

Obsolescence management — Application guide

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National foreword

This British Standard is the UK implementation of EN 62402:2007. It is identical to IEC 62402:2007. It supersedes BS 7000-5:2001 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee OS/1, Obsolescence management.

A list of organizations represented on this committee can be obtained on request to its secretary.

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**Obsolescence management -
Application guide
(IEC 62402:2007)**

Gestion de l'obsolescence -
Guide d'application
(CEI 62402:2007)

Anleitung zum
Obsoleszenzmanagement
(IEC 62402:2007)

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CENELEC

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Foreword

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CONTENTS

INTRODUCTION.....	5
1 Scope.....	6
2 Normative references	6
3 Terms, definitions and abbreviations	7
3.1 Definitions	7
3.2 Abbreviations	10
4 General principles	11
4.1 The obsolescence phase	11
4.2 Obsolescence management process	11
4.3 Documentation	13
5 Management responsibility	13
5.1 Management function on obsolescence	13
5.2 Meeting customer needs	14
5.3 Obsolescence contractual and regulatory implications	14
5.4 Obsolescence management planning	14
5.5 Responsibility	15
5.6 Management review	15
6 Resources	15
7 Managing obsolescence	15
7.1 Planning	15
7.1.1 General	15
7.1.2 Obsolescence management plan contents	16
7.1.3 Obsolescence management in the context of risk management	16
7.1.4 Planning	17
7.1.5 Assessment of impact, cost and probability of obsolescence	18
7.1.6 Determining the main strategy	18
7.1.7 Reactive strategy	19
7.1.8 Proactive strategy	20
7.1.9 Budgetary provision	20
7.1.10 Reviewing the strategy	20
7.2 Customer related activities	21
7.3 Reactive strategy recovery options (see Figure 8)	21
7.3.1 Overview	21
7.3.2 Product search	21
7.3.3 Cannibalization	22
7.3.4 Repair	22
7.3.5 Design revision	22
7.3.6 Product obsolescence	23
7.4 Proactive strategy options	23
7.4.1 Design considerations	23
7.4.2 Technology transparency	23
7.4.3 Obsolescence monitoring	24
7.4.4 Planned system upgrades	25
7.4.5 Lifetime buy	25

7.4.6	Additional factors affecting the choice of obsolescence management programme options	26
7.4.7	Skills training	26
7.5	Supply chain management	26
8	Measurement, analysis and improvement	26
9	Software obsolescence issues and strategies	27
9.1	Additional planning aspects for software	27
9.1.1	Software and hardware similarities and differences	27
9.1.2	Causes of software obsolescence	28
9.1.3	Determining the main strategy to combat software obsolescence	29
9.1.4	Reactive strategy – Do nothing until the need arises	30
9.1.5	Proactive strategy	30
9.2	Relationship between the customer and the supplier	31
9.3	Reactive strategy recovery options (see Figure 10)	31
9.3.1	Overview	31
9.3.2	Software search	31
9.3.3	Revision	31
9.3.4	Software obsolescence	32
9.4	Proactive strategy as applied to software separable from hardware (see Figure 11)	32
9.4.1	Overview	32
9.4.2	Design considerations	32
9.4.3	Technology transparency/open systems	32
9.4.4	Contract support	33
9.4.5	Planned upgrades	33
9.4.6	Additional factors affecting choice of obsolescence management programme options	33
Annex A (informative)	Check list	35
Annex B (informative)	Monitoring products	36
Annex ZA (normative)	Normative references to international publications with their corresponding European publications	39
Bibliography	.....	38
Figure 1 – Availability phases	.....	11
Figure 2 – Process steps for managing obsolescence	.....	12
Figure 3 – Obsolescence management versus product life cycle	.....	12
Figure 4 – Relationship between OCM, OEM and the customer	.....	13
Figure 5 – Process steps in project risk management versus obsolescence management	.....	17
Figure 6 – Reactive versus proactive strategy	.....	19
Figure 7 – Proactive strategy	.....	20
Figure 8 – Overview of reactive strategy recovery options	.....	21
Figure 9 – Reactive versus proactive strategy in relation to software obsolescence	.....	30
Figure 10 – Overview of recovery options	.....	31
Figure 11 – Proactive options overview (software)	.....	32
Figure B.1 – Simplified outline of monitoring of active electronic parts with suggested solutions (see 7.4.3)	.....	37

INTRODUCTION

Obsolescence affects all products and it impacts upon all stages of their life. The term product includes

- capital equipment;
- infrastructure;
- consumer durables;
- consumables;
- software products.

Obsolescence is inevitable and it cannot be avoided, but forethought and careful planning can minimize its impact and its potential high costs. The objective of obsolescence management is to ensure that obsolescence is managed as an integral part of design, development, production and in-service support in order to minimize cost and detrimental impact throughout the product life cycle.

Obsolescence presents itself in two ways:

- the item is no longer suitable for current demands, or
- the item is no longer available from the original manufacturer, e.g. due to economic constraints.

