



SLOVENSKI STANDARD SIST EN IEC 62430:2021

01-junij-2021

Nadomešča:
SIST EN 62430:2010

Okoljsko osveščeno snovanje (ECD) - Načela, zahteve in napotki

Environmentally Conscious Design (ECD) - Principles, requirements and guidance

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Ta slovenski standard je istoveten z: EN IEC 62430:2019

<https://standards.iteh.ai/catalog/standards/sist/da3912e3-ed57-4dbb-b8c0-bb87035c71e/sist-en-iec-62430-2021>

ICS:

13.020.30	Ocenjevanje vpliva na okolje	Environmental impact assessment
29.020	Elektrotehnika na splošno	Electrical engineering in general
31.020	Elektronske komponente na splošno	Electronic components in general

SIST EN IEC 62430:2021

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN IEC 62430:2021](#)

<https://standards.iteh.ai/catalog/standards/sist/da3912e3-ed57-4dbb-b8c0-bbff1035c71c/sist-en-iec-62430-2021>

EUROPEAN STANDARD

EN IEC 62430

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2019

ICS 13.020.01

Supersedes EN 62430:2009 and all of its amendments
and corrigenda (if any)

English Version

**Environmentally conscious design (ECD) - Principles,
requirements and guidance
(IEC 62430:2019)**Écoconception (ECD) - Principes, exigences et
recommandations
(IEC 62430:2019)Umweltbewusstes Gestalten (ECD) - Grundsätze,
Anforderungen und Leitfaden
(IEC 62430:2019)

This European Standard was approved by CENELEC on 2019-11-26. CENELEC 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 CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

SIST EN IEC 62430:2021

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 62430:2019 (E)**European foreword**

The text of document 111/536/FDIS, future edition 2 of IEC 62430, prepared by IEC/TC 111 "Environmental standardization for electrical and electronic products and systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62430:2019.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2020-08-26
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-11-26

This document supersedes EN 62430:2009 and all of its amendments and corrigenda (if any).

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

iTeh STANDARD PREVIEW (standards.iteh.ai)

Endorsement notice

[SIST EN IEC 62430:2021](https://standards.iteh.ai/catalog/standards/sist/da3912e3-ed57-4dbb-b8c0-bbf1035c71c/sist-en-iec-62430-2021)

[https://standards.iteh.ai/catalog/standards/sist/da3912e3-ed57-4dbb-b8c0-](https://standards.iteh.ai/catalog/standards/sist/da3912e3-ed57-4dbb-b8c0-bbf1035c71c/sist-en-iec-62430-2021)

[bbf1035c71c/sist-en-iec-62430-2021](https://standards.iteh.ai/catalog/standards/sist/da3912e3-ed57-4dbb-b8c0-bbf1035c71c/sist-en-iec-62430-2021)

The text of the International Standard IEC 62430:2019 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 62430:2009	NOTE	Harmonized as EN 62430:2009 (not modified)
IEC 62474	NOTE	Harmonized as EN IEC 62474
ISO/IEC Guide 2:2004	NOTE	Harmonized as EN 45020:2006 (not modified)
ISO 9000:2015	NOTE	Harmonized as EN ISO 9000:2015 (not modified)
ISO 9001:2015	NOTE	Harmonized as EN ISO 9001:2015 (not modified)
ISO 14001:2015	NOTE	Harmonized as EN ISO 14001:2015 (not modified)
ISO 14006:2011	NOTE	Harmonized as EN ISO 14006:2011 (not modified)
ISO 14040:2006	NOTE	Harmonized as EN ISO 14040:2006 (not modified)



IEC 62430

Edition 2.0 2019-10

INTERNATIONAL STANDARD

NORME INTERNATIONALE

HORIZONTAL STANDARD

NORME HORIZONTALE

Environmentally conscious design – Principles, requirements and guidance

Écoconception (ECD) – Principes, exigences et recommandations

[SIST EN IEC 62430:2021](https://standards.iteh.ai/catalog/standards/sist/da3912e3-ed57-4dbb-b8c0-bb1035c71c/sist-en-iec-62430-2021)

<https://standards.iteh.ai/catalog/standards/sist/da3912e3-ed57-4dbb-b8c0-bb1035c71c/sist-en-iec-62430-2021>

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 13.020.01

ISBN 978-2-8322-7456-9

**Warning! Make sure that you obtained this publication from an authorized distributor.
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

