la  
fourniture de systèmes ouverts

Luft- und Raumfahrt - Programm-Management -  
Allgemeiner Leitfaden für Erwerb und Lieferung von offenen  
Systemen

This European Standard was approved by CEN on 28 June 2014.

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 CEN-CENELEC Management Centre or to any CEN member.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Contents

Page

Foreword.....	3
1 Scope .....	4
2 Normative references .....	5
3 Terms and definitions and abbreviated terms .....	5
4 Acquisition process .....	8
5 Supply process .....	12
6 Life cycle model management process .....	13
7 Infrastructure management process .....	13
8 Budget management process .....	14
9 Resource management process .....	14
10 Quality management process .....	16
11 Project planning process .....	16
12 Project control and assessment process .....	17
13 Decision-making process .....	18
14 Risk management process .....	18
15 Configuration management process .....	21
16 Information management process .....	23
17 Measuring process .....	25
18 Requirement establishment and analysis process .....	28
19 Architecture design process .....	35
20 Execution process .....	37
21 Integration process .....	37
22 Verification process .....	38
23 Validation process .....	40
24 Qualification process .....	41
25 Operating process .....	41
26 Maintenance process .....	43
27 Withdrawal from service process .....	43
Bibliography .....	44

## Foreword

This document (EN 9320:2014) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

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 2015, and conflicting national standards shall be withdrawn at the latest by June 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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## 1 Scope

These general guidelines cover the open system acquisition and supply processes.

There is an increasing requirement for systems designed and produced by industry, particularly in the aeronautic, space and defence fields, to be used with other systems designed, produced, acquired and operated independently.

The concept of open systems is touched upon in many systems engineering documents. This document deals specifically with this subject. To this end, through the various processes applied, it provides information to stakeholders (buyers, suppliers, designers, subcontractors, supervisors, etc.) on the best practice to be adopted.

The specific nature of openness for a system is defined by all the following properties:

- Interchangeability,
- Interoperability,
- Upgradability,
- Reusability,
- Reversibility,
- Flexibility,
- Affordability.

These properties are defined in the glossary for these general guidelines.

These general guidelines are largely based on the structure and system life cycle processes described in standard ISO/IEC 15288:2008.

The characteristics of openness also relate to:

- The products or services offered by the company (target systems resulting from use of company processes).
- The company's processes (project systems). Several stakeholders, with their own assignments, cultures, jobs and geographical locations, different working methods, modelling frameworks, standards, tools and aids, etc. are involved in the activities, which are sometimes multidisciplinary, of the internal and external processes of a company. These diverse elements are not necessarily all suited to working together without causing certain risks, a loss of autonomy, effectiveness and/or efficiency, etc. A company must, for example, develop its ability and capacity in terms of interoperability both internally (between the systems of which it is made) and externally (with other partners), including, by way of an example:
  - Ability of each stakeholder and each department involved to maintain efficient and trusting relationships with other stakeholders, taking into account deadline, cost and quality objectives,
  - Ability to exchange, communicate and use the necessary flows (data, information, knowledge, materials, energy) autonomously, without error and dynamically throughout the life cycle of the target system,
  - Ability to coordinate, synchronise and manage common tasks and share and use resources (human, machine or application) and services efficiently and appropriately.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 9001:2008, *Quality management systems — Requirements*

ISO 9241-210:2010, *Ergonomics of human-system interaction — Part 210: Human-centred design for interactive systems*

ISO 10007:2003, *Quality management systems — Guidelines for configuration management*

ISO 10303-1:1994, *Industrial automation systems and integration — Product data representation and exchange — Part 1: Overview and fundamental principles*

ISO/IEC 15288:2008, *Systems and software engineering — System life cycle processes*

ISO/IEC 9126-1:2001, *Software engineering — Product quality — Part 1: Quality model*

IEEE 830:1998, *IEEE Recommended Practice for Software Requirements Specifications*

IEEE 1471:2000, *IEEE Recommended Practice for Architectural Description for Software — Intensive Systems*

## 3 Terms and definitions and abbreviated terms

### 3.1 Terms and definitions

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

#### 3.1.1

##### **affordability**

ability of a system to have acceptable operational performance for an acceptable cost of ownership, resulting from a compromise after negotiation between the Parties

[SOURCE: IEEE 1471:2000]

#### 3.1.2

##### **architecture**

fundamental organisation of a system described by its components, the relationship between these components and with the environment, and the principles guiding its representation and its development. The relationships between the components are described in the interfaces

#### 3.1.3

##### **capacity**

capacity is represented by the consistent integration of a Policy, an Organisation, human resources, training, Support and Equipment

#### 3.1.4

##### **component**

product that cannot be broken down from the point of view of a specific application

[SOURCE: ISO 10303-1:1994]