

SVENSK STANDARD

SS-ISO 12006-2:2015



Fastställt/Approved: 2015-08-26
Publicerad/Published: 2015-09-08
Utgåva/Edition: 2
Språk/Language: engelska/English
ICS: 91.010.01

Strukturering av information om byggnadsverk – Del 2: Ramverk för klassificering (av information) (ISO 12006-2:2015, IDT)

Building construction – Organization of information about construction works – Part 2: Framework for classification (ISO 12006-2:2015, IDT)

This preview is downloaded from www.sis.se. Buy the entire standard via <https://www.sis.se/std-8015674>

Standarder får världen att fungera

SIS (Swedish Standards Institute) är en fristående ideell förening med medlemmar från både privat och offentlig sektor. Vi är en del av det europeiska och globala nätverk som utarbetar internationella standarder. Standarder är dokumenterad kunskap utvecklad av framstående aktörer inom industri, näringsliv och samhälle och befrämjar handel över gränser, bidrar till att processer och produkter blir säkrare samt effektiviserar din verksamhet.

Delta och påverka

Som medlem i SIS har du möjlighet att påverka framtida standarder inom ditt område på nationell, europeisk och global nivå. Du får samtidigt tillgång till tidig information om utvecklingen inom din bransch.

Ta del av det färdiga arbetet

Vi erbjuder våra kunder allt som rör standarder och deras tillämpning. Hos oss kan du köpa alla publikationer du behöver – allt från enskilda standarder, tekniska rapporter och standardpaket till handböcker och onlinetjänster. Genom vår webbtjänst e-nav får du tillgång till ett lättnavigerat bibliotek där alla standarder som är aktuella för ditt företag finns tillgängliga. Standarder och handböcker är källor till kunskap. Vi säljer dem.

Utveckla din kompetens och lyckas bättre i ditt arbete

Hos SIS kan du gå öppna eller företagsinterna utbildningar kring innehåll och tillämpning av standarder. Genom vår närhet till den internationella utvecklingen och ISO får du rätt kunskap i rätt tid, direkt från källan. Med vår kunskap om standarders möjligheter hjälper vi våra kunder att skapa verklig nytta och lönsamhet i sina verksamheter.

Vill du veta mer om SIS eller hur standarder kan effektivisera din verksamhet är du välkommen in på www.sis.se eller ta kontakt med oss på tel 08-555 523 00.



Standards make the world go round

SIS (Swedish Standards Institute) is an independent non-profit organisation with members from both the private and public sectors. We are part of the European and global network that draws up international standards. Standards consist of documented knowledge developed by prominent actors within the industry, business world and society. They promote cross-border trade, they help to make processes and products safer and they streamline your organisation.

Take part and have influence

As a member of SIS you will have the possibility to participate in standardization activities on national, European and global level. The membership in SIS will give you the opportunity to influence future standards and gain access to early stage information about developments within your field.

Get to know the finished work

We offer our customers everything in connection with standards and their application. You can purchase all the publications you need from us - everything from individual standards, technical reports and standard packages through to manuals and online services. Our web service e-nav gives you access to an easy-to-navigate library where all standards that are relevant to your company are available. Standards and manuals are sources of knowledge. We sell them.

Increase understanding and improve perception

With SIS you can undergo either shared or in-house training in the content and application of standards. Thanks to our proximity to international development and ISO you receive the right knowledge at the right time, direct from the source. With our knowledge about the potential of standards, we assist our customers in creating tangible benefit and profitability in their organisations.

If you want to know more about SIS, or how standards can streamline your organisation, please visit www.sis.se or contact us on phone +46 (0)8-555 523 00



Den internationella standarden ISO 12006-2:2015 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av ISO 12006-2:2015.

Denna standard ersätter SS-ISO 12006-2, utgåva 1.

The International Standard ISO 12006-2:2015 has the status of a Swedish Standard. This document contains the official English version of ISO 12006-2:2015.

