TECHNICAL REPORT

# ISO/TR 15686-11

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# Buildings and constructed assets — Service life planning —

## Part 11: Terminology

*Bâtiments et biens immobiliers construits — Prévision de la durée de vie —*

*Partie 11: 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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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, *Service life planning*, Subcommittee SC 14, *Design life*.

ISO 15686 consists of the following parts, under the general title *Buildings and civil engineering — Service life planning*:

— *Part 1: General principles and framework*

— *Part 2: Service life prediction procedures*

— *Part 3: Performance audits and reviews*

— *Part 4: Service Life Planning using Building Information Modelling*

— *Part 5: Life-cycle costing*

— *Part 7: Performance evaluation for feedback of service life data from practice*

— *Part 8: Reference service life and service-life estimation*

— *Part 9: Guidance on assessment of service-life data* [Technical Specification]

— *Part 10: When to assess functional performance*

— *Part 11: Terminology* [Technical Report]

The following part has been withdrawn:

— *Part 6: Procedures for considering environmental impacts*

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# Introduction

Concern has been expressed for many years over the lack of a comprehensive list of the terms and definitions for the different concepts applied within the ISO 15686 series of standards regarding design life and service life planning for buildings and civil engineering works.

This Technical Report is the result of the terminography and other terminology work that was undertaken within ISO/TC 59/SC 14 on Design life to establish consistent terminology for concepts related to the subject field of service life planning in buildings and civil engineering works.

The first edition of Part 1 of ISO 15686 was published in 2000, followed by Part 2 in 2001 and Part 3 in 2002. The publication of other parts followed in subsequent years, with the most recent new part, Part 10, being published in 2010. Revisions of the original parts started in 2009 and both Part 1 and Part 2 were republished in 2011 and 2012, respectively. These recent updates, along with the addition of several new parts over the past five years have led to some of the concepts being applied with more than one definition, which is leading to some confusion.

NOTE 1 ISO 1087-1, *Terminology work — Vocabulary — Part 1: Theory and application*, 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 related to service life planning within ISO/TC 59/SC 14 and its working groups include both buildings and civil engineering works, collectively referred to using the designation construction works.

In 2005, a joint ISO/TC 59 meeting was held with members of a number of 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 on *Sustainability of Construction Works* (Formerly CEN BT/WG174 *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 criteria for single family attached and detached dwellings*; and SC 17 – *Sustainability in buildings and civil engineering works* (formerly *Sustainability in building construction*).

Subsequent to this joint meeting, an ISO/TC 59 Ad hoc Group (AHG) on Terminology was established. The AHG was directed to maintain close liaison on any 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/SC2, would be used as the primary reference vocabulary for any of the work on terminology undertaken within all the Committees.

Individual representatives from the ISO/TC 59 Subcommittees (SC 2, SC 14, SC 15, SC 17) and the CEN/TC 350 committee 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 ISO/TC 59 SCs involved as well as from the CEN/TC 350. The working list of terms and definitions generally included a mix of both

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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.

The database of terms and definitions developed by SC 14 on design life and service life planning was submitted to the AHG on terminology in September, 2006. To ensure that proper terminology (terms and definitions) are clearly delineated and understood for the concepts applied within both the existing and new Parts of ISO 15686, at the 2007 SC14 plenary meeting, a resolution was passed that SC14 work to develop a Technical Specification on service life planning terminology. The intent was that the TS would be used as a normative reference for the various parts of ISO 15686. In 2011, it was agreed that the document would instead take the form of a Technical Report.

As part of ISO 15686, this Technical Report 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 14 related to design life and service life planning 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.

The compilation of terms and definitions, and related abbreviations, included in Clause 3 of this Technical Report are for concepts that have been standardized and/or applied through publication of individual parts of ISO 15686 within ISO/TC 59/SC 14.

The gradual evolution of all of these concepts inevitably means that the “service life planning in buildings and civil engineering works” terminology will continue to develop and that therefore this document might 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 might be given further consideration within ISO/TC 59 SC 2 on Terminology and harmonization of languages for possible inclusion in a part of the ISO 6707 series.


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# Buildings and constructed assets — Service life planning —

# Part 11: Terminology

## 1 Scope

This Technical Report provides a compilation of the terms and definitions of concepts that have been standardized to establish a vocabulary applicable to the aspects of both the construction and use of a building or civil engineering works and the service life planning of the same, as applied in the documents of ISO/TC 59/SC 14 *Design life*.

This Technical Report consists of terms and definitions included in the different parts of ISO 15686, along with their abbreviated designations, where applicable.

The terms and definitions of concepts listed in Clause 3, along with any relevant abbreviated designations, include those representing concepts that have been standardized and/or applied within SC 14, as well as a number of others that have originally been developed elsewhere within the ISO technical structure. A cross reference is included in each of the definitions to the specific part of ISO 15686 in which the concept is defined, as well as to the International Standard (s) from where the definition originates, unless otherwise noted.

## 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 ISO/TC 59/SC 14 documents and follows the format recommended ISO 10241-1:2011, 6.4.7.(b) regarding references to terms and symbols in definitions.

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.

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

NOTE 3 The terminological entries are loaded on ISO's Online Browsing Platform (https://www.iso.org/obp/ui/). Search for 15686-11 and click on *Terms and definitions* to find the terms. Sort by term to find the terms in alphabetical order.

# 3 Terms and definitions

## 3.1 Terms relating to service life planning in buildings and civil engineering works

**3.1.1**
**accelerated short-term exposure**
*short-term exposure* (3.1.119) in which the *agent intensity* (3.1.6) is raised above the levels expected in service

[SOURCE: ISO 15686-2:2012, 3.1.1]

**3.1.2**
**acquisition cost**
all costs included in acquiring an *asset* (3.1.7.1)(3.1.7.2) by purchase/lease or construction *procurement* (ISO 10845-1:2010, 3.30) route, excluding costs during the occupation and use or end-of-life phases of the *life cycle* (3.1.60) of the *constructed asset* (3.1.15)

[SOURCE: ISO 15686-5:2008, 3.1.1]

**3.1.3**
**ageing**
*degradation* (3.1.17) due to long term influence of *agents* (3.1.5) related to use

[SOURCE: ISO 15686-2:2012, 3.1.2]

**3.1.4**
**ageing exposure**
procedure in which a *product* (ISO 6707-1:2014, 6.1.2)(3.1.92) is exposed to *agents* (3.1.5) believed or known to cause *ageing (3.1.3)* for the purpose of undertaking/initiating a *service life prediction (3.1.117)* or comparison of relative *performance* (3.1.78.1)(3.1.78.2)

[SOURCE: ISO 15686-2:2012, 3.1.3]

**3.1.5**
**agent**
whatever acts on a *building* (ISO 6707-1:2014, 3.1.3)(3.1.10) or its parts to adversely affect its *performance* (3.1.78.1)(3.1.78.2)

EXAMPLE Person, water load, heat.

[SOURCE: ISO 15686-2:2012, 3.1.4]

**3.1.6**
**agent intensity**
*measure* (ISO 6707-1:2014, 9.1.7) of the extent to or level at which an *agent* (3.1.5) is present

Note 1 to entry: In ISO 15686-2, the term "agent intensity" refers figuratively to any quantity that conforms to the requirements for a measure; i.e. not only to UV radiation and rain intensity, etc., but also to relative humidity, $SO_2$ concentration, freeze–thaw rate and mechanical pressure, etc.

[SOURCE: ISO 15686-2:2012, 3.1.5]


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