CONTENTS

FOREWORD	4
INTRODUCTION	6
1 Scope	7
2 Normative references	7
3 Terms and definitions	7
3.1 Terms related to design and development.....	7
3.2 Terms related to product life cycle	8
3.3 Terms relating to those who control or influence ECD requirements	9
3.4 Terms related to the environment.....	9
4 Principles of environmentally conscious design (ECD).....	10
4.1 General.....	10
4.2 Life cycle thinking	10
4.3 ECD as a policy of the organization	11
5 Requirements of ECD	11
5.1 General.....	11
5.1.1 Integrating ECD into the management system of the organization.....	11
5.1.2 Determining the scope of ECD	11
5.1.3 Elements of ECD	11
5.1.4 Documented information	12
5.2 Analysis of stakeholder environmental requirements	12
5.3 Identification and evaluation of environmental aspects.....	12
5.4 Incorporation of ECD into design and development	13
5.5 ECD review	13
5.5.1 Process review	13
5.5.2 Design review	14
5.5.3 Documented information of reviews	14
5.6 Information exchange.....	14
6 Guidance on implementing ECD	14
6.1 General.....	14
6.1.1 Overview	14
6.1.2 Integrating ECD into the management system of the organization.....	14
6.1.3 Determining the scope of ECD.....	15
6.1.4 Elements of ECD	15
6.1.5 Documented information	15
6.2 Analysis of stakeholder requirements.....	15
6.3 Identification and evaluation of environmental aspects.....	16
6.4 Incorporation of ECD into design and development	17
6.5 Review.....	17
6.5.1 Process review	17
6.5.2 Design review	17
6.5.3 Documented information of reviews	18
6.6 Information exchange.....	18
Annex A (informative) Examples of how to apply ECD.....	19
A.1 Environmental aspects and impacts	19
A.1.1 Application of ECD to goods and services.....	19

A.1.2	Inputs and outputs	20
A.1.3	Value proposition creation	21
A.1.4	Design and development	21
A.1.5	Manufacture of goods and preparation of enablers/capabilities to deliver services	21
A.1.6	Delivery/installation of goods and launch/delivery of services	22
A.1.7	Use stage of goods and provisioning of services.....	23
A.1.8	Maintenance, repair, upgrade, reuse and remanufacture	23
A.1.9	End of life treatment and final disposal	24
A.1.10	Environmental impacts.....	24
A.2	Examples of ECD strategies	24
A.3	Information exchange.....	26
Annex B (informative)	ECD methods and tools selection	28
B.1	Overview.....	28
B.2	Examples of methods and tools	28
B.2.1	General	28
B.2.2	ECD benchmarking	28
B.2.3	ECD checklists and guidelines.....	29
B.2.4	Environmental quality function deployment	29
B.2.5	LCT based assessment	29
B.2.6	Design and development methods and tools	29
Bibliography	30
Figure A.1	– Inputs and outputs and indicative examples of life cycle stages for goods and services	20
Figure A.2	– Conceptual diagram showing information exchange and collaboration across the value chain	27
Table A.1	– Examples of product-related environmental improvement strategies.....	25

ITeH STANDARD PREVIEW
(standards.iteh.ai)

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ENVIRONMENTALLY CONSCIOUS DESIGN –
PRINCIPLES, REQUIREMENTS AND GUIDANCE**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62430 has been prepared by IEC Technical Committee 111: Environmental standardization for electrical and electronic products and systems, and ISO Technical Committee 207: Environmental management.

It is published as a double logo standard.

This second edition cancels and replaces the first edition published in 2009. This edition constitutes a technical revision.

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

- a) Scope is extended from electrotechnical product and systems to all products including services.
- b) As a consequence of the scope expansion, non-electrotechnical products, services in particular, are taken into account to modify requirements.
- c) Clause 6 is added as a guidance.

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

FDIS	Report on voting
111/536/FDIS	111/553/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

It has the status of a horizontal standard in accordance with IEC Guide 108.

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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

iTeh STANDARD PREVIEW **(standards.iteh.ai)**

[SIST EN IEC 62430:2021](#)

<https://standards.iteh.ai/catalog/standards/sist/da3912e3-ed57-4dbb-b8c0-bb1035c71c/sist-en-iec-62430-2021>

INTRODUCTION

The main purpose of this document is to set requirements and give guidance on how an organization can integrate environmentally conscious design (ECD) into their design and development. It is not a product standard and so does not describe requirements that apply to individual products, or a series of products.

This document uses the term ECD but other terminology used worldwide with the same meaning includes ecodesign, design for environment (DFE), green design and environmentally sustainable design.

This document covers physical goods, services, and a combination of the two, all of which are referred to as 'products'.

ECD is not a separate activity; it is rather an integral part of an organization's existing design and development. While this is not a management system standard, its requirements regarding ECD can be incorporated into an organization's existing management system, such as created to support conformance with ISO 14001 and ISO 9001.

