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Interested committees:

Title: BS EN IEC 62402-2 Obsolescence Management

Part 2: Forecasting obsolescence cost

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

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Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



56/2056/CD

COMMITTEE DRAFT (CD)

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DATE OF CIRCULATION: 2024-06-28	CLOSING DATE FOR COMMENTS: 2024-09-20
SUPERSEDES DOCUMENTS:	

IEC TC 56 : DEPENDABILITY	
SECRETARIAT: United Kingdom	SECRETARY: Ms Stephanie Lavy
OF INTEREST TO THE FOLLOWING COMMITTEES: TC 107	PROPOSED HORIZONTAL STANDARD: ☐ Other TC/SCs are requested to indicate their interest, if any, in this CD to the secretary.
FUNCTIONS CONCERNED: ☐ EMC ☐ ENVIRONMENT ☒ QUALITY ASSURANCE ☐ SAFETY	

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TITLE: Obsolescence Management Part 2: Forecasting obsolescence cost
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

OBSOLESCENCE MANAGEMENT

Part 2: Forecasting obsolescence cost

FOREWORD

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IEC 62402 has been prepared by IEC technical committee 56: DEPENDABILITY. It is an International Standard.

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

Draft	Report on voting
XX/XX/FDIS	XX/XX/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.

114 This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in
115 accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available
116 at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are
117 described in greater detail at www.iec.ch/publications.

118 The committee has decided that the contents of this document will remain unchanged until the
119 stability date indicated on the IEC website under webstore.iec.ch in the data related to the
120 specific document. At this date, the document will be

- 121 • reconfirmed,
- 122 • withdrawn,
- 123 • replaced by a revised edition, or
- 124 • amended.

125

INTRODUCTION

Increased item integration and conversely item complexity, and the accelerating rate of change of technologies, is resulting in obsolescence occurring at a faster rate. Creating designs with the long term in mind and with the availability of substitutes to resolve obsolescence also makes the management of obsolescence critical to most modern systems. These factors increase item availability risks, and the need for expensive design change resolutions, which requires significant resources to resolve. As such, there is an increasing importance to improve the predictability of cost outcomes to manage obsolescence resolutions as an affordable plan of work and enable organisations to manage their assets cost effectively.

Obsolescence is inevitable but normally involves uncertainty as to when it will occur and what the likely consequences in terms of cost and impact will be. Therefore, to apply a standardised approach to improve the predictability of cost outcomes, the analysis must identify and manage areas of uncertainty. Uncertainty as to the level of information available and the reliability of the information to determine the time when obsolescence will occur and the impact. Maturing the level and quality of information throughout the life cycle will increase confidence and reduce uncertainty in the forecasted costs.

An understanding of the parameters identified as cost drivers for obsolescence will influence what information is collected and analysed to forecast obsolescence costs. Particular attention is focused on the

- obsolescence management approach being applied,
- maturity of approach,
- resolution option(s) selected,
- through life support cost,
- industry the item is designed for,
- level of requalification required to certify a sub-item,
- complexity of a sub-item, and
- level of integration required.

Forecasting obsolescence costs can provide benefit throughout the life cycle from the early stage providing estimates of the life cycle cost, and then during tendering processes for procurement or support contracts enabling cost estimating to include costs for the management of obsolescence, reducing the need to exclude from contracts. Costs are likely to be less certain the further into the future the forecast covers, as such cost variance can be incorporated in the forecast to show the level of uncertainty in the forecast, which can support contracting for obsolescence management.

This document provides guidance for forecasting obsolescence costs for any type of item, equipment, sub-system, system or platform.

Even though this situation may not be a direct case of obsolescence, this document will also be of assistance in forecasting the cost to manage and resolve items that have diminished manufacturing sources and materiel shortages that can result in long lead times, reduced availability, and ultimately obsolescence of those items.

This document takes a different view of obsolescence from the standard dictionary definition. Instead of an item becoming outdated or no longer used, this document views obsolescence as the transition of a required item still in use from available to unavailable from the manufacturer. Any item that remains in use will be subject to obsolescence. Obsolescence manifests itself as difficulty in obtaining supplies, spares and/or support.

OBSOLESCENCE MANAGEMENT

Part 2: Forecasting obsolescence cost

1 Scope

This part of IEC 62402 provides guidance for forecasting obsolescence costs by defining policies, processes, and techniques to forecast obsolescence management costs for planning for obsolescence, designing to minimize obsolescence, checking for obsolescence, and acting on obsolescence for an item over a defined period or throughout the life cycle phases.

This document will provide the techniques to justify obsolescence management investment using a forecast of doing nothing vs cost avoidance of doing 'something'.

This document will also provide guidance applicable to any organization that is dependent on another organization to obtain value from the usefulness of the items that it provides.

This document excludes forecasting:

- capability improvement costs, those costs related to improving the performance of items that have become outdated, which may resolve obsolescence but that is not the primary objective;
- indirect costs, those costs related to obsolescence management that are not related to a specific item.

NOTE An example of a capability improvement is the procurement of the latest smart phone to obtain greater performance.

This document will exclude cost information but will provide guidance on how organisations should establish their own cost forecasting baselines utilising historical cost outcomes.

Guidance on specific models (including academic models) are included as notes, in the informative annexes and references in the Bibliography.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60050-192:2015 International Electrotechnical Vocabulary (IEV) – Part 192: Dependability.

IEC 62402:2019, Obsolescence management.

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/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1.1

alternative item

item whose characteristics can be different from that specified for one or more reasons

EXAMPLE Items with different quality or reliability level, tolerance, parameters, temperature range.

[SOURCE: IEC 62402:2019 modified – Note 1 removed]

3.1.2

commercial off-the-shelf

COTS

conforming to the manufacturer's datasheet and available to any purchaser

Note 1 to entry: A single user is not able to influence the manufacturer's datasheet.

Note 2 to entry: This note applies to the French language only.

[SOURCE: IEC 62402:2019]

3.1.3

cost element

component of life cycle cost for which cost data are, or can be, collected

[SOURCE: IEC 60300-3-3:2017]

3.1.4

end of sale

EOS

date items can no longer be purchased from the manufacturer

Note 1 to entry: For software items, no longer licenced.

3.1.5

emulation

process that produces a substitute item for the purpose of replacing another item while maintaining the same form, fit and function, and interface

Note 1 to entry: Microcircuit emulation can replicate, with state-of-the-art, items that emulate the original item.

[SOURCE: IEC 62402:2019]

3.1.6

end of production

EOP

date of discontinuance from manufacture

Note 1 to entry: This note applies to the French language only.

[SOURCE: IEC 62402:2019]

3.1.7

equivalent item

item which is functionally, parametrically and technically interchangeable

Note 1 to entry: This term is also known as 'form, fit, function and interface' F3I.

[SOURCE: IEC 62402:2019 modified – Note 2 removed]