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Sustainability in buildings and civil engineering works — A review of terminology

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National foreword

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TECHNICAL REPORT

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Sustainability in buildings and civil engineering works — A review of terminology

Développement durable dans les bâtiments et les ouvrages de génie civil — Une revue de la terminologie

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 59, *Buildings and civil engineering works*, Subcommittee SC 17, *Sustainability in buildings and civil engineering works*.

Introduction

Communication is important in the implementation and operation of the concept of sustainable development related to building and civil engineering. In the interest of common understanding and standardization, consistent word usage is encouraged to help eliminate the major barrier to effective technical communication.

This Technical Report is the result of the terminography and other terminology work that was undertaken within ISO/TC 59 to establish consistent terminology for concepts related to the subject field of sustainability in buildings and civil engineering works. Such standardization work was primarily undertaken by Subcommittee 17, *Sustainability in buildings and civil engineering works*, and more specifically, SC 17/Working Group 1, *General principles and terminology*.

NOTE 1 ISO 1087-1 defines the concepts of *terminology*, *terminology work*, and *terminography* as follows:

— terminology

set of designations belonging to one special language.

— terminology work

work concerned with the systematic collection, description, processing, and presentation of concepts and their designations

— terminography

part of terminology work concerned with the recording and presentation of terminological data.

NOTE 2 The work items undertaken on different subjects of standardization within ISO/TC 59/SC 17 and its working groups include both buildings and civil engineering works, collectively referred to using the designation *construction works*.

In 2005, in initiating their terminology work, SC 17 members participated in a joint ISO/TC 59 meeting with members of other ISO/TC 59 SCs to discuss the common concerns and issues related to the preparation and use of terminology within a number of ISO/TC 59 subcommittees. This included individuals also involved in the parallel standardization and terminology work going on within the European Committee for Standardization (CEN), under the technical committee CEN/TC 350, *Sustainability of Construction Works* (formerly CEN BT/WG 174, *Integrated Environmental Performance of Buildings*). In addition to the CEN/TC 350 representation, the ISO/TC 59 subcommittees represented at the joint meeting were SC 2, *Terminology and harmonization of languages,* SC 14, *Design life*, SC 15, *Performance description of houses* (formerly *Performance criteria for single family attached and detached dwellings*), and SC 17, *Sustainability in buildings and civil engineering works* (formerly *Sustainability in building construction*).

Standardization in terminology work had already been undertaken by several of these different committees on concept harmonization to clarify, by eliminating minor differences, the various terms and definitions for the concepts related to both service life planning of construction works and the contribution of construction works to sustainability. Concerns were raised about conflicts arising as a result of the significant number of standardization activities underway in the related subject fields of sustainability and service life planning. It was agreed that there were many challenges in implementing and/or adapting the language attributed to the common general concepts related to buildings and civil engineering works into these specialized subject fields, and to do so in a consistent and concise manner.

An ISO/TC 59 Ad hoc Group (AHG) on Terminology was subsequently established and directed to maintain close liaison on terminology work occurring across the participating committees and to work to help resolve different terminology requirements within the different subcommittees of ISO/TC 59 and CEN/TC 350. Also, it was acknowledged and agreed that the main terminology document on general concepts regarding buildings and civil engineering works, ISO 6707-1, which was developed by ISO/TC 59/SC 2, would be used as the primary reference vocabulary for any of the work on terminology undertaken within all the committees, including CEN/TC 350.

Individual representatives from the ISO/TC 59/Subcommittees SC 2, SC 14, SC 15, SC 17, and the CEN/TC 350 were identified as members of the AHG to provide input and act as liaison on behalf of the various committees. A database of terms and definitions was developed as an initial working document, which was based on information submitted from the four TC 59 SCs involved as well as from the CEN/TC 350. The working list of terms and definitions generally included both a mix of standardized ISO terms and definitions, as well as definitions that were contained in working drafts within the various committees. A number of the AHG experts were involved with more than one of the targeted committees, which proved to be extremely beneficial, as it provided continuity within the discussions from meeting to meeting and committee to committee.

In 2008, a final report from the AHG was presented to ISO/TC 59 that contained a list of recommendations typically targeting one or more of the specific committees and specific definitions for individual concepts.

NOTE 3 Additional information on the outcomes of the work of the ISO/TC 59 AHG on Terminology, including its final report and recommendations, is available from the ISO/TC 59 Secretariat.

Over the same time period (2005 to 2008), and subsequently between 2008 and the present, standardization work had (has) taken place within the various working groups of SC 17 (and CEN/TC 350). Within SC 17, this work resulted in the formal development and standardization of terms and definitions for concepts specific to a number of individual standards, including those related to general principles (ISO 15392), sustainability indicators for buildings (ISO 21929-1), environmental product declarations (ISO 21930), and assessment of the environmental performance of buildings (ISO 21931-1).

This Technical Report does not contain a complete list of terms of relevance to the thematic field, but compiles a complete set of the specific terms and definitions of concepts that have been applied and standardized in the documents developed to date under ISO/TC 59/SC 17 related to sustainability in buildings and other types of construction works.

This Technical Report presents a mix of terms and definitions, some of which are repeated from other ISO publications, while others are those that have been derived from ISO standards on environmental management and environmental life cycle assessment. Derivations have been performed carefully by the different committees in order to maintain the original intention, but to enable interpretation to the context of sustainability and sustainable development related to buildings and civil engineering works.

The compilation of terms and definitions included in Clause 3 of this Technical Report are for concepts that have been standardized and/or applied through publication of individual ISO standards within ISO/TC 59/SC 17. Other terms and definitions described in the informative Annexes include both those considered as still being a work in progress within SC 17 (Annex B), as well as a set of terms and definitions that have been established within CEN/TC 350 (Annex C). The gradual evolution of all of these concepts inevitably means that the “sustainability in buildings and civil engineering works” terminology will continue to develop and that therefore this document may be subject to regular revision and updating. As a resumé of terms and definitions in this domain, this Technical Report provides a resource for any future standardization in a general vocabulary. It is expected that the information contained within this Technical Report may be given further consideration within ISO/TC 59/SC 2, *Terminology and harmonization of languages* for possible inclusion in a part of the ISO 6707 series.

TECHNICAL REPORT **ISO/TR 21932:2013(E)**

Sustainability in buildings and civil engineering works — A review of terminology

1 Scope

This Technical Report provides a compilation of terms and definitions of concepts related to both the construction and use of a building or civil engineering works, and the effect of such construction works on sustainability and sustainable development, as applied in the documents of ISO/TC 59/SC 17, *Sustainability in buildings and civil engineering works*.

The terms and definitions of concepts listed in Clause 3 reflect standardized terminology relevant to construction works and the contribution of buildings and civil engineering works to sustainability and sustainable development.

The terms and definitions listed in Clause 3 include those that represent concepts that have been standardized and/or applied within SC 17, which includes a number of concepts that have been originally developed elsewhere within the ISO technical structure. A cross reference is included after each of the definitions to the specific SC 17 document in which the concept is defined, as well as to the International Standard(s) from where the definition originates, where applicable.

NOTE 1 Annex A contains information on a representative model of the methodology used in the development of some of the terminological data.

NOTE 2 Annex B contains a number of examples of term designations and possible wordings of related definitions that have been discussed during the ongoing terminology work within SC 17.

NOTE 3 Annex C contains a listing of terms and definitions for related concepts being applied by the CEN/TC 350 on Sustainability of Construction Works, many of which were specifically considered and elaborated within the work of the ISO/TC 59 Ad hoc Group on Terminology.

NOTE 4 Annex D reproduces information from the informative Annex B of ISO 15392, and provides a discussion around the terminology used by different actors involved to designate various concepts related to products of the building and construction sector.

2 Vocabulary structure

The terms are generally presented alphabetically except that, in some cases, they are arranged and numbered within generic relations to allow ready comparison of related concepts. Where a given term designates more than one concept, each concept has been treated in a separate entry.

As recommended in ISO 10241-1, in a definition, example, or note, reference to another listed entry (concept) is highlighted in italics and followed by the entry number in brackets, when it is first mentioned. In the case of those terms and definitions for concepts that originate from other referenced sources and are specifically listed within Clause 3, the entry numbers cross-referenced coincide with the term entries in this document and not the source document. In the case of cross-referencing those terms and definitions for concepts that originate from other referenced sources, but are not specifically listed within Clause 3, both the source document and related entry numbers within that source are cross-referenced.

NOTE 1 With the mixed structure used in Clause 3, the term-entry numbering does not exactly follow the format recommended in the ISO/IEC Directives, Part 2 or ISO 10241-1.

NOTE 2 Cross-references within the terminological data in Clause 3 to terms and definitions contained in other referenced ISO documents is in addition to any references shown in the original SC 17 documents and follows the format recommended in Clause 6.4.7.(b) of ISO 10241-1 regarding references to terms and symbols in definitions.

Where a different preferred national equivalent designation exists and has been identified, this has been given in bold face following the preferred term and annotated by the country code (i.e. US). A term following the preferred term not given in boldface type is a non-preferred synonym.

For general terms and definitions related to buildings and civil engineering works, reference should also be made to ISO 6707-1.

For general terms and definitions related to design life and service life planning for buildings and civil engineering works, reference should also be made to the ISO 15686 series.

For general terms and definitions related to environmental management systems and life cycle assessment, reference should also be made to ISO 14050.

NOTE 3 Some of the terms and definitions are derived or taken from non-ISO publications, such as the WBCSD (World Business Council for Sustainable Development) Brundtland Report.

NOTE 4 In Clause 3, for a number of the terms and definitions shown as being contained in ISO 21929-1, the terminological data are slightly modified from that shown in the published version. This has been done to correct unintended changes/errors in the text that had occurred in the published document. This specifically affects the data for the concepts of *accessibility* (see 3.2), *areas of protection* (see 3.6), *built environment* (see 3.8), *functional performance requirement* (see 3.16), *impact category* (see 3.22), *indicator* (see 3.23.1.2), *indoor air quality* (see 3.24), *life cycle* (see 3.27.1.2), *maintainability* (see 3.28), *performance* (see 3.29.1), and *serviceability* (see 3.37.1).

NOTE 5 An alphabetical index is provided showing term entries listed in Clause 3, as well as those in Annexes B and C, in both the normal and inverted form.

3 Terms relating to sustainability in buildings and civil engineering works

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

3.1
access to services
availability and accessibility of services outside the *building* (3.7)

Note 1 to entry: Services can include public transportation, parking, entertainment, health-care, water and energy supply, etc.

[SOURCE: ISO 15392:2008, 3.1; ISO 21929-1:2011, 3.1]

3.2
accessibility
ability of a *space* (ISO 6707-1:2004, 4.1.1) to be entered with ease

Note 1 to entry: Requirements for accessibility depend on the *users'* (ISO 6707-1:2004, 8.1) needs, as well as on activities during the *life cycle* (3.27.1.1) (3.27.1.2) of the *building* (3.7), e.g. *construction work* (3.11), *maintenance* (ISO 6707-1:2004, 7.1.40), and deconstruction.

Note 2 to entry: "Barrier-free use of buildings" would relate to requirements for accessibility related to the needs of users with reduced mobility.

Note 3 to entry: Adapted from ISO 6707-1:2004, 9.3.80, modified — Notes 1 and 2 to entry related to requirements for accessibility have been added.

[SOURCE: ISO 15392:2008, 3.2; ISO 21929-1:2011, 3.2]

3.3.1
acoustic comfort
reaction of occupants to the indoor acoustical environment, described in terms of sound pressure level and audibility

[SOURCE: ISO 16813:2006, 3.1; ISO 21929-1:2011, 3.3]

3.3.2
thermal comfort
condition of mind derived from satisfaction with the thermal environment

Note 1 to entry: Thermal comfort is the combined thermal effect of environmental parameters including air temperature, vapour pressure, air velocity, mean radiant temperature (fixed factors), and clothing and activity level of occupants (variable factors).

[SOURCE: ISO 16813:2006, 3.28; ISO 21929-1:2011, 3.35]

3.3.3
visual comfort
occupant satisfaction with the indoor visual environment, described in terms of illumination level, glare, visibility, reflection, and psychological and physiological content with natural and artificial illumination

[SOURCE: ISO 16813:2006, 3.29; ISO 21929-1:2011, 3.36]

3.4
adaptability
ability to be changed or modified to make suitable for a particular use

[SOURCE: ISO 6707-1:2004, 9.3.79; ISO 21929-1:2011, 3.3]

3.5
areas of concern
areas of protection
protection area, sing
aspect(s) of the economy, the environment, or the society that can be impacted by *construction works* (3.12), goods, or services

EXAMPLE Asset value, cultural heritage, resources, human health and comfort, social infrastructure.

[SOURCE: ISO 15392:2008, 3.3]

3.6
areas of protection
protection area
issue of concern
aspect(s) of the economy, the environment, or the society that can be impacted by *construction works* (3.12), goods, or services

EXAMPLE Asset value, cultural heritage, resources, human health and comfort, social infrastructure.

[SOURCE: ISO 15392:2008, 3.3, modified — The preferred term specified to designate this concept has been changed to ‘areas of protection’ and the admitted term, ‘issue of concern’, is used in place of ‘areas of concern’; ISO 21929-1:2011, 3.5]

3.7
building
construction works (3.12) that has the provision of shelter for its occupants or contents as one of its main purposes; usually partially or totally enclosed and designed to stand permanently in one place

[SOURCE: ISO 6707-1:2004, 3.1.3; ISO 15392:2008, 3.4; ISO 21929-1:2011, 3.6]

3.8
built environment
collection of man-made or induced physical objects located in a particular area or region

Note 1 to entry: When treated as a whole, the built environment typically is taken to include *buildings* (3.7), external works (landscaped areas), *infrastructure* (3.10), and other *construction works* (3.12) within the area under consideration.

Note 2 to entry: Derived from the definition of “environment” in ISO 6707-1.

[SOURCE: ISO 15392:2008, 3.5; ISO 21929-1:2011, 3.7]

3.9
characterization factor
factor derived from a characterization model which is applied to convert an assigned *life cycle inventory analysis (LCI) result* (ISO 14040:2006, 3.24) to the common unit of the *category indicator* (ISO 14040:2006, 3.40)

Note 1 to entry: Adapted from ISO 14044.