From the user's point of view, obsolescence then manifests itself as difficulty in obtaining supplies. If the end-user is the general public, it will be in the interest of the supplier to protect his brand image by having a defined obsolescence policy.

Commercial-off-the-shelf (COTS) products and custom designed items, e.g. new design tools and new production processes, tend to have a much shorter life in terms of availability and supportability than in the past. With the increased use of commercial items in complex products expecting to have a long life cycle, it has become essential to include obsolescence management within programme plans from the earliest stages. Furthermore environmental considerations have the potential to affect the use of some materials during the life of the product and should be considered from the outset.

Obsolescence management is essential to achieve optimum cost-effectiveness throughout the life cycle of a product. The purpose of this standard is to provide guidance on planning a cost effective obsolescence management process that takes into account essential factors to ensure product life cycle costs are considered and applied. Obsolescence management should also include the maintenance of the relevant knowledge and skill base sets.

Clause 4 provides overview of the process and its relation to others.

Clauses 5, 6 and 8 give guidance on management responsibility, resources, measurement and improvement with regard to obsolescence management.

Clause 7 gives guidance on planning, strategies and options described for hardware (including integral software).

Clause 9 gives guidance on planning, strategies and options for software that is separable from its hardware.

OBSOLESCENCE MANAGEMENT – APPLICATION GUIDE

1 Scope

This International Standard gives guidance for establishing a framework for obsolescence management and for planning a cost-effective obsolescence management process that is applicable through all phases of the product life cycle, the term 'product' includes:

- capital equipment;
- infrastructure;
- consumer durables;
- consumables;
- software products.

Obsolescence management covers the following areas:

- a) design of new products;
- b) new technology insertion into existing products;
- c) support and maintenance of legacy products.

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, *International Electrotechnical Vocabulary (IEV) – Part 191: Dependability and quality of service*

IEC 60300-1, *Dependability management – Part 1: Dependability management systems*

IEC 60300-2:2004, *Dependability management – Part 2: Guidelines for dependability management*

IEC 62198, *Project risk management – Application guidelines*

IEC/TS 62239, *Process management for avionics – Preparation of an electronic components management plan*

IEC 62258 (all parts), *Semiconductor die products*

IEC 62309, *Dependability of products containing reused parts – Requirements for functionality and tests*

3 Terms, definitions and abbreviations

For the purposes of this document, the terms and definitions given in IEC 60050-191 and the following apply.

3.1 Definitions

3.1.1

bench marking

testing and comparing similar products or processes

3.1.2

bridge buy

lifetime buy for a given period, e.g. during replacement product development

3.1.3

cannibalization

re-use of components and assemblies taken from products within the inventory to support other products

3.1.4

commercial-off-the-shelf

COTS

conforming to the manufacturer's data sheet and available to any purchaser

NOTE A single user is not able to influence the specification.

3.1.5

end of life

EOL

discontinuance of production by the original manufacturer

NOTE EOL should not be confused with 'time to wear out' or 'end of use'.

3.1.6

hardware

physical components of a system including its associated data and documentation

3.1.7

infrastructure

facilities, plant and people who design, manufacture, operate and support the product

3.1.8

integrated logistic support

ILS

management method by which all the logistic support services required by a customer can be brought together in a structured way and in harmony with a product

[IEC 60300-3-12:2001, Subclause 3.2]

3.1.9**intellectual property rights****IPR**

patents, designs (whether registered or not), registered trade marks, and copyright

NOTE These are rights defined and regulated by international agreement. Confidential technical information (usually in reports, drawings, specifications or data), and general “know-how” comprise other rights under international law. Although to an extent intangible, they constitute a form of property, possess value and can be bought, sold or licensed.

3.1.10**legacy product**

product whose development is complete

3.1.11**legacy system**

system whose development is complete

3.1.12**lifetime buy****LTB**

purchase of a supply of components sufficient to support the product throughout its life cycle or until the next planned technology change

3.1.13**materiel**

systems, products, stores, supplies, spares and related documentation, manuals, computer software and firmware

3.1.14**original component manufacturer****OCM**

manufacturer of an item, material or component that is intended for embodiment into an assembly or a product by an original equipment manufacturer (OEM)

3.1.15**original equipment manufacturer****OEM**

manufacturer of an assembly or a product

NOTE 1 OEM is a common term used to identify a position in the supply chain.

NOTE 2 The assembly or product might be regarded as a component by a customer.

3.1.16**obsolescence**

3.1.16.1 transition from availability from the original manufacturer to unavailability

3.1.16.2 permanent transition from operability to non-functionality due to external reasons

3.1.17**obsolescence management**

co-ordinated activities to direct and control an organization with regard to obsolescence

3.1.18**obsolescence management plan**

description of the strategies for the identification and mitigation of the effects of obsolescence through all stages of the life of a product

3.1.19

obsolescent

subject to an announced future end of

- service provision;
- support of software;
- production by the OCM;
- processed material supply

3.1.20

obsolete

no longer available

NOTE This might be because of the lack of availability of

- service provision;
- support of software;
- production by the OCM and there is no replacement available;
- processed material supply.

