

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Dependability management –  
Part 3-14: Application guide – Supportability and support**

**Gestion de la sûreté de fonctionnement –  
Partie 3-14: Guide d'application – Supportabilité et soutien**



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## CONTENTS

FOREWORD.....	5
INTRODUCTION.....	7
1 Scope.....	9
2 Normative references .....	9
3 Terms and definitions .....	9
4 Overview of supportability and support .....	13
4.1 Description of supportability and support .....	13
4.2 Principles.....	14
4.3 Benefits .....	14
4.4 Interfaces.....	15
4.4.1 General .....	15
4.4.2 Effect of supportability and support on reliability .....	16
4.4.3 Effect of supportability and support on maintainability.....	16
4.4.4 Effect of supportability and support on availability .....	16
4.4.5 Effect of supportability and support on life cycle cost.....	16
5 Specifying for supportability and support .....	16
5.1 General.....	16
5.2 Defining requirements .....	17
5.3 Attributes of supportable items.....	17
5.4 Measures of supportability .....	18
6 Supportability and support programme .....	19
6.1 General.....	19
6.2 Project management.....	20
6.3 Planning and constraints.....	20
7 Managing supportability and support over the life cycle .....	23
7.1 General.....	23
7.2 Concept stage.....	23
7.2.1 Initial considerations .....	23
7.2.2 Restoration options.....	23
7.2.3 Types of support.....	24
7.2.4 Establishing a support data repository.....	25
7.2.5 Supportability analysis.....	25
7.3 Development stage .....	25
7.4 Finalisation stage .....	26
7.5 Utilization stage .....	27
7.6 Retirement or reuse .....	27
8 Assurance .....	28
8.1 Assurance objectives .....	28
8.2 Methods of assurance.....	28
8.2.1 Verification .....	28
8.2.2 Dependability case .....	29
9 Supportability and support information.....	29
9.1 Data collection.....	29
9.2 Configuration management .....	30
9.3 Document management .....	31
9.4 Technical manuals .....	31

9.4.1	General .....	31
9.4.2	Development of a technical manual .....	33
9.4.3	Evaluation .....	34
9.4.4	Amendment of documentation.....	34
9.4.5	Event reporting.....	34
9.4.6	Communication.....	34
10	Resource management.....	35
10.1	Provision of resources .....	35
10.2	Human resources.....	35
10.3	Training .....	35
10.4	Support equipment.....	36
10.4.1	General .....	36
10.4.2	Types of support equipment.....	36
10.4.3	Selection of support equipment.....	37
10.4.4	Support equipment data.....	37
10.4.5	Automatic test equipment .....	37
10.4.6	Calibration.....	38
10.4.7	Repair of support equipment.....	38
10.4.8	Built-in test equipment (BITE).....	38
10.5	Support facilities .....	39
10.5.1	Work area facilities .....	39
10.5.2	Administration and technical facilities.....	39
10.5.3	Facilities for computerized support information systems .....	39
10.6	Spare parts and consumables.....	40
10.6.1	General .....	40
10.6.2	Spare parts' quality.....	40
10.6.3	Spare parts' quantification .....	41
10.6.4	Spare parts' identification .....	42
Annex A	(informative) Maintenance types influencing supportability and support .....	43
A.1	General.....	43
A.2	Repair whilst the essential functions of the system continue to operate.....	43
A.2.1	Redundancy of a part .....	43
A.2.2	Standby redundancy .....	43
A.2.3	Redundancy for a subsystem.....	43
A.2.4	Redundancy for a defined time period.....	44
A.2.5	Maintenance during low performance demand or dwell time .....	44
A.3	Maintenance when the system is not operating .....	44
A.3.1	Planned stoppage.....	44
A.3.2	Operate to failure.....	45
Annex B	(informative) Supportability and support analysis.....	46
B.1	Techniques associated with supportability analysis .....	46
B.2	Feasibility estimation .....	46
B.3	Allocation.....	47
B.4	Prediction .....	47
B.5	Detailed analysis approach .....	48
B.6	Costs considered during the detailed analysis approach .....	48
B.6.1	Individual costs.....	48
B.6.2	Cost interactions.....	50
B.6.3	Cost comparison examples.....	50

Annex C (informative) Economic ordering of replacements ..... 53

- C.1 Performance and specification considerations..... 53
- C.2 Continuous ordering of spare parts ..... 53
- C.3 Batch ordering of spare parts ..... 53

Annex D (informative) Example of support delay times and other associated times ..... 55

- D.1 Example timeline ..... 55
- D.2 Delay time assessments ..... 56

Bibliography..... 57

Figure 1 – Spare parts provisioning process ..... 42

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**DEPENDABILITY MANAGEMENT –****Part 3-14: Application guide – Supportability and support**

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IEC 60300-3-14 has been prepared by IEC technical committee 56: Dependability. It is an International Standard.