[SOURCE: ISO 21930:2007, 3.3]

3.10
civil engineering works
infrastructure
civil engineering project US
construction works (3.12), comprising a *structure* (ISO 6707-1:2004, 3.1.4), such as a *dam* (ISO 6707-1:2004, 3.2.24), *bridge* (ISO 6707-1:2004, 3.3.19), *road* (ISO 6707-1:2004, 3.3.1), *railway* (ISO 6707-1:2004, 3.3.3), runway, utilities, *pipeline* (ISO 6707-1:2004, 3.2.32), or *sewerage system* (ISO 6707-1:2004, 5.4.40), or the result of operations such as dredging, *earthwork* (ISO 6707-1:2004, 7.1.6), geotechnical *processes* (3.31.1), but excluding a *building* (3.7) and its associated *site* (ISO 6707-1:2004, 3.1.6) works

Note 1 to entry: Associated site works are included in US civil engineering projects.

Note 2 to entry: Derived from the definition of *civil engineering works* in ISO 6707-1.

[SOURCE: ISO 15392:2008, 3.6]

3.11
construction work
construction US
activities of forming *construction works* (3.12)

[SOURCE: ISO 6707-1:2004, 7.1.1; ISO 15392:2008, 3.7]

3.12
construction works
construction US
everything that is constructed or results from construction operations

[SOURCE: ISO 6707-1:2004, 3.1.1; ISO 15392:2008, 3.8]

3.13.1
disposal
<status change> transfer of ownership of, or responsibility for, the object of consideration

[SOURCE: ISO 15686-10:2010, 3.6; ISO 21929-1:2011, 3.8]

3.13.2
disposal
<end of life> transformation of the state of a *building* (3.7) or *facility* (ISO 15686-10:2010, 3.8) that is no longer of use

Note 1 to entry: Transformation can include, either individually or in some combination, the decommissioning, deconstruction, recycling, and demolition of the object of consideration.

[SOURCE: ISO 15686-10:2010, 3.7; ISO 21929-1:2011, 3.9]

3.14.1
economic aspect
aspect of *construction works* (3.12), parts of works, *processes* (3.31.1) or services related to their *life cycle* (3.27.1.1) (3.27.1.2) that can cause a change to economic conditions

[SOURCE: ISO 15392:2008, 3.9]

3.14.2.1
environmental aspect
aspect of *construction works* (3.12), parts of works, *processes* (3.31.1) or services related to their *life cycle* (3.27.1.1) (3.27.1.2) (ISO 14040:2006, 3.1) that can cause a change to the environment

Note 1 to entry: Adapted from ISO 14001.

[SOURCE: ISO 15392:2008, 3.10]

3.14.2.2
environmental aspect
aspect of *buildings* (3.7), parts of buildings, *processes* (3.31.1) or services related to their *life cycle* (3.27.1.1) (3.27.1.2) (ISO 14040:2006, 3.1) that can cause a change to the environment

[SOURCE: ISO 21931-1:2010, 3.3]

3.14.3
social aspect
aspect of *construction works* (3.12), parts of works, *processes* (3.31.1) or services related to their *life cycle* (3.27.1.1) (3.27.1.2) that can cause a change to society or quality of life

[SOURCE: ISO 15392:2008, 3.19]

3.15.1
environmental declaration
claim which indicates the *environmental aspects* (3.14.2.1) (3.14.2.2) of any good(s) or service(s)

Note 1 to entry: An environmental declaration may take the form of a statement, symbol, or graphic on a *product* (3.32.1.1) (3.32.1.2) or package label, in product literature, in technical bulletins, in advertising or in publicity, amongst other things.

Note 2 to entry: Adapted from the definition of *environmental declaration* in ISO 14025.

[SOURCE: ISO 15392:2008, 3.11]

3.15.2
Type III environmental declaration
environmental product declaration
EPD
environmental declaration (3.15.1) providing quantified environmental data using predetermined parameters and, where relevant, additional environmental information

Note 1 to entry: The predetermined parameters are based on ISO 14040 and ISO 14044.

Note 2 to entry: The additional environmental information may be quantitative or qualitative.

[SOURCE: ISO 14025:2006, 3.2, modified — Two additional preferred terms are shown to designate this concept; ISO 21930:2007, 3.16]

3.16
functional performance requirement
type and *level of functionality* (3.18.2) that is required by *stakeholders* (ISO 15686-10:2010, 3.30) of a *facility* (ISO 15686-10:2010, 3.8), *building* (3.7), or other constructed *asset* (ISO 15686-10:2010, 3.1), or of an *assembly* (ISO 6707-1:2004, 5.5.5), *component* (ISO 6707-1:2006, 6.1.3), or *product* (ISO 6707-1:2006, 6.1.2) thereof, or of a movable asset, for a specific *function* (ISO 15686-10:2010, 3.10)

[SOURCE: ISO 15686-10:2010, 3.12; ISO 21929-1:2011, 3.12]

3.17.1
functional unit
quantified *performance* (3.29.1) of a *product system* (ISO 14040:2006, 3.27) for a *building product* (3.32.1.1) (3.32.3) for use as reference unit in an *EPD* (3.15.2) based on *life cycle assessment* (ISO 14040:2006, 3.2)

Note 1 to entry: Adapted from ISO 14040.

[SOURCE: ISO 21930:2007, 3.5]

3.17.2
declared unit
quantity of a *building product* (3.32.1.1) (3.32.3) for use as a reference unit in an *EPD* (3.15.2) based on *LCA* (ISO 14040:2006, 3.2), for the expression of environmental information needed in *information modules* (3.25)

EXAMPLE Mass (kilogram), volume (cubic metre).

Note 1 to entry: The declared unit is used where the *function* (ISO 15686-10:2010, 3.10) and the reference scenario for the whole *life cycle* (3.27.1.1) (3.27.1.2) (ISO 14040:2006, 3.1), on the *building* (3.7) level, cannot be stated.

[SOURCE: ISO 21930:2007, 3.4]

3.17.3
functional equivalent
quantified functional requirements and/or technical requirements for a *building* (3.7) for use as a reference basis for comparison

[SOURCE: ISO 21931-1:2010, 3.7]

3.18.1
functionality
suitability or usefulness for a specific purpose or activity

[SOURCE: ISO 15686-10:2010, 3.13; ISO 21931-1:2010, 3.13]

3.18.2
level of functionality
number indicating the relative *functionality* (3.18.1) required for a *user* (ISO 15686-10:2010, 3.34), group, or customer for one *topic* (ISO 15686-10:2010, 3.33) on a predetermined demand *scale* (ISO 15686-10:2010, 3.26) from the level of the least (functionality) to the level of the most (functionality)

EXAMPLE Scale of integers from 0 to 9.

Note 1 to entry: The level of functionality can be the consequence of several distinct *functions* (ISO 15686-10:2010, 3.10) required to act in combination.

[SOURCE: ISO 15686-10:2010, 3.15; ISO 21929-1:2011, 3.19]

3.19
gate
point at which the *building product* (3.32.1.1) (3.32.3) or *material* (ISO 6707-1:2004, 6.1.1) leaves the factory before it becomes an input into another manufacturing *process* (3.31.1) or before it goes to the distributor, a factory, or *building* (3.7)*site* (ISO 6707-1:2004, 3.1.6)

[SOURCE: ISO 21930:2007, 3.6; ISO 21931-1:2010, 3.8]

3.20
heat island effect
phenomenon of elevated temperatures in urban and suburban areas compared to their outlying rural surroundings

Note 1 to entry: The temperatures can be influenced by various aspects, including the presence of denuded landscaping, impermeable surfaces, massive *buildings* (3.7), heat-generating vehicles and machines, and pollutants.

[SOURCE: ISO 21929-1:2011, 3.14]

3.21.1
impact
any change that may be adverse or beneficial

[SOURCE: ISO 15392:2008, 3.13]

3.21.2
economic impact
impact (3.21.1) to the economy, wholly or partially resulting from *economic aspects* (3.14.1)

[SOURCE: ISO 15392:2008, 3.13.1]

3.21.3.1
environmental impact
impact (3.21.1) to the environment, wholly or partially resulting from *environmental aspects* (3.14.2.1) (3.14.2.2)

Note 1 to entry: Adapted from ISO 14001.

[SOURCE: ISO 15392:2008, 3.13.2]

3.21.3.2
environmental impact
change to the environment, whether adverse or beneficial, wholly or partially resulting from *environmental aspects* (3.14.2.1) (3.14.2.2)

Note 1 to entry: Adapted from ISO 15392:2008, definitions 3.13 and 3.13.2.

[SOURCE: ISO 21931-1:2010, 3.4]

3.21.4
social impact
impact (3.21.1) to society or quality of life, wholly or partially resulting from *social aspects* (3.14.3)

[SOURCE: ISO 15392:2008, 3.13.3]

3.22
impact category
class representing an economic, environmental, or social *issue(s) of concern* (3.6) (*areas of protection* [3.5]) to which analysis (assessment) results may be assigned

Note 1 to entry: Issues of concern can involve either *impacts* (3.21.1) or aspects related to the economy, the environment, or society.

Note 2 to entry: Adapted from ISO 14040:2006, 3.39.

[SOURCE: ISO 21929-1:2011, 3.15]

3.23.1.1
indicator
quantitative, qualitative, or descriptive measure

Note 1 to entry: Adapted from ISO 14050, 2002 edition.

[SOURCE: ISO 15392:2008, 3.14]

3.23.1.2
indicator
quantitative, qualitative, or descriptive measure representative of one or more *impact categories* (3.22)

Note 1 to entry: Periodic evaluation and monitoring using indicators can show direction of any *impact* (3.21.1).

Note 2 to entry: Derived from the definitions of 'impact category indicator' (ISO 14040:2006, 3.40) and 'indicator' (ISO/TR 14061:1998, 2.6.3).

[SOURCE: ISO 21929-1:2011, 3.16]

3.23.2
sustainability indicator
indicator (3.23.1.1) (3.23.1.2) related to *economic* (3.21.2), *environmental* (3.21.3.1) (3.21.3.2), or *social impacts* (3.21.4)

[SOURCE: ISO 21929-1:2011, 3.33]

3.23.3
economic indicator
sustainability indicator (3.23.2) related to an *economic impact* (3.21.2)

[SOURCE: ISO 21929-1:2011, 3.10]

3.23.4
environmental indicator
sustainability indicator (3.23.2) related to an *environmental impact* (3.21.3.1) (3.21.3.2)

[SOURCE: ISO 21929-1:2011, 3.11]

3.23.5
social indicator
sustainability indicator (3.23.2) related to a *social impact* (3.21.4)

[SOURCE: ISO 21929-1:2011, 3.31]

3.23.6
set of indicators
non-structured list of *indicators* (3.23.1.1) (3.23.1.2)

[SOURCE: ISO 21929-1:2011, 3.30]

3.23.7
system of indicators
structured list of *indicators* (3.23.1.1) (3.23.1.2)

[SOURCE: ISO 21929-1:2011, 3.34]

3.24
indoor air quality
quality (ISO 6707-1:2004, 9.1.12) of air inside a *building* (3.7), described in terms of odour and chemical and biological pollutants

Note 1 to entry: Indoor air quality is directly related to the ventilation rate, air distribution patterns, and pollution sources.

Note 2 to entry: Indoor air quality is important in ensuring human health, olfactory comfort, and perceived comfort.

[SOURCE: ISO 16813:2006, 3.21, modified — The definition was simplified to refer to a building in general, versus only non-industrial buildings, and the non-essential but relevant characteristics are now referenced in Notes 1 and 2 to entry; ISO 21929-1:2011, 3.17]

3.25
information module
compilation of data to be used as a basis for a *Type III environmental declaration* (3.15.2), covering a *unit process* (ISO 14040:2006, 3.34) or a combination of unit processes that are part of the *life cycle* (3.27.1.1) (3.27.1.2) (ISO 14040:2006, 3.1) of a *product* (3.32.1.1) (3.32.1.2)

[SOURCE: ISO 14025:2006, 3.13; ISO 21930:2007, 3.7]

3.26.1
interested party
person or group concerned with or affected by the *environmental performance* (3.29.2.1) (3.29.2.2) of a *building* (3.7)

[SOURCE: ISO 21931-1:2010, 3.9; ISO 21929-1:2011, 3.18]

3.26.2
third party
person or body that is recognized as being independent of the parties involved with the issues in question

Note 1 to entry: "Parties involved" are usually supplier ("first party") and purchaser ("second party").

[SOURCE: ISO 14024:1999, 3.7; ISO 21930:2007, 3.15]

3.26.3
stakeholder
individual or group that has an interest in any decision or activity of an organization

[SOURCE: ISO 26000:2010, 2.20; ISO 21929-1:2011, 3.32]

3.27.1.1
life cycle
consecutive and interlinked stages of the object of consideration

Note 1 to entry: Adapted from the definition of *life cycle* (3.1) contained in ISO 14040:2006.

Note 2 to entry: For consideration of *environmental impacts* (3.21.3.1) (3.21.3.2) and *environmental aspects* (3.14.2.1) (3.14.2.2), the life cycle comprises all stages, from raw *material* (ISO 6707-1:2004, 6.1.1) acquisition or generation of natural resources to final *disposal* (3.13.2).

Note 3 to entry: For consideration of *economic impacts* (3.21.2) and *economic aspects* (3.14.1), in terms of *costs* (ISO 6707-1:2004, 9.3.86), the life cycle comprises all stages from *construction* (ISO 6707-1:2004, 7.1.1) to decommissioning. A *period of analysis* (3.30) can be chosen to be different from the life cycle. See ISO 15686-5.

[SOURCE: ISO 15392:2008, 3.15]

3.27.1.2
life cycle
consecutive and interlinked stages of the object of consideration

Note 1 to entry: For consideration of *environmental impacts* (3.21.3.1) (3.21.3.2) and *environmental aspects* (3.14.2.1) (3.14.2.2), the life cycle comprises all stages, from raw *material* (ISO 6707-1:2004, 6.1.1) acquisition or generation of natural resources to final *disposal* (3.13.2).

Note 2 to entry: For consideration of *economic impacts* (3.21.2) and *economic aspects* (3.14.1), in terms of *costs* (ISO 6707-1:2004, 9.3.86), the life cycle comprises all stages from *construction* (ISO 6707-1:2004, 7.1.1) to decommissioning. A *period of analysis* (3.30) can be chosen to be different from the life cycle. See ISO 15686-5.

Note 3 to entry: Adapted from ISO 14040:2006, 3.1.

