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## Ledning av tillförlitlighet – Del 3-3: Vägledning – Livstidskostnad (LCC)

*Dependability management –  
Part 3-3: Application guide –  
Life cycle costing*

Som svensk standard gäller europastandarden EN 60300-3-3:2004. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60300-3-3:2004.

### Nationellt förord

Europastandarden EN 60300-3-3:2004<sup>\*)</sup>

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 60300-3-3, Second edition, 2004 - Dependability management - Part 3-3: Application guide - Life cycle costing**

utarbetad inom International Electrotechnical Commission, IEC.

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<sup>\*)</sup> EN 60300-3-3:2004 ikraftsattes 2004-12-20 som SS-EN 60300-3-3 genom offentliggörande, d v s utan utgivning av något svenskt dokument.

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EUROPEAN STANDARD

**EN 60300-3-3**

NORME EUROPÉENNE

EUROPÄISCHE NORM

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**Dependability management**  
**Part 3-3: Application guide –**  
**Life cycle costing**  
(IEC 60300-3-3:2004)

Gestion de la sûreté de fonctionnement  
Partie 3-3: Guide d'application -  
Evaluation du coût de vie  
(CEI 60300-3-3:2004)

Zuverlässigkeitsmanagement  
Teil 3-3: Anwendungsleitfaden -  
Lebenszykluskosten  
(IEC 60300-3-3:2004)

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

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**CENELEC**

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Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

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SEK Svensk Elstandard

## Foreword

The text of document 56/942/FDIS, future edition 2 of IEC 60300-3-3, prepared by IEC TC 56, Dependability, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60300-3-3 on 2004-09-01.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2005-06-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2007-09-01

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 60300-3-3:2004 was approved by CENELEC as a European Standard without any modification.

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## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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

NOTE Where an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-191	1990	International Electrotechnical Vocabulary (IEV) Chapter 191: Dependability and quality of service	-	-
IEC 60300-3-12	- <sup>1)</sup>	Dependability management Part 3-12: Application guide - Integrated logistic support	EN 60300-3-12	2004 <sup>2)</sup>
IEC 61703	- <sup>1)</sup>	Mathematical expressions for reliability, availability, maintainability and maintenance support terms	EN 61703	2002 <sup>2)</sup>
IEC 62198	- <sup>1)</sup>	Project risk management - Application guidelines	-	-

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1) Undated reference.

2) Valid edition at date of issue.

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## INTRODUCTION

Products today are required to be reliable. They have to perform their functions safely with no undue impact on the environment and be easily maintainable throughout their useful lives. The decision to purchase is not only influenced by the product's initial cost (acquisition cost) but also by the product's expected operating and maintenance cost over its life (ownership cost) and disposal cost. In order to achieve customer satisfaction, the challenge for suppliers is to design products that meet requirements and are reliable and cost competitive by optimizing acquisition, ownership and disposal costs. This optimization process should ideally start at the product's inception and should be expanded to take into account all the costs that will be incurred throughout its lifetime. All decisions made concerning a product's design and manufacture may affect its performance, safety, reliability, maintainability, maintenance support requirements, etc., and ultimately determine its price and ownership and disposal costs.

Life cycle costing is the process of economic analysis to assess the total cost of acquisition, ownership and disposal of a product. This analysis provides important inputs in the decision-making process in the product design, development, use and disposal. Product suppliers can optimize their designs by evaluation of alternatives and by performing trade-off studies. They can evaluate various operating, maintenance and disposal strategies (to assist product users) to optimize life cycle cost (LCC). Life cycle costing can also be effectively applied to evaluate the costs associated with a specific activity, for example, the effects of different maintenance concepts/approaches, to cover a specific part of a product, or to cover only selected phase or phases of a product's life cycle.

Life cycle costing is most effectively applied in the product's early design phase to optimize the basic design approach. However, it should also be updated and used during the subsequent phases of the life cycle to identify areas of significant cost uncertainty and risk.

The necessity for formal application of the life cycle costing process to a product will normally depend on contractual requirements. However, life cycle costing provides a useful input to any design decision-making process. Therefore, it should be integrated with the design process, to the extent feasible, to optimize product characteristics and costs.



## DEPENDABILITY MANAGEMENT –

### Part 3-3: Application guide – Life cycle costing

#### 1 Scope

This part of IEC 60300 provides a general introduction to the concept of life cycle costing and covers all applications. Although the life cycle costs consist of many contributing elements, this standard particularly highlights the costs associated with dependability of the product.

This standard is intended for general application by both customers (users) and suppliers of products. It explains the purpose and value of life cycle costing and outlines the general approaches involved. It also identifies typical life cycle cost elements to facilitate project and programme planning.

General guidance is provided for conducting a life cycle cost analysis, including life cycle cost model development. Illustrative examples are provided to explain the concepts.

#### 2 Normative references

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

IEC 60050-191:1990, *International Electrotechnical Vocabulary (IEV) – Chapter 191: Dependability and quality of service*

IEC 60300-3-12, *Dependability management – Part 3-12: Application guide – Integrated logistic support*

IEC 61703, *Mathematical expressions for reliability, maintainability and maintenance support terms*

IEC 62198, *Project risk management – Application guidelines*