NOTE ISO 14001 links management of an organization's processes with environmental impacts, but it does not specify requirements for the management processes associated with design and development. Therefore, this ECD standard can be an addition for organizations which have ISO 14001 in place, as ISO 14001 does not specify how to incorporate ECD into products. ISO 14006 provides guidance on how to incorporate ECD into an environmental management system, however, it does not specify how to apply ECD.

Every product has environmental impacts, and these can occur during all stages of its life cycle. These impacts can range from slight to significant; they may be short-term or long-term; and they may occur at the local, national, regional or global level (or a combination thereof).

In order to minimize these impacts, it is essential to implement ECD within design and development. ECD is a systematic approach to achieve reduction of these adverse impacts of a product throughout its entire life cycle.

Multiple benefits can be achieved for the organization, its customers, and other stakeholders by applying ECD, such as an overall environmental improvement, a cost reduction, and better marketability.

This document is intended for those, directly and indirectly, involved in the implementation of ECD into the design and development.

This document does not preclude sectors from generating their own ECD specific standards or guidance. However, where such documents are produced, the authors are encouraged to use this document as a reference to ensure consistency across areas of various products and supply chains.

ENVIRONMENTALLY CONSCIOUS DESIGN – PRINCIPLES, REQUIREMENTS AND GUIDANCE

1 Scope

This document describes principles, specifies requirements and provides guidance for organizations intending to integrate environmental aspects into the design and development in order to minimize the adverse environmental impacts of their products.

This document applies to processes on how ECD (environmentally conscious design) are integrated into the design and development. This document applies to any organization, regardless of its size, type or sector.

This document does not provide requirements for assessing the conformity of individual products.

This horizontal standard is primarily intended for use by technical committees in the preparation of standards in accordance with the principles laid down in IEC Guide 108.

One of the responsibilities of a technical committee is, wherever applicable, to make use of horizontal standards in the preparation of its publications. The contents of this horizontal standard will not apply unless specifically referred to or included in the relevant publications.

2 Normative references

[SIST EN IEC 62430:2021](https://standards.iteh.ai/catalog/standards/sist/da3912e3-ed57-4dbb-b8c0-b8ff935f31/sist-en-62430-2021)

[https://standards.iteh.ai/catalog/standards/sist/da3912e3-ed57-4dbb-b8c0-](https://standards.iteh.ai/catalog/standards/sist/da3912e3-ed57-4dbb-b8c0-b8ff935f31/sist-en-62430-2021)

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 terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <http://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1 Terms related to design and development

3.1.1 environmentally conscious design ECD

systematic approach which considers environmental aspects in the design and development with the aim to reduce adverse environmental impacts throughout the life cycle of a product

Note 1 to entry: Other terminology used worldwide with the same meaning includes ecodesign, design for environment (DFE), green design and environmentally sustainable design.

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

3.1.2 product

any goods or service

Note 1 to entry: This includes interconnected, interrelated goods or services.

[SOURCE: ISO 14050:2009, 6.2, modified – Note 1 and 2 deleted and new Note 1 added.]

3.1.3

product group

group of technologically or functionally similar products where the environmental aspects can reasonably be expected to be similar

3.1.4

design and development

process that transforms requirements into a product

Note 1 to entry: Design and development usually follow a series of steps e.g. starting with an initial idea, transforming the idea into a formal specification, through to the creation of a product, its possible redesign and consideration of end of life.

Note 2 to entry: Design and development can include taking a product idea from planning to product provision and review of the product. It can include considerations on business strategies, marketing, research methods and design aspects that are used. It includes improvements or modifications of existing products.

3.1.5

process

set of interrelated or interacting activities which transforms inputs into outputs

[SOURCE: ISO 14001:2015, 3.3.5, modified – Note 1 deleted.]

3.1.6

requirement

need or expectation that is stated, generally implied or obligatory

SIST EN IEC 62430:2021

[SOURCE: ISO/IEC Directives, Part 1, Consolidated ISO Supplement, Annex L, Appendix 2:2019, 3.3, modified – Notes have been deleted.]

3.2 Terms related to product life cycle

3.2.1

life cycle

consecutive and interlinked stages of a product

Note 1 to entry: Examples of interlinked stages for goods include value proposition creation, design and development, manufacture of goods, delivery/installation of goods, use of goods, maintenance, repair, upgrade, re-use, remanufacture, end of life treatment and final disposal.

Note 2 to entry: Examples of interlinked stages of service include value proposition creation, design and development, preparation of enablers/capabilities to deliver the service, launch/delivery of the service, and service provision.

Note 3 to entry: The term "entire life cycle" refers to all life cycle stages that a product goes through, e.g. from raw material acquisition or generation from natural resources to the final disposal.

3.2.2

life cycle stage

life cycle phase

element of a life cycle

3.2.3

life cycle thinking

LCT

life cycle perspective

LCP

consideration of all relevant environmental aspects of a product during its entire life cycle