[SOURCE: ISO 15392:2008, 3.15; ISO 21929-1:2011, 3.21]

3.27.2
life-cycle cost
LCC
cost of an *asset* (ISO 15686-10:2010, 3.1) or its parts throughout its *life cycle* (3.27.1.1) (3.27.1.2), while fulfilling its *performance requirements* (ISO 6707-1:2004, 9.1.16)

[SOURCE: ISO 15686-1:2011, 3.11; ISO 21929-1:2011, 3.22]

3.27.3
life-cycle costing
methodology for systematic economic evaluation of *life-cycle costs* (3.27.2) over a *period of analysis* (3.30), as defined in the agreed scope

Note 1 to entry: Life-cycle costing can address a period of analysis that covers the entire *life cycle* (3.27.1.1) (3.27.1.2) or a selected stage(s) or periods of interest thereof.

[SOURCE: ISO 15686-5:2008, 3.1.8; ISO 21929-1:2011, 3.23]

3.27.4
whole-life cost
WLC
all significant and relevant initial and future *costs* (ISO 6707-1:2004, 9.3.86) and benefits of an *asset* (ISO 15686-10:2010, 3.1), throughout its *life cycle* (3.27.1.1) (3.27.1.2), while fulfilling the *performance requirements* (ISO 6707-1:2004, 9.1.16)

[SOURCE: ISO 15686-5:2008, 3.1.14; ISO 21929-1:2011, 3.38]

3.27.5
whole-life costing
methodology for systematic economic consideration of all *whole-life costs* (3.27.4) and benefits over a *period of analysis* (3.30), as defined in the agreed scope

Note 1 to entry: The projected *costs* (ISO 6707-1:2004, 9.3.86) or benefits may include *external costs* (ISO 15686-5:2008, 3.1.6) (including, for example, finance, business costs, income from *land* (ISO 6707-1:2004, 10.1) sale, *user* (ISO 6707-1:2004, 8.1) costs).

Note 2 to entry: Whole-life costing can address a period of analysis that covers the entire *life cycle* (3.27.1.1) (3.27.1.2) or a selected stage(s) or periods of interest thereof.

Note 3 to entry: This definition should be contrasted with that for *life-cycle costing* (3.27.3).

[SOURCE: ISO 15686-5:2008, 3.1.15; ISO 21929-1:2011, 3.39]

3.28
maintainability
ability of a *building* (3.7) to be retained in a state in which it can perform its required *functions* (ISO 15686-10:2010, 3.10) or to be restored to such a state when a *fault* (ISO 6707-1:2004, 9.3.7.8) occurs

[SOURCE: ISO 6707-1:2004, 9.3.89, modified — The definition has been simplified to refer to a building in general, versus specific components or construction; ISO 21929-1:2011, 3.24]

3.29.1
performance
ability to fulfil required functions under intended use conditions or behaviour when in use

Note 1 to entry: Derived from the definition of *performance* in ISO 6707-1.

Note 2 to entry: The required functions address both the *functionality* (3.18.1) requirements as well as the technical requirements.

[SOURCE: ISO 15392:2008, 3.16; ISO 21929-1:2011, 3.26]

3.29.2.1
environmental performance
performance (3.29.1) related to *environmental impacts* (3.21.3.1) (3.21.3.2) and *environmental aspects* (3.14.2.1) (3.14.2.2)

Note 1 to entry: The environmental performance is influenced by all *processes* (3.31.1) related to the *life cycle* (3.27.1.1) (3.27.1.2) of the object of consideration.

[SOURCE: ISO 15392:2008, 3.12]

3.29.2.2
environmental performance
performance (3.29.1) of a *building* (3.7) related to its *environmental impacts* (3.21.3.1) (3.21.3.2) and *environmental aspects* (3.14.2.1) (3.14.2.2)

Note 1 to entry: The environmental performance is influenced by all *processes* (3.31.1) related to the *life cycle* (3.27.1.1) (3.27.1.2) of the building.

Note 2 to entry: Environmental performance can be expressed either quantitatively or qualitatively with reference to *performance requirements* (ISO 6707-1:2004, 9.1.16), or, possibly relative to a scale of values or a benchmark.

[SOURCE: ISO 21931-1:2010, 3.5]

3.30
period of analysis
period of time over which *life-cycle costs* (3.27.2) or *whole-life costs* (3.27.4) are analysed

Note 1 to entry: The period of analysis is determined by the *client* (ISO 6707-1:2004, 8.3).

[SOURCE: ISO 15686-5:2008, 3.3.6; ISO 21929-1:2011, 3.27]

3.31.1
process
series of operations performed to achieve a desired result

[SOURCE: ISO 21931-1:2010, 3.11]

3.31.2
downstream process
process (3.31.1) that is carried out after the designated process in the stream of relevant processes

[SOURCE: ISO 21931-1:2010, 3.2]

3.31.3
upstream process
process (3.31.1) carried out after the designated process in the stream of relevant processes

[SOURCE: ISO 21931-1:2010, 3.15]

3.32.1.1
product
construction product
building product
<building and civil engineering> item manufactured or processed for incorporation in *construction works* (3.12)

Note 1 to entry: Derived from the definition of *product* (ISO 6707-1:2004, 6.1.2) in ISO 6707-1.

[SOURCE: ISO 15392:2008, 3.17.1]

3.32.1.2
product
<environmental management> any goods or service

[SOURCE: ISO 14024:2009, 3.2; ISO 15392:2008, 3.17.2]

3.32.2
ancillary product
complementary product
building product (3.32.1.1) (3.32.3) that enables another building product to fulfil its purpose in the intended application

EXAMPLE *Fasteners* (ISO 6707-1:2004, 5.5.72) used to attach structural *panels* (ISO 6707-1:2004, 5.2.49) to framing members.

[SOURCE: ISO 21930:2007, 3.1]

3.32.3
building product
goods or services used during the *life cycle* (3.27.1.1) (3.27.1.2) of a *building* (3.7) or other *construction works* (3.12)

Note 1 to entry: In ISO 21930, the term "product" used alone relates not only to goods or *product systems* (ISO 14040:2006, 3.28) but can also include service systems. In either case, the *declaration* (3.15.2) is presented in a manner that clearly indicates whether the declaration applies to goods, or to only a part of the goods or packaging, or to an element of service. This is discussed in ISO 14025:2006, 7.2.2.

Note 2 to entry: The manufacturing or processing of goods used as building products can take place at the factory or on the *construction* (ISO 6707-1:2004, 5.5.6) *site* (ISO 6707-1:2004, 3.1.6).

Note 3 to entry: The use of services can occur at any stage of the life cycle of the building or other construction works.

Note 4 to entry: It is possible to have an *EPD* (3.15.2) for a *material* (ISO 6707-1:2004, 6.1.1), a building product, a *component* (ISO 6707-1:2006, 6.1.3), an *assembly* (ISO 6707-1:2004, 5.5.5), and/or a *building element* (ISO 6707-1:2004, 5.5.4). The EPD of a component, assembly, or building element can incorporate the results of the EPD of all the assembled materials and building products. This is described in ISO 14025:2006, 5.4.

Note 5 to entry: Adapted from ISO 6707-1 and ISO 14021.

[SOURCE: ISO 21930:2007, 3.2]

3.34.1
product category
group of *building products* (3.32.1.1) (3.32.3) that can fulfil equivalent functions

Note 1 to entry: Adapted from ISO 14025

[SOURCE: ISO 21930:2007, 3.10]

3.34.2
product category rules
PCR
set of specific rules, requirements, and guidelines for developing *Type III environmental declarations* (3.15.2) for one or more *product categories* (3.34.1)

[SOURCE: ISO 14025:2006, 3.5; ISO 21930:2007, 3.11]

3.34.3
PCR review
process (3.31.1) whereby a *third party* (3.26.2) verifies the *product category rules* (3.34.1)

[SOURCE: ISO 14025:2006, 3.6; ISO 21930:2007, 3.9]

3.35.1
renewable resource
resource that is grown, naturally replenished, or cleansed on a human time scale

EXAMPLE Trees in forests, grasses in grasslands, and fertile soil.

Note 1 to entry: A renewable resource is capable of being exhausted but can last indefinitely with proper stewardship.

[SOURCE: ISO 21930:2007, 3.13; ISO 21929-1:2011, 3.28; ISO 21931-1:2010, 3.12]

3.35.2
non-renewable resource
resource that exists in a fixed amount that cannot be replenished on a human time scale

[SOURCE: ISO 21930:2007, 3.8; ISO 21929-1:2011, 3.25; ISO 21931-1:2010, 3.10]

3.36
secondary fuels
fuels or fuel *products* (3.32.1.2) that are derived from primary fuels

EXAMPLE Gasoline, gas field coal, and lubricants.

[SOURCE: ISO 21930:2007, 3.14]

3.37.1
serviceability
capability of a *facility* (ISO 15686-10:2010, 3.8), *building* (3.7), or other *constructed asset* (ISO 15686-1:2011, 3.2), or of an *assembly* (ISO 6707-1:2004, 5.5.5), *component* (ISO 6707-1:2006, 6.1.3), or *product* (ISO 6707-1:2004, 6.1.2) thereof, or of a movable *asset* (ISO 15686-10:2010, 3.1), to support the *function*(s) (ISO 15686-10:2010, 3.10) for which it is designed, used, or required to be used

Note 1 to entry: Adapted from ISO 6707-1:2004, definitions 9.1.11 (capability) and 9.3.85 (serviceability).

[SOURCE: ISO 15686-10:2010, 3.29; ISO 21929-1:2011, 3.29]

3.37.2
level of serviceability
number indicating the relative *serviceability* (3.37.1) [capability of a *facility* (ISO 15686-10:2010, 3.8)] for a *user* (ISO 15686-10:2010, 3.34), group, or customer for one *topic* (ISO 15686-10:2010, 3.33) on a predetermined supply *scale* (ISO 15686-10:2010, 3.27) from the level of the least (serviceability) to the level of the most (serviceability)

EXAMPLE Scale of integers from 0 to 9.

Note 1 to entry: The level of serviceability may be the consequence of several distinct *features* (ISO 15686-10:2010, 3.9) acting in combination.

[SOURCE: ISO 15686-10:2010, 3.17; ISO 21929-1:2011, 3.20]

3.38.1
service life
period of time after installation during which a *construction works* (3.12) or its parts meets or exceeds the *performance requirements* (ISO 6707-1:2004, 9.1.16)

Note 1 to entry: Derived from the definition of *service life* in ISO 6707-1.

[SOURCE: ISO 15392:2008, 3.18]

3.38.2
estimated service life
service life (3.38.1) that a *building* (3.7) or parts of a building would be expected to have in a set of specific *in-use conditions* (ISO 15686-1:2011, 3.10), determined from *reference service life data* (ISO 15686-1:2011, 3.23) after taking into account any differences from the *reference in-use conditions* (ISO 15686-1:2011, 3.21)

[SOURCE: ISO 15686-1:2011, 3.7; ISO 21931-1:2010, 3.6]

3.38.3
reference service life
service life (3.38.1) of a *building product* (3.32.1.1) (3.32.3) that is known or expected under a particular set, i.e. a reference set, of *in-use conditions* (ISO 15686-1:2011, 3.10) that may form the basis of estimating the service life under other in-use conditions

Note 1 to entry: The reference service life is applied in the *functional unit* (3.17.1)/*declared unit* (3.17.2).

Note 2 to entry: Adapted from ISO 15686-1

[SOURCE: ISO 21930:2007, 3.12]

3.38.4
design life
required *service life* (3.38.1)

[SOURCE: ISO 21931-1:2010, 3.1]

3.39
sustainability
state in which components of the ecosystem and their functions are maintained for the present and future generations

Note 1 to entry: Sustainability is the goal of *sustainable development* (3.40) and can result from the application of the concept of sustainable development.

Note 2 to entry: In building construction, it relates to how the attributes of the activities, *products* (3.32.1.1) (3.32.1.2), or services used in the *construction work* (3.11), or the use of the *construction works* (3.12), contribute to the maintenance of ecosystem components and functions for future generations.

Note 3 to entry: While the challenge of sustainability is global, the strategies for sustainability in building construction are local and differ in context and content from region to region.

Note 4 to entry: “Components of the ecosystem” includes plants and animals, as well as humans and their physical environment. For humans, this includes a balancing of key elements of human needs: the economic, environmental, social, and cultural conditions for societies’ existence.

[SOURCE: ISO 15392:2008, 3.20]

3.40
sustainable development
development that meets the needs of the present without compromising the ability of future generations to meet their own needs

Note 1 to entry: According to the Report of the World Commission on Environment and Development, sustainable development contains two key concepts: 1) the concept of "needs", in particular the essential needs of the world's poor, to which overriding priority should be given; and 2) the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs.

Note 2 to entry: Sustainable development concerns all resources providing a better quality of life, equally for present and future generations. Sustainable development also aims to eradicate poverty and gives priority to the needs of the poor.

[SOURCE: ISO 15392:2008, 3.21]

3.41
system boundary
interface between a *building* (3.7) and the environment or other *product systems* (ISO 14040:2006, 3.27)

Note 1 to entry: System boundary defines what is included and what is not included in an assessment.

Note 2 to entry: Adapted from ISO 14040:2006, definition 3.32.

[SOURCE: ISO 21931-1:2010, 3.13]

3.42
transparency
open, comprehensive, and understandable presentation of information

[SOURCE: ISO 14040:2006, 3.7; ISO 21931-1:2010, 3.14]

3.43.1
waste
substances or objects which the holder intends or is required to dispose of

Note 1 to entry: The definition is taken from the *Basel Convention on the Control of Trans boundary Movements of Hazardous Wastes and Their Disposal* (22 March 1989) but is not confined in ISO 21930 to *hazardous waste* (ISO 6707-1:2004, 10.18).

[SOURCE: ISO 14040:2006, 3.35; ISO 21930:2007, 3.17]

3.43.2
waste
substances or objects that the original holder has disposed of or intends to or is required to dispose of

Note 1 to entry: In ISO 21929-1, this concept is not confined to *hazardous waste* (ISO 6707-1:2004, 10.18).

[SOURCE: The *Basel Convention on the Control of Trans boundary Movements of Hazardous Wastes and Their Disposal* (22 March 1989), Article 2 Definitions, Item 1, modified — The wording has been simplified and the reference to national law as the basis for any requirements has been removed; ISO 21929-1:2011, 3.37]

Annex A
(informative)

Representative model of the methodology used in the development of the terminology

A.1 General

The application of the standards on sustainability in buildings and civil engineering works requires the use of a coherent and harmonized vocabulary that is easily understandable by all potential users of the standards.