This second edition cancels and replaces the first edition published in 2004. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) consistency with the other core dependability standards prepared by IEC TC 56;
- b) expansion of supportability and support principles and activities in dependability.

The text of this International Standard is based on the following documents:

Draft	Report on voting
56/2050/FDIS	56/2055/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2 and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/standardsdev/publications](http://www.iec.ch/standardsdev/publications).

A list of all parts in the IEC 60300 series, published under the general title *Dependability management*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under [webstore.iec.ch](http://webstore.iec.ch) in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

## INTRODUCTION

This document provides guidance on how to identify and apply appropriate analysis and assurance techniques for supportability and support on an item. This document includes good practice, the measures appropriate for requirements and how to evaluate them. This document also includes the relationship with other dependability attributes together with the elements of an effective supportability and support programme. Support, in the context of this document, is the provision of quality resources to enable an item to perform as required. Supportability focuses on:

- identifying and quantifying:
  - support for a defined item in a given context of use;
  - time to provide that support;
  - resourcing, cost and quality of the support activity;
  - quality of the delivered support;
- influencing the design of an item and support arrangements to achieve value over the item's life.

A primary objective of "designing for item supportability" is to influence the support activity during operations and maintenance. However, supportability is not just an attribute of the design as it is also dependent on the conditions of use and the organization providing the support arrangements. Achieving the desired capabilities inherent in an item design implies that the necessary support capability is also designed, implemented and continuously evolved to align with changes to the item's configuration and its conditions of use including the capability of the managing organization and its suppliers. Supportability of an item ensures that:

- support requirements to achieve a desired item capability are balanced and known;
- financial capability to deliver that support is known for the short and long term;
- there is a desired balance between item design, the design of the support and the design of the organization delivering that support in order to achieve technical and financial requirements.

Support is a major contributor to the overall costs for an item to operate smoothly throughout its life for a given life profile. The current trend is to extend the life of an item by ensuring spares and other support resources are readily available over a longer period of time (particularly for items which will have problems such as obsolescence). The current trend also aims to ensure that parts are retired and recycled in a sustainable manner. Supportability will benefit from innovative solutions if it is to meet these future sustainability and circularity demands.

An item which is easily supported is better able to withstand adversity and recover from it. Such an item is more resilient and less reliant on the people and systems that can be affected by serious adverse events and situations.

An effective supportability and support programme ensures that the customer will have increased confidence in the support organization, with lower life cycle costs, improved availability and fewer modifications due to supportability deficiencies. In turn, this will result in improved customer confidence in the item leading to improved sales as well as improved sales for future items from the same company.

This document is one of the "top-level" interrelated dependability standards that provide managers and technical personnel with guidance on how to effectively plan and implement dependability activities. Other documents in the suite are:

- IEC 60300-1 which highlights the importance and benefits of managing dependability. It gives guidance on dependability activities and how to integrate them into an existing management system and life cycle processes;
- IEC 60300-3-4 which provides guidance for writing dependability requirements in specifications, together with the means of assuring the achievement of those requirements;
- IEC 60300-3-10 which provides guidance on how to identify and apply appropriate analysis and assurance techniques for maintainability (and maintenance);
- guidance documents to cover reliability and availability which are under development.

## DEPENDABILITY MANAGEMENT –

### Part 3-14: Application guide – Supportability and support

#### 1 Scope

This part of IEC 60300 introduces the dependability attribute of supportability (and support) and the relationship with related dependability attributes of reliability, maintainability and availability.

This document can be used at any time during an item's life to guide the planning and implementing of supportability and support activities focused on achieving an intended balance of performance, cost and risk. All activities can be tailored to the nature of the item and its conditions of use.

Guidance is offered on how supportability and support activities can be applied at any life cycle stage for newly designed items, existing items available for commercial procurement, or for items during their operational life.

This document considers the life cycle implications by formally managing risks associated with the management and delivery of activities to create, operate, maintain and refurbish an item to achieve its stated purpose.

This document describes the:

- nature of supportability and support;
- role of supportability and support in achieving item value over its life;
- trade-offs associated with supportability and support to achieve desired balance of cost, performance and risk during the life of an item;
- importance of aligning the structure of an organization with its objectives, with the ultimate aim of improving efficiency and effectiveness in order to deliver the required supportability and support.

#### 2 Normative references

There are no normative references in this document.

#### 3 Terms and definitions

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

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

- IEC Electropedia: available at <https://www.electropedia.org/>
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