3.1.21

proactive strategy

development and implementation of an obsolescence management plan in advance

3.1.22

product

result of a process

NOTE There are four generic product categories, as follows:

- service (e.g. transport, after sales support);
- software (e.g. computer program, dictionary);
- hardware (e.g. mechanical component, electrical component or assembly);
- process material (e.g. lubricant).

[ISO 9000:2005, definition 3.4.2 modified]

3.1.23

product change note/notice/notification

PCN

notice from a supplier announcing a change of process, an error on a data-sheet or the obsolescence of a component

3.1.24

product discontinuance notice

PDN

notice of discontinuance of production by the original manufacturer

NOTE It is also often referred to as an EOL notice.

3.1.25

project manager

individual or body with authority and responsibility for managing a project to achieve specific objectives

3.1.26**reactive strategy**

reaction to problems of obsolescence as and when they occur

3.1.27**software**

programs, procedures, rules, data and documentation associated with programmable aspects of systems hardware and infrastructure

3.1.28**support**

total resources required to operate and maintain systems or products throughout their operating phase, including all aspects of software, hardware and complete design knowledge

3.1.29**technology insertion**

updates or upgrades to legacy products (utilizing developing technologies)

NOTE 1 Update: new version, same features.

NOTE 2 Upgrade: new version, additional features.

3.1.30**life cycle costs****LCC**

cumulative cost of a product over its life cycle

[IEC 60300-3-3:2005, Subclause 3.3]

3.2 Abbreviations

COTS	commercial-off-the-shelf
EOL	end of life
ILS	integrated logistics support
IPR	intellectual property rights
LCC	life cycle costs
LTB	life time buy
OCM	original component manufacturer
OEM	original equipment manufacturer
PCN	product change note/notice/notification
PDN	product discontinuance notice

4 General principles

4.1 The obsolescence phase

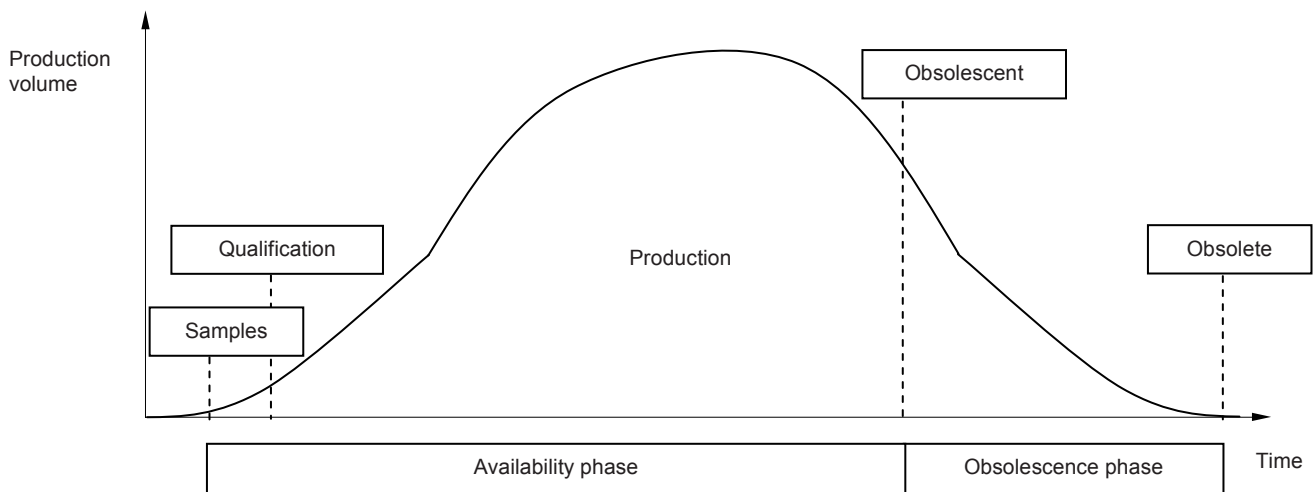


Figure 1 – Availability phases

As a general principle, the obsolescence phase of a product begins immediately after the information about discontinuance is issued and the product is considered as obsolescent, as shown in Figure 1. The information at the obsolescent phase change is often in the form of a product discontinuance notice (PDN), end-of-life (EOL) notification or lifetime buy (LTB) notification. A product change notice (PCN) may also cause a product to enter the obsolescence phase for certain manufacturers (OCM or OEM). For a software product, the obsolescence phase commences once the original software manufacturer indicates that the software is no longer supported.

A product may be considered obsolete once it is no longer available from the original manufacturer, even though some product is still in the supply chain.

4.2 Obsolescence management process

Dependability management encompasses obsolescence management, which is the process of assuring that the product is manufacturable and supportable for the intended life, see Figure 2. The process consists of planned and co-ordinated activities for providing availability of a product during its intended life, by the economic and practicable provision of replacement components and support activities. Figure 3 shows the relationship between obsolescence management and product life cycle.