Concepts are not independent of one another, and an analysis of the relationships between concepts within the field of sustainable development and the arrangement of them into concept systems is a prerequisite of a coherent vocabulary. Such an analysis was used, in part, in the work within ISO/TC 59/SC 17 on the development of the terminology specified in this Technical Report.

A.2 Content of a vocabulary entry and the substitution rule

The concept forms the unit of transfer between languages (including variants within one language, for example American English and British English). For each language, the most appropriate term for the universal transparency of the concept in that language, i.e. not a literal approach to translation, is chosen.

A definition is formed by describing only those characteristics that are essential to identify the concept. Information concerning the concept that is important, but not essential to its description, is put in one or more notes to the entry.

When a term is substituted by its definition, subject to minor syntax changes, there should be no change in the meaning of the text. Such a substitution provides a simple method for checking the accuracy of a definition. However, where the definition is complex in the sense that it contains a number of terms, substitution is best carried out taking one or, at most, two definitions at a time. Complete substitution of the totality of the terms will become difficult to achieve syntactically and unhelpful in conveying meaning.

A.3 Concept relationships and their graphical representation

A.3.1 General

In terminology work, the relationships between concepts are based on the hierarchical formation of the characteristics of a species so that the most economical description of a concept is formed by naming its species and describing the characteristics that distinguish it from its parent or sibling concepts.

There are three primary forms of concept relationships: generic, partitive, and associative.

A.3.2 Generic relation

Subordinate concepts within the hierarchy inherit all the characteristics of the superordinate concept and contain descriptions of these characteristics which distinguish them from the superordinate (parent) and coordinate (sibling) concepts, e.g. the relation of spring, summer, autumn, and winter to season.

Generic relations are depicted by a fan or tree diagram without arrows. In the subject area of sustainability in building construction, there is a generic relation of economic impact, environmental impact, and social impact to the generic concept of impact (see Figure A.1).

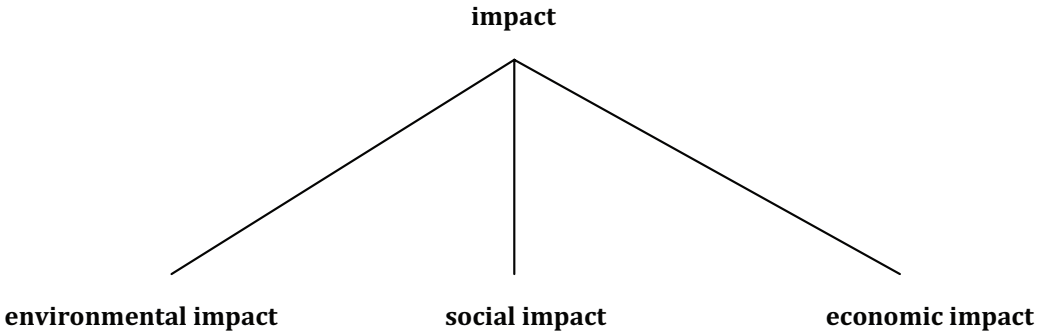

Figure A.1 — Graphical representation of a generic relation

A.3.3 Partitive relation

Subordinate concepts within the hierarchy form constituent parts of the superordinate concept, e.g. spring, summer, autumn, and winter may be defined as parts of the concept year. In comparison, it is inappropriate to define sunny weather (one possible characteristic of summer) as part of a year.

Partitive relations are depicted by a rake without arrows. There is a partitive relationship between construction works and the concepts of buildings, civil engineering works, structure, and external works (see Figure A.2). Singular parts are depicted by one line, multiple parts by double lines.

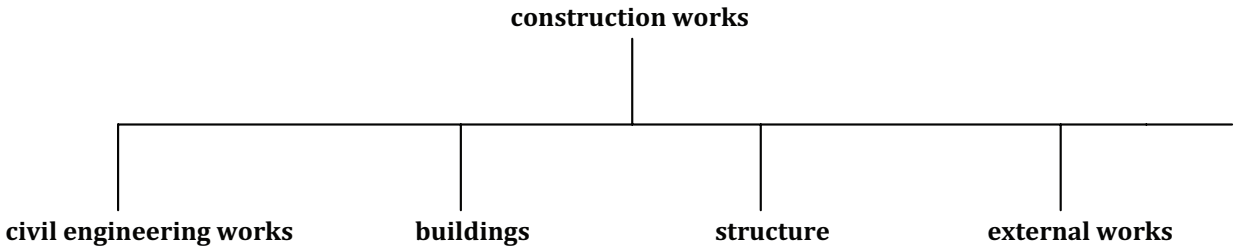

Figure A.2 — Graphical representation of a partitive relation

A.3.4 Associative relation

Associative relations cannot provide the economies in description that are present in generic and partitive relations but are helpful in identifying the nature of the relationship between one concept and another within a concept system, e.g. cause and effect, activity and location, activity and result, tool and function.

Associative relations are depicted by a line with arrowheads at each end. Generally speaking, there is an associative relationship between the concepts of material and product and component (see Figure A.3).

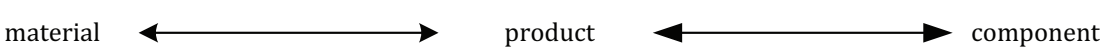

Figure A.3 — Graphical representation of an associative relation

NOTE Annex D provides a specific discussion on the terminology and language that is used by the different interested parties involved in the construction sector in referring to the common concepts of material, product, components, etc.

Annex B
(informative)

Additional information on the on-going development of terminology and definitions within ISO/TC 59/SC 17

B.1 General

This Annex provides additional information about a number of the terms and definitions for designating/describing various concepts related to sustainability in building construction and environmental performance that were discussed within the terminology work of the SC 17 working group and ISO/TC 59 Ad hoc Group dealing with terminology. As it relates to the work of SC 17, these terminological entries are considered as on-going work (in progress) as they have not been subject to complete formal review or standardization work and are provided here solely for information purposes only. In some cases, details are provided on the discussions that had occurred during the terminology work on specific concepts, both within SC 17 as well as the TC 59 AHG on terminology. In some cases, the information is based on a recommendation originating within the ISO/TC 59 AHG on terminology.

B.2 Terms and definitions of on-going ISO/TC 59/SC17 terminology work items

B.2.1
aspect
particular element or particular quality of the whole

[In the discussions regarding the essential characteristics of the concepts of economic, environmental, and social aspects, consideration was given to the need for establishing a particular definition for the concept of an 'aspect'. At an early stage of the standardization work within SC 17, they had established the specific definition shown above. Subsequently, it was recommended that the definition not be included, in order to leave the concepts of environmental, social, and economic aspects broad enough so that 'aspect' can include characteristics, features, etc.]

B.2.2
building environment
surroundings in which a *building* is located, including air, water, *land*, resources, flora, fauna, human beings, and their interrelation

Note 1 to entry: Surroundings in this context extend from within a building to the outdoors.

Note 2 to entry: Derived from the definition of *environment* in ISO 14001, which reads "surroundings in which an organization operates including air, water, land, natural resources, flora, fauna, humans, and their interrelation." Surroundings in this context extend from within an organization to the global system.

[This concept of 'building environment' can be compared with the defined concept of 'built environment' (see Clause 3, term entry 3.8).]

B.2.3
building performance
ability of a *building* to fulfil its required *functions* under the intended use conditions

Note 1 to entry: The required functions address both the *functionality* requirements as well as the technical requirements.

Note 2 to entry: Fire safety, structural safety, efficiency, *accessibility*, security, *durability*, reliability, *serviceability*, functionality, *adaptability*, *maintainability*, and deconstructability are attributes of building performance.

B.2.4
comfort
physical state of well-being given by the interior *building environment* from the point of view of *users*

Note 1 to entry: Comfort in a *building* may result from air quality, thermal conditions, lighting, and noise within the indoor and outdoor environment as well as the amenities, security, safety, *accessibility*, viability, and cultural and ecological diversity of the building.

[This concept of 'comfort' is related to the defined concepts of 'acoustic comfort', 'thermal comfort', and 'visual comfort' (see Clause 3, term entries 3.3.1, 3.3.2, and 3.3.3).]

B.2.5
consequential economic indicator
expression, either quantitative or qualitative, of *economic impacts* in terms of *building performance* or location

B.2.6
consequential environmental indicator
expression, either quantitative or qualitative, of *environmental impacts* in terms of *building performance* or location

B.2.7
eco-efficiency
optimal use of economic and environmental resources while satisfying human needs

Note 1 to entry: According to the WBCSD, eco-efficiency is achieved by the delivery of competitively priced goods and services that satisfy human needs and bring quality of life, while progressively reducing ecological impacts and resource intensity throughout the *life cycle* to a level at least in line with the earth's estimated carrying capacity; in short, creating more value with the least *impact*.

Note 2 to entry: Eco-efficiency is typically achieved by following seven basic guidelines:

— reduce the *material* intensity of good and services;

— reduce the energy intensity of goods and services;

— reduce dispersion of toxic substances;

— enhance recyclability of *materials*;

— maximize sustainable use of *renewable resources*;

— extend durability of *products*;

— increase the service intensity of products.

Note 3 to entry: Eco-efficiency is a term created for business accounting. It is generally associated with production activities and addresses *economic* and *environmental aspects*.

B.2.8
environmental benefit
favourable environmental impact

B.2.9
environmental benefit
favourable factor or advantage impacting the environment

B.2.10
environmental performance
expression relating the magnitude of an *environmental impact*(s) of the object of consideration relative to specified requirements, objectives, and/or targets

B.2.11
life cycle
consecutive and interlinked stages of the object of consideration

Note 1 to entry: Adapted from the definition of *life cycle* contained in ISO 14040:2006.

Note 2 to entry: For consideration of *environmental impacts* and *environmental aspects*, the life cycle comprises all stages, from raw *material* acquisition or generation of natural resources to final *disposal*.

Note 3 to entry: For consideration of *economic impacts* and *economic aspects*, in terms of costs, the life cycle comprises all stages from the strategic planning (inception) of the construction project to end-of-life. A *period of analysis* can be chosen to be different from the life cycle (see ISO 15686-5).

B.2.12
material
substance that can be used to form *products* for *construction works*

EXAMPLE Cement, metal, plastic, sand and wood.

Note 1 to entry: Adapted from ISO 6707-1.

[Sometimes a material is referred to as a product and vice versa. See Annex D for a discussion on the terminology and language that is used by the different interested parties involved in the construction sector in regards to their different manner of referring to the common concepts of material, product, component, etc.]

B.2.13
non-renewable resource
resource that exists in a fixed amount that cannot be replenished on a human time scale

EXAMPLE Iron ore, coal, and oil.

Note 1 to entry: Non-renewable resources exist in various places in the earth's crust and have the potential for renewal only by the geological, physical, and chemical processes taking place over hundreds of millions of years.

Note 2 to entry: A non-renewable resource can be scarce or plentiful.

B.2.14
performance
expression relating the magnitude of a particular aspect of the object of consideration relative to specified requirements, objectives, and/or targets

B.2.15
primary energy indicator
indicator describing the *environmental impact* of the depletion of energy resources caused by energy and *material* inputs into a product system

Note 1 to entry: According to ISO/TR 14047, the primary energy can be quantified as energy content of the depletion energy sources.

B.2.16
renewable resource
resource that is grown, naturally replenished, or cleansed on a human time scale

Note 1 to entry: Sustainable use of a renewable resource implies that the rate of growth, replenishment, or cleansing takes place at a rate equal to or greater than the current rate of depletion of that resource.

Annex C
(informative)

European Committee for Standardization (CEN)/TC 350 on Sustainability of construction works and its general terminology

C.1 General

ISO/TC 59/SC 17, as well as the ISO/TC 59 Ad hoc Group (AHG) on Terminology, worked to maintain close liaison on the terminology work occurring across a select group of ISO/TC 59 SCs. This involved work to resolve different terminology requirements within both the various ISO/TC 59 subcommittees and also the CEN/TC 350 as it related to concepts applied to sustainability in building construction and other construction works.

In the work of the AHG on Terminology between 2005 and 2008, draft terms and definitions being discussed within CEN/TC 350 were considered in the development of the international concepts. As the work within ISO/TC 59/SC 17 progressed, which resulted in the publication of a number of International Standards, parallel activity was occurring within the CEN/TC 350 that resulted in the publication of European (EN) Standards.

Clause C.2 presents a list of CEN/TC 350 general terms and definitions arising from the standardization by CEN/TC 350 in their terminology work, which includes many of the concepts that were considered by ISO/TC 59/SC 17 and the ISO/TC 59 AHG on Terminology.

In a definition, example, or note, reference to another listed term entry (concept) is highlighted in italics, when it is first mentioned. A cross reference is included after each of the definitions to the specific CEN/TC 350 document in which the concept is defined, as well as to the International Standard(s) or CEN standard from where the definition originates. It is important to note that the items listed herein are based on the information included in the CEN standards published at the time of finalizing this Technical Report and includes terminological data from the following CEN documents:

EN 15643-1:2010, *Sustainability of construction works — Sustainability assessment of buildings — Part 1: General framework*

EN 15643-2:2011, *Sustainability of construction works — Assessment of buildings — Part 2: Framework for the assessment of environmental performance*

FprEN 15643-3:(May)2011, *Sustainability of construction works — Assessment of buildings — Part 3: Framework for the assessment of social performance*

FprEN 15643-4:(May)2011, *Sustainability of construction works — Assessment of buildings — Part 4: Framework for the assessment of economic performance*

EN 15804:2012, *Sustainability of construction works — Environmental products declarations — Core rules for the product category of construction products*

CEN/TR 15941:2010, *Sustainability of construction works — Environmental products declarations — Methodology for selection and use of generic data*

FprEN 15978:(Nov)2011, *Sustainability of construction works — Assessment of environmental performance of buildings — Calculation method*

FprEN 16309:(Aug)2011, *Sustainability of construction works — Assessment of social performance of buildings — Methods*

NOTE 1 In certain instances, the terminological data from the various CEN standards involve similar concepts but with variations within the wording of their definitions, which has been captured either in the definition wording or, where variations are significant, with multiple entries. Consequently, a mixed structure is used in Clause C.2 and occasionally includes multiple entries of the same preferred term. This results in the term-entry numbering not exactly following the format recommended in the ISO/IEC Directives, Part 2 or ISO 10241-1.

NOTE 2 In Clause C.2, for a number of the term entries, the terminological data related to the SOURCE standard has been modified from the SOURCE that is identified in the CEN standard, as follows:

— *brief* (C.2.6), *handover* (C.2.64), *sketch plan stage* (C.2.127): the CEN standards show the SOURCE as being ISO 6707-2:1993, while none of these concepts are listed in the 1993 edition. A definition for each of the concepts is included in the ISO/WD 6707-2: 2010;

— *built environment* (C.2.13): some of the CEN standards show the definition as being adapted from the definition of built environment in ISO 6707-1, while there is no such definition in ISO 6707-1. Instead, the definition is a modified version of the definition for built environment in ISO 15392;

— *economic performance* (C.2.38): the CEN standards show the SOURCE of the definition as being ISO 15392, while there is no such definition in ISO 15392;

— *environmental aspect* (C.2.41) (C.2.42): the CEN standards show the SOURCE of the definition as being ISO/DIS 21931-1, yet the Note 2 to entry shows the definition as actually aligned with the definition in ISO 15392;

— *functional requirement* (C.2.55) (C.2.56) (C.2.57) (C.2.58): the CEN standards show the SOURCE of the definition as ISO/WD 15686-10, while this concept is not listed in ISO/WD 15686-10. Instead, the term and definition are adapted from the terminological data for the concept of *functional performance requirement* in ISO 15686-10:2010;

— *indicator* (C.2.65) (C.2.66): the CEN standards show the SOURCE as being ISO 14044, while this concept is not listed in ISO 14044. Instead, the term and definition are adapted from the terminological data for the concept of impact category indicator in ISO 14044;

— *monetary value* (C.2.82): the CEN standards show the SOURCE of the definition as being FprEN 15643-4, while this concept if not listed in FprEN 15643-4. Instead the term and definition are adapted from the terminological data for the concept of financial value in FprEN 15643-4;

— *repair* (C.2.116): a CEN standard shows the SOURCE of this definition as being EN 15643-1, while there is no such definition in EN 15643-1.

— *social performance* (C.2.132): the CEN standards show the SOURCE of this definition as being ISO 15392, while there is no such definition in ISO 15392;

— *transparency* (C.2.146): the CEN standards show three SOURCEs of this definition, including one being ISO 21930, while there is no such definition in ISO 21930, and only the original source needs to be listed.

C.2 Terms and definitions of on-going CEN/TC 350 terminology work items

C.2.1
additional technical information
information that forms part of the EPD by providing a basis for the development of *scenarios*

[SOURCE: EN 15804:2012, 3.1]

C.2.2
ancillary material
input material or *product* that is used by the *unit process* producing the product, but which does not constitute part of the product

[SOURCE: ISO 14040:2006, 3.16, modified — Reference added to both input material and product that is used by the unit process; EN 15804:2012, 3.2]

C.2.3
assembled system
part of works
component or a set of components incorporated in the *construction works*

Note 1 to entry: Adapted from the definitions in the Construction Products Directive Guidance Paper C and from the definition of *construction* in ISO 6707-1.

[SOURCE: EN 15643-1:2010, 3.1; EN 15643-2:2010, 3.1; FprEN 15643-3:2010, 3.1; FprEN 15643-4:2010, 3.1; prEN 16309:2011, 3.1]

C.2.4
average data
data combined from different manufacturers or production sites for the same *declared unit*

Note 1 to entry: Average can relate to a number of issues such as location or time.

[CEN/TR 15941:2010, 3.1]

C.2.5
average data
data representative of a *product*, product group, or *construction service*, provided by more than one supplier

Note 1 to entry: The product group or construction service can contain similar products or construction services.

[SOURCE: EN 15804:2012, 3.3]

C.2.6
brief
written document that states the *client's* requirements for a construction project

[SOURCE: ISO/WD 6707-2:2010, 3.1; EN 15643-1:2010, 3.2; EN 15643-2:2010, 3.2; FprEN 15643-3:2010, 3.2; FprEN 15643-4:2010, 3.2]

C.2.7
building
construction works that has (have) the provision of shelter for its occupants or contents as one of its main purposes and is (are) usually enclosed and designed to stand permanently in one place

[SOURCE: ISO 6707-1:2004, 3.1.3; EN 15643-1:2010, 3.3; EN 15643-2:2010, 3.3; FprEN 15643-3:2010, 3.3; FprEN 15643-4:2010, 3.3; FprEN 15978:2011, 3.1]

C.2.8
building fabric
(all) *construction products* that are fixed to the *building* in a permanent manner, so that the dismantling of the *product* changes the *performance* of the building and the dismantling or replacement of the product constitutes construction operations

[SOURCE: EN 15643-1:2010, 3.4; EN 15643-2:2010, 3.4; FprEN 15643-3:2010, 3.4; FprEN 15643-4:2010, 3.4; FprEN 15978:2011, 3.2; prEN 16309:2011, 3.2]

C.2.9
building-integrated technical system
installed technical equipment to support operation of a *building*

Note 1 to entry: This includes *technical building system* and other systems for sanitation, security, fire safety, internal transport and building automation, and control and IT communications.

[SOURCE: EN 15643-1:2010, 3.5; EN 15643-2:2010, 3.5; FprEN 15643-3:2010, 3.5; prEN 16309:2011, 3.3]

C.2.10
building-integrated technical system
installed technical equipment to support operation of a *building*

Note 1 to entry: This includes the *technical building system* and other systems, e.g. for sanitation, security, fire safety, internal transport and building automation, control and IT communications, and climate control systems and installations.

[FprEN 15978:2011, 3.3]

C.2.11
building site
specified area of land where a *building* is located or is defined to be located and *construction work* of the building and associated *external works* are or will be undertaken

Note 1 to entry: Adapted from the definition of *site* in ISO 6707-1.

[SOURCE: EN 15643-1:2010, 3.6; EN 15643-2:2010, 3.6; FprEN 15978:2011, 3.4; prEN 16309:2011, 3.4]

C.2.12
building site
specified area of land where a *building* is located or is defined to be located and *construction work* of the building and associated *external works* are undertaken

Note 1 to entry: Adapted from the definition of *site* in ISO 6707-1.

[FprEN 15643-3:2010, 3.6; FprEN 15643-4:2010, 3.5]

C.2.13
built environment
collection of *buildings, external works* (landscaped areas), infrastructure, and other *construction works* within an area

[SOURCE: ISO 15392:2008, 3.5. modified — Revised text to explicitly reference different types of construction works originally shown in the Note 1 to entry; EN 15643-1:2010, 3.7; EN 15643-2:2010, 3.7]

C.2.14
built environment
collection of man-made or induced physical objects located in a particular area or region

Note 1 to entry: When treated as a whole, the built environment typically is taken to include *buildings, external works*, landscaped areas, infrastructure, and other *construction works* within the area under consideration.

Note 2 to entry: Adapted from the definition of *environment* in ISO 6707-1:2004.

[SOURCE: ISO 15392:2008, 3.5; FprEN 15643-3:2010, 3.7; FprEN 15643-4:2010, 3.6]

C.2.15
civil engineering works
construction works comprising a structure, such as a dam, bridge, road, railway, runway, utilities, pipeline, or sewerage system, or the result of operations such as dredging, earthwork, geotechnical processes, but excluding a *building* and its associated site works

[SOURCE: ISO/NP 21929-2:2010, 3.6; EN 15643-1:2010, 3.8; EN 15643-2:2010, 3.8]

C.2.16
client
person or organization that requires a *building* to be provided, altered, or extended and is responsible for initiating and approving the *brief*

[SOURCE: ISO 6707-1:2004, 8.3; EN 15643-1:2010, 3.9; EN 15643-2:2010, 3.9; FprEN 15643-3:2010, 3.8; FprEN 15643-4:2010, 3.7]

C.2.17
comparative assertion
environmental claim regarding the superiority or equivalence of one *product* versus a competing product that performs the same function

[SOURCE: ISO 14044:2006, 3.6; EN 15804:2012, 3.4]

C.2.18
component
construction product manufactured as a distinct unit to serve a specific function or functions

[SOURCE: ISO 6707-1:2004, 6.1.3; EN 15643-1:2010, 3.10; EN 15643-2:2010, 3.10; FprEN 15643-3:2010, 3.9; FprEN 15643-4:2010, 3.8; FprEN 15978:2011, 3.5; prEN 16309:2011, 3.5]

C.2.19
construction element
part of a construction containing a defined combination of *products*

[SOURCE: EN 15804:2012, 3.9]

C.2.20
construction product
item manufactured or processed for incorporation in *construction works*

Note 1 to entry: Construction products are items supplied by a single responsible body.

Note 2 to entry: Adapted from the definition (of product) in ISO 6707-1 according to the recommendation of ISO/TC 59/AHG Terminology.

[SOURCE: EN 15643-1:2010, 3.11; EN 15643-2:2010, 3.11; FprEN 15643-3:2010, 3.10; FprEN 15643-4:2010, 3.9; FprEN 15978:2011, 3.6; EN 15804:2012, 3.5; prEN 16309:2011, 3.6]

C.2.21
construction service
activity that supports the construction process or subsequent *maintenance*

[SOURCE: EN 15804:2012, 3.6]

C.2.22
construction work
activities of forming a *construction works*

[SOURCE: ISO 6707-1:2004, 7.1.1; EN 15643-1:2010, 3.12; EN 15643-2:2010, 3.12; FprEN 15643-3:2010, 3.11; FprEN 15643-4:2010, 3.10; FprEN 15978:2011, 3.7; prEN 16309:2011, 3.7]

C.2.23
construction works
everything that is constructed or results from construction operations

Note 1 to entry: This covers both *building* and *civil engineering works*, and both structural and non-structural elements.

Note 2 to entry: Adapted from the definition in ISO 6707-1.

[SOURCE: EN 15643-1:2010, 3.13; EN 15643-2:2010, 3.13; FprEN 15643-3:2010, 3.12; FprEN 15643-4:2010, 3.11; FprEN 15978:2011, 3.8; prEN 16309:2011, 3.8]

C.2.24
co-product
any of two or more marketable *materials, products,* or fuels from the same *unit process*, but which is not the object of the assessment

Note 1 to entry: Co-product, by-product, and product have the same status and are used for identification of several distinguished flows of products from the same unit process. From co-product, by-product, and product, *waste* is the only output to be distinguished as a non-product.

[SOURCE: ISO 14040:2006, 3.10, modified — Expanded concept to refer to marketable materials and fuels; to exclude the object of consideration; and to add the informative note; EN 15804:2012, 3.7]

C.2.25
data set
collection of data appropriate for a specific *LCA*, *LCI*, or for *information modules*

[CEN/TR 15941:2010, 3.2]

C.2.26
declared unit
quantity of a *construction product* for use as a reference unit in an EPD for an environmental declaration based on one or more *information modules*

EXAMPLE Mass (kg), volume (m^3).

Note 1 to entry: Adapted from ISO 21930:2007.

[SOURCE: EN 15804:2012, 3.8]

C.2.27
decommissioning
activities of removing *building* or an *assembled system (part of works)* from operational status to non-operational status

[SOURCE: EN 15643-1:2010, 3.14; EN 15643-2:2010, 3.14; FprEN 15643-3:2010, 3.13; FprEN 15643-4:2010, 3.12]

C.2.28
delivered energy
total energy, expressed per *energy carrier*, supplied to the *technical building system* through the *system boundary* to satisfy the uses taken into account (heating, cooling, ventilation, domestic hot water, lighting, appliances, etc.) or to produce electricity

Note 1 to entry: For active solar and wind energy systems, the incident solar radiation on solar panels or on solar collectors or the kinetic energy of wind is not part of the energy balance of the *building*. *Renewable energy* produced on site is part of the delivered energy.

Note 2 to entry: Delivered energy can be calculated for defined energy uses or it can be measured.

[SOURCE: EN 15603:2008; EN 15643-1:2010, 3.15; EN 15643-2:2010, 3.15; FprEN 15643-4:2010, 3.13]

C.2.29
design life
service life intended by the designer

[SOURCE: ISO 15686-1:2011, 3.3, modified — Note has been removed; EN 15643-1:2010, 3.16; EN 15643-2:2010, 3.16; FprEN 15978:2011, 3.9; prEN 16309:2011, 3.9]

C.2.30
design life
required *service life*

Note 1 to entry: Adapted from the definition in ISO 15686-1.

[FprEN 15643-4:2010, 3.13]

C.2.31
disposal
waste treatment operation other than *recovery*

Note 1 to entry: Adapted from the definition in Directive 2008/98/EC.

[SOURCE: EN 15643-1:2010, 3.17; EN 15643-2:2010, 3.17; FprEN 15643-4:2010, 3.15]

C.2.32
durability
ability to maintain required *technical performance* throughout the *service life*, subject to specified *maintenance* under the influence of the foreseeable actions

Note 1 to entry: Foreseeable actions are actions related to "normal" agents that could be expected to act on the works or parts thereof. Potential degradation agents include, for example, temperature, humidity, water, UV radiation, abrasion, chemical attack, biological attack, corrosion, weathering, frost, freeze-thaw, and fatigue.

Note 2 to entry: Adapted from the definition in CPD Guidance Paper F and in ISO 6707-1:2004.

[SOURCE: EN 15643-1:2010, 3.18; EN 15643-2:2010, 3.18]

C.2.33
durability
ability to maintain *technical performance* throughout the *service life*; subject to specified *maintenance* under the influence of the foreseeable actions

Note 1 to entry: Foreseeable actions are actions related to "normal" agents that could be expected to act on the works or parts thereof. Potential degradation factors that can affect the *performance* of the works include, for example, temperature, humidity, water, UV radiation, abrasion, chemical attack, biological attack, corrosion, weathering, frost, freeze-thaw, and fatigue.

Note 2 to entry: Durability can be assessed in terms of individual *construction products*, materials, and *components* as well as whole *assembled systems* (*part of works*) or *buildings.*

Note 3 to entry: Adapted from the definition in ISO 6707-1 according to the recommendation of the ISO/TC 59/AHG Terminology.

[FprEN 15643-3:2010, 3.14]

C.2.34
durability
ability to maintain the required *technical performance* throughout the *service life*, subject to specified *maintenance*, under the influence of the foreseeable actions

Note 1 to entry: Foreseeable actions are actions related to "normal" agents that could be expected to act on the works or parts thereof. Potential degradation factors that can affect the *performance* of the works include, for example, temperature, humidity, water, UV radiation, abrasion, chemical attack, biological attack, corrosion, weathering, frost, freeze-thaw, and fatigue.

Note 2 to entry: Durability can be assessed in terms of individual *construction products,* materials, and *components* as well as whole *assembled systems* (*part of works*) or *buildings.*

Note 3 to entry: Adapted from the definition in ISO 6707-1 according to the recommendation of the ISO/TC 59/AHG Terminology.

[FprEN 15643-4:2010, 3.16]

C.2.35
economic aspect
aspect of *construction works*, *part of works*, processes or services related to their *life cycle* that can cause (a) change to economic conditions

[SOURCE: ISO 15392:2008, 3.9; EN 15643-1:2010, 3.19; EN 15643-2:2010, 3.19; FprEN 15643-4:2010, 3.17]

C.2.36
economic aspect
aspect of *construction works*, *assembled system* (*part of works*), processes or services related to their *life cycle* that can cause change to economic conditions

[SOURCE: ISO 15392:2008, 3.9; FprEN 15643-3:2010, 3.15]

C.2.37
economic impact
(any) change to the economic conditions, whether adverse or beneficial, wholly or partially resulting from *economic aspects*

Note 1 to entry: Derived from the definitions of impact and economic impact in ISO 15392:2008.

[SOURCE: EN 15643-1:2010, 3.20; EN 15643-2:2010, 3.20; FprEN 15643-3:2010, 3.16; FprEN 15643-4:2010, 3.18]

C.2.38
economic performance
performance related to *economic impacts* and *economic aspects*

[SOURCE: EN 15643-1:2010, 3.21; EN 15643-2:2010, 3.21; FprEN 15643-3:2010, 3.17; FprEN 15643-4:2010, 3.19]

C.2.39
energy carrier
substance or phenomenon that can be used to produce mechanical work or heat or to operate chemical or physical processes

Note 1 to entry: Adapted from the definition in EN 15603:2008.

[SOURCE: EN 15643-1:2010, 3.22; EN 15643-2:2010, 3.22]

C.2.40
energy carrier
substance or phenomenon that can be used to produce mechanical work or heat or to operate chemical or physical processes

Note 1 to entry: The energy content of fuels is given by their gross calorific value.

[SOURCE: EN 15603:2008; ISO 13600:1997; FprEN 15643-4:2010, 3.20]

C.2.41
environmental aspect
aspect of *construction works*, *part of works,* processes or services related to their *life cycle* that can cause change to the environment

EXAMPLES Use of energy and mass flow, production and segregation of *wastes*, water use, land use, emissions to air.

Note 1 to entry: The examples added to the definition of environmental aspect in ISO 15392:2008.

[SOURCE: EN 15643-1:2010, 3.23; EN 15643-2:2010, 3.23; FprEN 15643-3:2010, 3.18; FprEN 15643-4:2010, 3.21]

C.2.42
environmental aspect
aspect of *construction works*, *part of works*, processes or services related to their *life cycle* that can cause change to the environment

Note 1 to entry: Examples for environmental aspects are: use of energy and mass flow, production and segregation of *wastes*, water use, land use, emissions to air.

Note 2 to entry: The examples added to the definition of environmental aspect in ISO 15392:2008.

[SOURCE: EN 15643-1:2010, 3.23; FprEN 15978:2011, 3.10]

C.2.43
environmental impact
(any) change to the environment, whether adverse or beneficial, wholly or partially resulting from *environmental aspects*

Note 1 to entry: Derived from the definitions of impact and environmental impact in ISO 15392.

[SOURCE: ISO 21931-1:2010, 3.4; EN 15643-1:2010, 3.24; EN 15643-2:2010, 3.24; FprEN 15643-3:2010, 3.19; FprEN 15643-4:2010, 3.22; FprEN 15978:2011, 3.11]

C.2.44
environmental performance
performance related to *environmental impacts* and *environmental aspects*

[SOURCE: ISO 15392:2008, 3.12, modified — The Note has been removed; ISO 21931-1:2008, 3.5, modified — The two Notes have been removed; EN 15643-1:2010, 3.25; EN 15643-2:2010, 3.25; FprEN 15643-3:2010, 3.20; FprEN 15643-4:2010, 3.23; FprEN 15978:2011, 3.12; EN 15804:2012, 3.10]

C.2.45
environmental risk assessment
process of systematic estimation of the probability of a particular set of circumstances and its negative environmental consequences and process of comparing the estimation results against given criteria to determine their environmental significance

Note 1 to entry: Adapted from ISO/IEC Guide 73.

[SOURCE: EN 15643-1:2010, 3.26; EN 15643-2:2010, 3.26; FprEN 15643-4:2010, 3.24]

C.2.46
estimated service life
service life that a *building* or an *assembled system (part of works)* would be expected to have in a set of specific *in-use conditions*, determined from *reference service life data* after taking into account any differences from the *reference in-use conditions*

[SOURCE: ISO 15686-1:2011, 3.7, modified — Reference to 'parts of a building' is changed to 'assembled systems (parts of works)'; EN 15643-1:2010, 3.27; EN 15643-2:2010, 3.27; FprEN 15643-4:2010, 3.25; FprEN 15978:2011, 3.13; prEN 16309:2011, 3.10]

C.2.47
external works
construction works external to the building structure but within the *building's* site

[SOURCE: EN 15643-1:2010, 3.28; EN 15643-2:2010, 3.28]

C.2.48
external works
construction works or landscape work on land associated with, or adjacent to, *civil engineering works* or a *building*

[SOURCE: ISO 6707-1:2004, 3.1.5; FprEN 15643-3:2010, 3.21; FprEN 15643-4:2010, 3.26]

C.2.49
functional equivalent
quantified *functional requirements* and/or *technical requirements* for a *building* or an *assembled system (part of works)* for use as a basis for comparison

Note 1 to entry: Adapted from (the definition in) ISO 21931-1:2010.

[SOURCE: EN 15643-1:2010, 3.29; EN 15643-2:2010, 3.29; FprEN 15643-4:2010, 3.27; FprEN 15978:2011, 3.14; EN 15804:2012, 3.11; prEN 16309:2011, 3.11]

C.2.50
functional equivalent
quantified *functional requirements* and/or *technical requirements* for a *building* or an *assembled system (part of works)* for use as a reference unit

[FprEN 15643-3:2010, 3.22]

C.2.51
functional performance
performance related to the *functionality* of a *construction works* or an *assembled system* (*parts of works*), which is required by *users* or by regulations, or both

Note 1 to entry: Adapted from the definition in ISO 15686-10:2010.

[SOURCE: EN 15643-1:2010, 3.30]

C.2.52
functional performance
performance related to the *functionality* of a *construction works* or an *assembled system* (*parts of works*), which is required by the *client, users* and/or by regulations

Note 1 to entry: Adapted from the definition in EN 15643–1:2010.

[FprEN 15978:2011, 3.15]

C.2.53
functional performance
performance related to the *functionality* of a *construction works* or an *assembled system* (*parts of works*), which is required by the *client*, *users*, and/or by regulations (or both)

Note 1 to entry: Adapted from the definition in ISO 15686-10:2010.

[SOURCE: EN 15643-2:2010, 3.30; prEN 16309:2011, 3.12]

C.2.54
functional performance
performance related to the *functionality* which is required by the *users* of *construction works* or an *assembled system* (*parts of works*) or by regulations for a specific activity or function

[FprEN 15643-3:2010, 3.30; FprEN 15643-4:2010, 3.28]

C.2.55
functional requirement
type and level of *functionality* of a *building* or *assembled system* which is required by the *users* or by regulations, or both

Note 1 to entry: Adapted from the definition of 'functional performance requirement' in ISO 15686-10:2010.

[SOURCE: EN 15643-1:2010, 3.31; prEN 16309:2011, 3.13]

C.2.56
functional requirement
type and level of *functionality* of a *building* or *assembled system* which is required by the *client* and/or *users* and/or by regulations

Note 1 to entry: Adapted from the definition in EN 15643–1:2010.

[FprEN 15978:2011, 3.16]

C.2.57
functional requirement
type and level of *functionality* of a *building* or *assembled system* which is required by the *client, users*, and/or by regulations

Note 1 to entry: Adapted from the definition of 'functional performance requirement' in ISO 15686-10:2010.

[SOURCE: EN 15643-2:2010, 3.31]

C.2.58
functional requirement
type and level of *functionality* which is required by the *users* of a *building* or *assembled system* or by regulations for a specific activity or function

Note 1 to entry: Adapted from the definition of 'functional performance requirement' in ISO 15686-10:2010.

[FprEN 15643-3:2010, 3.24; FprEN 15643-4:2010, 3.29]

C.2.59
functional unit
quantified *performance* of a *product system* for use as a reference unit

[SOURCE: ISO 14040:2006, 3.20; EN 15804:2012, 3.12]

C.2.60
functionality
suitability or usefulness for a specific purpose or activity

[SOURCE: ISO 15686-10:2010, 3.13; EN 15643-1:2010, 3.32; EN 15643-2:2010, 3.32; prEN 16309:2011, 3.14]

C.2.61
functionality
suitability or usefulness for a specific purpose or activity

[SOURCE: EN 15643-1:2010, 3.32; FprEN 15978:2011, 3.17]

C.2.62
functionality
suitability or usefulness for a specific purpose or activity

Note 1 to entry: Suitability of a *building* or an *assembled system* (*part of works*), *component* or *construction product* thereof.

[SOURCE: ISO 15686-10:2010, 3.13; FprEN 15643-3:2010, 3.25; FprEN 15643-4:2010, 3.30]

C.2.63
generic data
surrogate data used if no *system specific data* are available

Note 1 to entry: Data can be *site specific* or *average*.

[CEN/TR 15941:2010, 3.3]

C.2.64
handover
step at which possession of the *construction works* is surrendered to the *client* upon completion with or without reservation

[SOURCE: ISO/WD 6707-2:2010, 9.9, modified — Revised wording has changed the concept from referring to a process of surrendering possession to referring simply to the point in time possession of the construction works is surrendered and also removed the reference to the US preferred term for this concept, which is 'turnover'; EN 15643-1:2010, 3.33; EN 15643-2:2010, 3.33; FprEN 15643-4:2010, 3.31]

C.2.65
indicator
quantifiable value related to *environmental impacts/aspects*

[SOURCE: ISO 14044:2006, 3.40, modified — The definition for impact category indicator was revised to refer specifically to environmental issues of concern; FprEN 15978:2011, 3.18]

C.2.66
indicator
quantifiable value related to *social impacts/aspects*

[SOURCE: ISO 14044:2006, 3.40, modified — The definition for impact category indicator was revised to refer specifically to social issues of concern; prEN 16309:2011, 3.15]

C.2.67
information module
compilation of data to be used as a basis for a *type III environmental declaration* covering a *unit process* or a combination of unit processes that are part of the *life cycle* of a *product*

[SOURCE: ISO 14025:2010, 3.13; EN 15804:2012, 3.13]

C.2.68
in-use condition
(any) circumstance that can impact the *performance* of a *building* or *assembled system (part of works*) under normal use

[SOURCE: ISO 15686-8:2008, 3.5, modified — The Note was removed; EN 15643-1:2010, 3.34; EN 15643-2:2010, 3.34; FprEN 15643-4:2010, 3.32]

C.2.69
life cycle
(all) consecutive and interlinked stages in the life of the object under consideration

[SOURCE: EN 15643-1:2010, 3.35; EN 15643-2:2010, 3.35; FprEN 15643-3:2010, 3.26; FprEN 15643-4:2010, 3.33; FprEN 15978:2011, 3.19; prEN 16309:2011, 3.16]

C.2.70
life cycle assessment
LCA
compilation and evaluation of the inputs, outputs and the potential *environmental impacts* of a *product system* throughout its *life cycle*

Note 1 to entry: In this context a *building* or *assembled system* is considered a "product" and a part of a "product system".

[SOURCE: ISO 14044:2006, 3.2, modified — Note 1 to entry was added; EN 15643-1:2010, 3.36; EN 15643-2:2010, 3.36; FprEN 15643-4:2010, 3.34]

C.2.71
life cycle assessment
LCA
compilation and evaluation of the inputs, outputs and the potential *environmental impacts* of a *product system* throughout its *life cycle*

[SOURCE: ISO 14044:2006, 3.2; EN 15804:2012, 3.14]

C.2.72
life cycle cost
LCC
cost of a *building* or *part of works* throughout its *life cycle,* while fulfilling *technical requirements* and *functional requirements*

[SOURCE: FprEN 15643-4:2010; EN 15643-1:2010, 3.37; EN 15643-2:2010, 3.37]

C.2.73
life cycle impact assessment
LCIA
phase of *life cycle assessment* aimed at understanding and evaluating the magnitude and significance of the potential *environmental impacts* for a *product system* throughout the *life cycle* of the *product*

Note 1 to entry: In this context a *building* or *assembled system* is considered a "product" and a part of a "product system".

[SOURCE: ISO 14044:2006, 3.4, modified — Note was added; EN 15643-1:2010, 3.38; EN 15643-2:2010, 3.38; FprEN 15643-4:2010, 3.36]

C.2.74
life cycle inventory analysis
LCI
phase of *life cycle assessment* involving the compilation and quantification of inputs and outputs for a *product* throughout its *life cycle*

Note 1 to entry: In this context a *building* or *assembled system* is considered a "product" and a part of a "*product system*".

[SOURCE: ISO 14044:2006, 3.3, modified — Note was added; EN 15643-1:2010, 3.39; EN 15643-2:2010, 3.39; FprEN 15643-4:2010, 3.37]

C.2.75
life cycle inventory analysis
LCI
phase of *life cycle assessment* involving the compilation and quantification of inputs and outputs for a *product* throughout its *life cycle*

[SOURCE: ISO 14044:2006, 3.3; EN 15804:2012, 3.15]

C.2.76
maintainability
ability of a *component,* an *assembled system (part of works)* or *construction works* to be retained in a state in which it can perform its required functions or be restored to such a state when a fault occurs

Note 1 to entry: Adapted from the definition in ISO 6707-1:2004.

[SOURCE: EN 15643-1:2010, 3.40; EN 15643-2:2010, 3.40]

C.2.77
maintainability
ability of a *component* or an *assembled system* (*part of works*) to be retained in a state in which it can perform its required functions or be restored to such a state when a fault occurs

Note 1 to entry: Adapted from the definition in ISO 6707-1:2004.

[FprEN 15643-3:2010, 3.27; FprEN 15643-4:2010, 3.38]

C.2.78
maintenance
combination of all technical and associated administrative actions during the *service life* to retain a *building* or an *assembled system* (*part of works*) in a state in which it can perform its required functions

Note 1 to entry: Maintenance includes cleaning, servicing, repainting, repairing, replacing parts of the *construction works* where needed, etc. (CPD Guidance Paper F).

Note 2 to entry: Adapted from the definition in ISO 15686-1:2000, ISO 6707-1:2004 and in CPD Guidance Paper F.

[SOURCE: EN 15643-1:2010, 3.41; EN 15643-2:2010, 3.41; FprEN 15643-3:2010, 3.28]

C.2.79
maintenance
combination of all technical and associated administrative actions during the *service life* to retain a *building* or an *assembled system* (*part of works*) in a state in which it can perform its required functions

Note 1 to entry: Adapted from the definition in ISO 15686-1:2000, ISO 6707-1:2004 and in CPD Guidance Paper F.

[SOURCE: EN 15643-1:2010, 3.41; FprEN 15978:2011, 3.20; prEN 16309:2011, 3.17]

C.2.80
maintenance
combination of all technical and associated administrative actions during the *service life* to retain a *building* or an *assembled system* (*part of works*) in a state in which it can perform its technical and *functional requirements*

Note 1 to entry: Maintenance includes cleaning, servicing, repainting, repairing, replacing parts of the *construction works* where needed, etc...(CPD Guidance Paper F).

Note 2 to entry: Adapted from the definition in ISO 15686-1:2000, ISO 6707-1:2004 and in CPD Guidance Paper F.

[FprEN 15643-4:2010, 3.39]

C.2.81
meta data
information about the data being used, e.g. the data source, its age, the accuracy and precision, etc.

[CEN/TR 15941:2010, 3.4]

C.2.82
monetary value
aggregate of costs and revenues of *economic aspects* expressed in monetary units

[SOURCE: FprEN 15643-4:2010, 3.40, modified — The preferred term has been changed from financial value to monetary value; EN 15643-1:2010, 3.42; EN 15643-2:2010, 3.42]

C.2.83
financial value
the aggregate of costs and revenues of *economic aspects* expressed in monetary units

[FprEN 15643-4:2010, 3.40]

C.2.84
non-renewable energy
energy from sources which are not defined as *renewable energy* sources

[SOURCE: EN 15643-1:2010, 3.43; EN 15643-2:2010, 3.43; EN 15804:2012, 3.16]

C.2.85
non-renewable energy
energy taken from a source which is depleted by extraction (e.g. fossil fuels)

[SOURCE: EN 15603:2010; FprEN 15643-4:2010, 3.40]

C.2.86
non-renewable resource
resource that exists in a finite amount that cannot be replenished on a human time scale

[SOURCE: ISO 21930:2007, 3.8, modified — Reference to fixed amount changed to finite amount; EN 15643-1:2010, 3.44; EN 15643-2:2010, 3.44; EN 15804:2012, 3.17]

C.2.87
non-renewable resource
resource that exists in a fixed amount that cannot be replenished on a human time scale

[SOURCE: ISO 21930:2007, 3.8; FprEN 15643-4:2010, 3.42]

C.2.88
operational energy use
energy use of *technical building system* during use and operation of the *building*

[SOURCE: EN 15643-1:2010, 3.45; EN 15643-2:2010, 3.45]

C.2.89
operational energy use
energy use of *technical building system* (heating, cooling, ventilation, hot water, lighting and building automation and control systems) during use and operation of the *building*

[FprEN 15643-4:2010, 3.43]

C.2.90
operational energy use
energy use of *building-integrated technical system* during use and operation of the *building*

Note 1 to entry: Adapted from the definition in EN 15643–1:2010.

[FprEN 15978:2011, 3.21]

C.2.91
operational water use
building-related water use of *technical building system* or *user* during use and operation of the *building*

[SOURCE: EN 15643-1:2010, 3.46; EN 15643-2:2010, 3.46]

C.2.92
operational water use
water use of *building-integrated technical system* and of the *user,* as needed for the technically and functionally defined operation of the *building*

Note 1 to entry: Adapted from the definition in EN 15643–1:2010.

[FprEN 15978:2011, 3.22]

C.2.93
operational water use
water use of *technical building system* or *user* during use and operation of the *building*

[FprEN 15643-4:2010, 3.44]

C.2.94
performance
expression relating (to) the magnitude of a particular aspect of the object of consideration relative to specified requirements, objectives and/or targets

Note 1 to entry: Adapted from the definition in ISO 6707-1 according to the draft recommendation of ISO/TC59/AHG Terminology.

[SOURCE: EN 15643-1:2010, 3.47; EN 15643-2:2010, 3.47; FprEN 15643-3:2010, 3.29; FprEN 15643-4:2010, 3.45; EN 15804:2012, 3.18]

C.2.95
primary energy
energy that has not been subjected to any conversion or transformation process

[SOURCE: EN 15603:2008; EN 15643-1:2010, 3.48; EN 15643-2:2010, 3.48]

C.2.96
product
goods or service

Note 1 to entry: Adapted from ISO 14024:2000.

[CEN/TR 15941:2010, 3.6]

C.2.97
product category
group of *construction products* that can fulfil equivalent functions

Note 1 to entry: Adapted from ISO 14025:2010.

[SOURCE: EN 15804:2012, 3.19]

C.2.98
product category rules
PCR
set of specific rules, requirements and guidelines for developing *type III environmental declarations* for one or more *product categories*

[SOURCE: ISO 14025:2010, 3.5; EN 15804:2012, 3.20]

C.2.99
product system
collection of *unit processes* with elementary and product flows, performing one or more defined functions, and which models the *life cycle* of a *product*

[SOURCE: ISO 14040:2006, 3.28; EN 15804:2012, 3.21]

C.2.100
programme operator
body or bodies that conduct a *type III environmental declaration* programme

Note 1 to entry: A programme operator can be a company or a group of companies, industrial sector or trade association, public authorities or agencies, or an independent scientific body or other organization.

[SOURCE: ISO 14025:2006, 3.4; EN 15804:2012, 3.22]

C.2.101
project specification
specification of *construction works* for a specific project that prescribes the *construction work* and the *construction products* to be used and how they are to be applied

[SOURCE: ISO 6707-2:1993, 3.2.6, modified — Changed from the specification simply 'describing' the required work to 'prescribing' the work and products to be used; EN 15643-1:2010, 3.49; EN 15643-2:2010, 3.49; FprEN 15643-3:2010, 3.30; FprEN 15643-4:2010, 3.46]

C.2.102
recovery
waste treatment operation that serves a purpose in replacing other resources or prepares waste for such a use

Note 1 to entry: Adapted from the Directive 2008/98/EC.

[SOURCE: EN 15643-1:2010, 3.50; EN 15643-2:2010, 3.50; FprEN 15643-4:2010, 3.47; FprEN 15978:2011, 3.23]

C.2.103
recycling
(any) *recovery* operation by which *waste* materials are reprocessed into *products*, materials, or substances whether for the original or other purposes

Note 1 to entry: Recycling operations include

— recycling of organic substances which are not used as solvents (including composting and other biological transformation processes),

— recycling of metals and metal compounds, and

— recycling of other inorganic materials,

as defined in Directive 2008/98/EC Annex II

Note 2 to entry: Recycling does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations or other recovery operations as defined in Directive 2008/98/EC Annex II.

Note 3 to entry: Adapted from the definition in Directive 2008/98/EC.

[SOURCE: EN 15643-1:2010, 3.51; EN 15643-2:2010, 3.51]

C.2.104
recycling
any *recovery* operation by which *waste* materials are reprocessed into *products,* materials, or substances whether for the original or other purposes

Note 1 to entry: Recycling operations include:

— recycling of organic substances,

— recycling of metals, and

— recycling of other inorganic materials,

as defined in Directive 2008/98/EC Annex II

Note 2 to entry: Recycling does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations or other recovery operations as defined in Directive 2008/98/EC Annex II.

Note 3 to entry: Adapted from (the definition in) EN 15643–1:2010.

[FprEN 15978:2011, 3.24]

C.2.105
recycling
recovery operation to reprocess materials for further use

Note 1 to entry: Adapted from the EC waste framework directive.

[FprEN 15643-4:2010, 3.48]

C.2.106
reference in-use conditions
in-use condition under which the *RSL data* are valid

Note 1 to entry: The reference in-use conditions can be based upon information gathered through testing or from recorded performance and actual *service life* data of a *component.*

[SOURCE: ISO 15686-8:2008, 3.9; EN 15643-1:2010, 3.52; EN 15643-2:2010, 3.52; FprEN 15643-4:2010, 3.49]

C.2.107
reference service life
RSL
service life of a *construction product* which is known to be expected under a particular set, i.e. a reference set, of *in-use conditions* which may form the basis of estimating the service life under other in-use conditions

[SOURCE: ISO 21930:2007, 3.12, modified — The Note has been deleted; EN 15643-1:2010, 3.53; EN 15643-2:2010, 3.53; FprEN 15643-4:2010, 3.50; EN 15804:2012, 3.25]

C.2.108
reference service life
service life of a *component* which is known to be expected under a particular set, i.e. a reference set, of *in-use conditions* which may form the basis of estimating the service life under other in-use conditions

[FprEN 15643-3:2010, 3.32]

C.2.109
reference service life data
RSL data
information that includes the *reference service life* and any qualitative or quantitative data describing the validity of the reference service life

EXAMPLE Typical data describing the validity of the *RSL* include the description of the *component* for which it applies, the *reference in-use conditions* under which it applies, and its quality.

[SOURCE: ISO 15686-8:2008, 3.8, modified — The two Notes have been removed; EN 15643-1:2010, 3.54; EN 15643-2:2010, 3.54; FprEN 15643-4:2010, 3.51; EN 15804:2012, 3.26]

C.2.110
reference study period
period over which the time-dependent characteristics of the object of assessment are analysed

Note 1 to entry: In some cases, the reference study period may differ significantly from the *design life* of the *building.*

[FprEN 15978:2011, 3.25; prEN 16309:2011, 3.18]

C.2.111
refurbishment
modification and improvements to an existing *building* in order to bring it up to an acceptable condition

[SOURCE: ISO 6707-1:2004, 7.1.49, modified — Reference to plant and civil engineering works removed; EN 15643-1:2010, 3.55; EN 15643-2:2010, 3.55; FprEN 15643-3:2010, 3.31; FprEN 15643-4:2010, 3.52; FprEN 15978:2011, 3.26; prEN 16309:2011, 3.19]

C.2.112
renewable energy
energy from renewable non-fossil sources

EXAMPLE Wind, solar, aerothermal, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases.

Note 1 to entry: Adapted from the definition in Directive 2009/28/EC.

[SOURCE: EN 15643-1:2010, 3.56; EN 15643-2:2010, 3.56; EN 15804:2012, 3.23]

C.2.113
renewable energy
energy from sources that are not depleted by extraction

Note 1 to entry: Examples are solar energy (thermal and photovoltaic), geothermal, wind, water power, biomass.

Note 2 to entry: Adapted from EN 15603:2008 in accordance with Directive 2009/28/EC.

[FprEN 15643-4:2010, 3.53]

C.2.114
renewable resource
resource that is grown, naturally replenished, or naturally cleansed, on a human time scale

EXAMPLE Trees in forests, grasses in grasslands, and fertile soil.

Note 1 to entry: A renewable resource is capable of being exhausted, but may last indefinitely with proper stewardship.

[SOURCE: ISO 21930:2007, 3.13; EN 15643-1:2010, 3.57; EN 15643-2:2010, 3.57; FprEN 15978:2011, 3.27; EN 15804:2012, 3.24]

C.2.115
renewable resource
resource that grows naturally, can be replenished, or cleansed on a human time scale

EXAMPLE Trees in forests, grasses in grasslands, and fertile soil.

Note 1 to entry: A renewable resource is capable of being exhausted, but may last indefinitely with proper stewardship.

[SOURCE: ISO 21930:2007, 3.13; FprEN 15643-4:2010, 3.54]

C.2.116
repair
returning an item to an acceptable condition through (by) the renewal, replacement, or mending of worn, damaged, or degraded parts

[SOURCE: ISO 6707-1:2004, 7.1.51; FprEN 15978:2011, 3.28; prEN 16309:2011, 3.20]

C.2.117
required service life
service life required by the *client* or through (by) regulations

[SOURCE: EN 15643-1:2010, 3.58; EN 15643-2:2010, 3.58; FprEN 15643-3:2010, 3.33; FprEN 15643-4:2010, 3.55; FprEN 15978:2011, 3.29; prEN 16309:2011, 3.21]

C.2.118
re-use
(any) operation by (through) which *products* or *components* that are not *waste* are used again for the same purpose for which they were conceived or used for other purposes without reprocessing

Note 1 to entry: Adapted from the definition in Directive 2008/98/EC.

[SOURCE: EN 15643-1:2010, 3.59; EN 15643-2:2010, 3.59; FprEN 15978:2011, 3.30]

C.2.119
re-use
operation by which *products* or *components* that are not *waste* are used again for the same purpose for which they were conceived

Note 1 to entry: Adapted from the EC waste framework directive.

[FprEN 15643-4:2010, 3.56]

C.2.120
scenario
collection of assumptions and information concerning an expected sequence of possible future events

[SOURCE: EN 15643-1:2010, 3.60; EN 15643-2:2010, 3.60; FprEN 15643-3:2010, 3.34; FprEN 15978:2011, 3.31; EN 15804:2012, 3.27; prEN 16309:2011, 3.22]

C.2.121
secondary fuel
fuel recovered from previous use or from *waste* which substitutes primary fuels

Note 1 to entry: Processes providing a secondary fuel are considered from the point where the secondary fuel enters the system from the previous system.

Note 2 to entry: Any combustible material recovered from previous use or from waste from the previous *product system* and used as a fuel in a following system is a secondary fuel.

Note 3 to entry: Examples for primary fuels are: coal, natural gas, biomass, etc.

Note 4 to entry: Examples for secondary fuels recovered from previous use or as waste are: solvents, wood, tyres, oil, animal fats.

[SOURCE: EN 15804:2012, 3.28]

C.2.122
secondary material
(any) material recovered from previous use or from *waste* which substitutes primary materials

Note 1 to entry: Secondary material is measured at the point where the secondary material enters the system from another system.

Note 2 to entry: Materials recovered from previous use or (from) waste from one *product system* and used as an input in another product system are secondary materials.

Note 3 to entry: Examples for secondary materials (to be measured at the *system boundary* are recycled (scrap) metal, crushed concrete, glass cullet, recycled wood chips, recycled plastic.

[SOURCE: EN 15643-1:2010, 3.61; EN 15643-2:2010, 3.61; FprEN 15978:2011, 3.32; EN 15804:2012, 3.29]

C.2.123
service life
working life
period of time after installation during which a *building* or an *assembled system (part of works)* meets or exceeds the *technical requirements* and *functional requirements*

Note 1 to entry: Adapted from the definition in ISO 15686-1:2011.

[SOURCE: EN 15643-1:2010, 3.62; EN 15643-2:2010, 3.62; FprEN 15978:2011, 3.33; prEN 16309:2011, 3.23]

C.2.124
service life
working life
period of time after installation during which a *building* or an *assembled system* (*part of works*) meets or exceeds the *technical* and *functional performance requirements*

[SOURCE: ISO 15686-1:2011, 3.25, modified — Specific reference added to refer to both technical and functional performance requirements; FprEN 15643-3:2010, 3.35]

C.2.125
service life
working life
period of time after installation during which a *building* or an *assembled system* (*part of works*) meets or exceeds the performance requirements

[SOURCE: ISO 15686-1:2011, 3.25; FprEN 15643-4:2010, 3.57]

C.2.126
site specific data
data derived from one production site

Note 1 to entry: Data might include different production lines.

[CEN/TR 15941:2010, 3.7]

C.2.127
sketch plan stage
(the) stage at which alternative outline proposals are evaluated and a preferred solution produced sufficiently to obtain *client's* approval

[SOURCE: ISO/WD 6707-2:2010, 5.2, modified — The concept was simplified to indicate that only the client's approval was critical and to remove any reference to subsequent design activity; EN 15643-1:2010, 3.63; EN 15643-2:2010, 3.63; FprEN 15643-3:2010, 3.36; FprEN 15643-4:2010, 3.58]

C.2.128
social aspect
aspect of *construction works, part of works*, processes or services related to their *life cycle* that can cause change to society or quality of life

[SOURCE: ISO 15392:2008, 3.19; EN 15643-1:2010, 3.64; EN 15643-2:2010, 3.64; FprEN 15643-4:2010, 3.59]

C.2.129
social aspect
aspect of *construction works, assembled system* (*part of works*), processes or services related to their *life cycle* that can cause change to society or quality of life

Note 1 to entry: In the context of this suite of standards, only aspects related to *users* of the *building* and immediate neighbourhood are considered.

[SOURCE: ISO 15392:2008, 3.19, modified — The Note 1 to entry was added; FprEN 15643-3:2010, 3.37; prEN 16309:2011, 3.24]

C.2.130
social impact
(any) change to society or quality of life, whether adverse or beneficial, wholly or partially resulting from *social aspects*

Note 1 to entry: Derived from the definitions of impact and social impact in ISO 15392:2008.

[SOURCE: EN 15643-1:2010, 3.65; EN 15643-2:2010, 3.65; FprEN 15643-4:2010, 3.60]

C.2.131
social impact
any change to society or quality of life, whether adverse or beneficial, wholly or partially resulting from *social aspects*

Note 1 to entry: Derived from the definitions of impact and social impact in ISO 15392:2008.

Note 2 to entry: In the context of this suite of standards, only aspects related to *users* of the *building* and immediate neighbourhood are considered.

[FprEN 15643-3:2010, 3.38; prEN 16309:2011, 3.25]

C.2.132
social performance
performance related to *social impacts* and *social aspects*

[SOURCE: EN 15643-1:2010, 3.66; EN 15643-2:2010, 3.66; FprEN 15643-3:2010, 3.39; FprEN 15643-4:2010, 3.61; prEN 16309:2011, 3.26]

C.2.133
specific data
data representative of a *product*, product group, or *construction service*, provided by one supplier

[SOURCE: EN 15804:2012, 3.30]

C.2.134
sustainability
ability of system to be maintained for the present and future generations

Note 1 to entry: In this context, "system" comprises *environmental*, *social*, and *economic aspects*.

[SOURCE: EN 15643-1:2010, 3.67; EN 15643-2:2010, 3.67; FprEN 15643-3:2010, 3.40; FprEN 15643-4:2010, 3.62]

C.2.135
sustainability assessment of buildings
combination of the assessments of *environmental performance*, *social performance*, and *economic performance* taking into account the *technical requirements* and *functional requirements* of a *building* or an *assembled system* (*part of works*), expressed at the building level

[SOURCE: EN 15643-1:2010, 3.68; EN 15643-2:2010, 3.68; FprEN 15643-3:2010, 3.41; FprEN 15643-4:2010, 3.63]

C.2.136
system boundary
interface in the assessment between a *building* and the environment or other *product systems*

Note 1 to entry: System boundary defines what is included and what is not included in the assessment.

[SOURCE: ISO 21931-1:2010, 3.13, modified — Specific reference added to 'in the assessment';
EN 15643-1:2010, 3.69; EN 15643-2:2010, 3.69; FprEN 15643-3:2010, 3.42; FprEN 15643-4:2010, 3.64; prEN 16309:2011, 3.27]

C.2.137
system boundary
interface in the assessment between a *building* and its surroundings or other *product systems*

Note 1 to entry: System boundary defines what is included and what is not included in the assessment.

Note 2 to entry: Adapted from the definition in EN 15643–1:2010.

[FprEN 15978:2011, 3.34]

C.2.138
system specific data
data specific to the *product system* under study

[CEN/TR 15941:2010, 3.8]

C.2.139
technical building system
technical equipment for heating, cooling, ventilation, hot water, lighting, or for a combination thereof

Note 1 to entry: Adapted from the definition in the recast of Energy Performance of Buildings Directive.

[SOURCE: EN 15643-1:2010, 3.70; EN 15643-2:2010, 3.70; FprEN 15643-3:2010, 3.43; FprEN 15978:2011, 3.35; prEN 16309:2011, 3.28]

C.2.140
technical building system
technical equipment for heating, cooling, ventilation, domestic hot water, lighting, and electricity production

Note 1 to entry: A technical building system can refer to one or to several building services (e.g. heating system, heating and domestic hot water system).

Note 2 to entry: A technical building system is composed of different subsystems.

Note 3 to entry: Electricity production can include cogeneration and photovoltaic systems.

[SOURCE: EN 15603:2008; FprEN 15643-4:2010, 3.65]

C.2.141
technical performance
performance related to the capability of a *construction works* or an *assembled system* (*part of works*) to fulfil its required functions under the intended use conditions

Note 1 to entry: Derived from the definition of "building performance" in ISO 6707-1:2004.

[SOURCE: EN 15643-1:2010, 3.71; EN 15643-2:2010, 3.71; FprEN 15643-3:2010, 3.44; FprEN 15643-4:2010, 3.66; FprEN 15978:2011, 3.36; prEN 16309:2011, 3.29]

C.2.142
technical requirement
type and level of the technical characteristics of a *construction works* or an *assembled system (part of works)*, which are required or are a consequence of the requirements made either by the *users* or by regulations, or both

[SOURCE: EN 15643-1:2010, 3.72]

C.2.143
technical requirement
type and level of the technical characteristics of a *construction works* or an *assembled system (part of works)*, which are required or are a consequence of the requirements made either by the *client, users*, and/or by regulations

[SOURCE: EN 15643-2:2010, 3.72; FprEN 15978:2011, 3.37; prEN 16309:2011, 3.30]

C.2.144
technical requirement
type and level of the capability of a *construction work* or *assembled system* (*part of works*) to fulfil its required functions under the intended use conditions

Note 1 to entry: Derived from the definition of "building performance" in ISO 6707-1 and from the definition of "functional (performance) requirement" in ISO 15686-10:2011.

[FprEN 15643-3:2010, 3.45; FprEN 15643-4:2010, 3.67]

C.2.145
third party
person or body that is recognized as being independent of the parties involved, as concerns the issues in question

Note 1 to entry: "Parties involved" are usually supplier ("first party") and purchaser ("second party") interests.

[SOURCE: ISO 14024:2000, 3.7; EN 15804:2012, 3.31]

C.2.146
transparency
open, comprehensive, and understandable presentation of information

[SOURCE: ISO 14044:2006, 3.7; EN 15643-1:2010, 3.73; EN 15643-2:2010, 3.73; FprEN 15643-3:2010, 3.46; FprEN 15643-4:2010, 3.68; FprEN 15978:2011, 3.38; prEN 16309:2011, 3.31]

C.2.147
type III environmental declaration
environmental declaration providing quantified environmental data using predetermined parameters and, where relevant, additional environmental information

Note 1 to entry: The calculation of predetermined parameters is based on the ISO 14040 series of standards, which is made up of ISO 14040 and ISO 14044. The selection of the predetermined parameters is based on ISO 21930 (adapted from ISO 14025).

[SOURCE: EN 15804:2012, 3.32]

C.2.148
unit process
the smallest element considered in the *life cycle inventory analysis* for which input and output data are quantified

[SOURCE: ISO 14044:2006, 3.34; EN 15804:2012, 3.35]

C.2.149
upstream, downstream process
process(es) that either precedes (upstream) or follows (downstream) a given *life cycle* stage

[CEN/TR 15941:2010, 3.9; EN 15804:2012, 3.33]

C.2.150
user
person or organization for which a *building* is designed (including building owner, manager, and occupants)

Note 1 to entry: Adapted from the definition in ISO 6707-1:2004.

[SOURCE: EN 15643-1:2010, 3.74; EN 15643-2:2010, 3.74; FprEN 15643-3:2010, 3.47; FprEN 15643-4:2010, 3.69; FprEN 15978:2011, 3.39]

C.2.151
verification
confirmation, through the provision of objective evidence, that specified requirements have been fulfilled

[SOURCE: ISO 9000:2005, 3.8.4; CEN/TR 15941:2010, 3.10]

C.2.152
waste
substance or object which the holder discards or intends or is required to discard

Note 1 to entry: Adapted from the definition in Directive 2008/98/EC.

[SOURCE: EN 15643-1:2010, 3.75; EN 15643-2:2010, 3.75; FprEN 15643-3:2010, 3.48; FprEN 15643-4:2010, 3.70; FprEN 15978:2011, 3.40; EN 15804:2012, 3.34]

Annex D
(informative)

Terminology and language regarding products of the building and construction sector

This annex originates from ISO 15392 and provides a discussion reflecting various terms used to designate a number of essential concepts related to *products* of the building and construction sector.

The concept of *"product"*, when used within the construction sector, typically refers to a distinct item having a form and shape, which is used in the construction of a building or other type of construction works.

The use of the terms "building product" and "construction product" is common, and they are used interchangeably to represent the same concept. The term "product" is also often used interchangeably with other frequently used terms and concepts within the field of building construction.

In the case of design and construction of a building, this partly arises from the fact that there are a variety of different interested parties who look at the items used to construct a building from varying perspectives and at different stages of the product or building life cycle.

A manufacturer of items, such as timber or bricks, will refer to them as products, building materials, or building products, while an architect or a builder may refer to them as building materials, components, or elements of a building. Similarly, a manufacturer of a prefabricated wall system or window may refer to it as a product or component, while an architect or builder may refer to it as a building element, kit, or assembly.

In ISO 6707-1:2004, these related construction concepts are defined as follows

— *material*

  substance that can be used to form *product(s)* or *construction works*

— *product*

  item manufactured or processed for incorporation in *construction works*

— *component*

  product manufactured as a distinct unit to serve a specific function or functions

— *assembly*

  set of related *component(s)* attached to each other

— *building element*

  major functional part of a *building*

EXAMPLE Foundation, floor, roof, service(s).

— *construction*

  assembled or complete part of *construction works* that results from work on-site

As can be seen in looking at these concepts in groups, the first three relate primarily to what would be the smaller pieces or items of a building, while the last three relate primarily to what would be considered the larger parts of the structure.

The concept of "product" is also present within the suite of International Standards developed in ISO/TC 59/SC 17 when used in relation to the environmental management field and the assessment of a "product system" or "service system". In such cases, in addition to "goods", the concept of a "product" is used in a broader manner to also include processes and services that may be subject to analysis.

It is critical that these distinct concepts and the terminology used within both fields are clearly understood to limit any misunderstanding or confusion in the language and discussions within the context of sustainable development.

In ISO 14040:2006, many environmental management concepts related to life cycle assessment of "products" and the "product system" are defined, including the following:

a) life cycle

consecutive and interlinked stages of a *product system*, from raw material acquisition or generation from natural resources to final disposal

b) product system

collection of *unit processes* with elementary and *product flows*, performing one or more defined functions, and which models the *life cycle* of a *product*

c) product

any goods or service

NOTE 1 The product can be categorized as follows:

— services (e.g. transport);

— software (e.g. computer program, dictionary);

— hardware (e.g. engine mechanical part);

— processed materials (e.g. lubricant).

NOTE 2 Services have tangible and intangible elements. Provision of a service can involve, for example, the following:

— an activity performed on a customer-supplied tangible product (e.g. automobile to be repaired);

— an activity performed on a customer-supplied intangible product (e.g. the income statement needed to prepare a tax return);

— the delivery of an intangible product (e.g. the delivery of information in the context of knowledge transmission);

— the creation of ambience for the customer (e.g. in hotels and restaurants).

Software consists of information and is generally intangible and can be in the form of approaches, transactions, or procedures.

Hardware is generally tangible and its amount is a countable characteristic. Processed materials are generally tangible and their amount is a continuous characteristic.

NOTE 3 Adapted from ISO 14021:1999 and ISO 9000:2005.

d) product flow

products entering from or leaving to another *product system*

e) intermediate product

output from a *unit process* that is *input* to other unit processes that require further transformation within the system

f) co-product

any of two or more *products* coming from the same *unit process* or *product system*

g) unit process

smallest element considered in the *life cycle inventory analysis* for which *input* and *output* data are quantified

h) functional unit

quantified performance of a *product system* for use as a reference unit

i) system boundary

set of criteria specifying which *unit processes* are part of a *product system*

NOTE The term "system boundary" is not used in this International Standard in relation to LCIA[1)].

j) allocation

partitioning the *input* or *output* flows of a *process* or a *product system* between the product system under study and one or more other product systems

1) LCIA is the abbreviation for life cycle impact assessment.

Annex E
(informative)

Alphabetical index of terms

NOTE This index includes reference to term entries listed not only in the main text (Clause 3) but also from the lists included in two of the informative Annexes (Annex B and Annex C).

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