This standard supersedes the Swedish Standard SS-ISO 12006-2, edition 1.

© Copyright/Upphovsrätten till denna produkt tillhör SIS, Swedish Standards Institute, Stockholm, Sverige. Användningen av denna produkt regleras av slutanvändarlicensen som återfinns i denna produkt, se standardens sista sidor.

© Copyright SIS, Swedish Standards Institute, Stockholm, Sweden. All rights reserved. The use of this product is governed by the end-user licence for this product. You will find the licence in the end of this document.

Uppllysningar om sakinnehållet i standarden lämnas av SIS, Swedish Standards Institute, telefon 08-555 520 00. Standarder kan beställas hos SIS Förlag AB som även lämnar allmänna upplysningar om svensk och utländsk standard.

Information about the content of the standard is available from the Swedish Standards Institute (SIS), telephone +46 8 555 520 00. Standards may be ordered from SIS Förlag AB, who can also provide general information about Swedish and foreign standards.

Denna standard är framtagen av kommittén för Bygg- och förvaltningsdokumentation, SIS/TK 269.

Har du synpunkter på innehållet i den här standarden, vill du delta i ett kommande revideringsarbete eller vara med och ta fram andra standarder inom området? Gå in på www.sis.se - där hittar du mer information.

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
3.1 General.....	1
3.2 Construction resource.....	2
3.3 Construction process.....	3
3.4 Construction result.....	4
3.5 Construction property.....	5
4 Basic principles	6
4.1 Object and process model.....	6
4.2 Classification and composition.....	7
4.3 Classification (type-of).....	8
4.4 Systems and compositional structuring (part-of).....	9
4.5 Other classification tables.....	9
4.6 Properties.....	9
5 Recommended classification tables	10
Annex A (informative) Classification table titles and examples	11
Annex B (informative) Classification concepts	20
Bibliography	23

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, *Buildings and civil engineering works*, Subcommittee SC 13, *Organization of information about construction works*.

This second edition cancels and replaces the first edition (ISO 12006-2:2001), which has been technically revised.

ISO 12006 consists of the following parts, under the general title *Building construction — Organization of information about construction works*:

- *Part 2: Framework for classification*
- *Part 3: Framework for object-oriented information*

[Annexes A](#) and [B](#) of this part of ISO 12006 are for information only.

Introduction

0.1 Background

This part of ISO 12006 was first produced when there was little international standardization of classification systems for construction. Now, several national classification systems have been developed, for example, in North America, Scandinavia, and the UK, that implement the 2001 edition. Lessons learned in these implementations have been applied in this second edition.

This part of ISO 12006 has also been revised to take into account developments in information technology (notably building information modelling) and construction procurement (for example, design-build and design-build-operate). It has been extended and definitions have been refined to better serve all construction sectors, including building, civil engineering, and even process engineering. However, it continues to serve traditional information technologies and procurement methods.

A survey conducted as part of the work towards this edition showed that the most widely used classifications remain work results (mainly for specifications) and elements (mainly for cost analysis). They are also the most widely varied classification tables not only in their itemization and structure but also in the range of purposes to which they are put. There are other classifications, potentially just as important, which are used to a lesser degree, e.g. for construction products and properties.

0.2 The need for standardization

Building information modelling and modern forms of procurement require all these construction object classes to be used, along with many others. Building information modelling, in particular, is about exchange of information of all types along the project time line and between participants and applications. This is also the case for cooperative forms of procurement. For this exchange to be successful, a complete and consistent approach to construction object classification is required within the project, and between projects. This part of ISO 12006 is intended to facilitate this exchange.

Information types include geometrical data, functional and technical data, and cost data and maintenance data. The project timeline runs from inception to eventual demolition. Participants include clients, designers, authorities, constructors, end users, and operators. Applications include modelling, specification, product information, and cost information systems. Even now, there is still pressure for each of these to retain, or even develop, its own classification silo. This is not sustainable.

While national classifications that implement this part are still likely to differ in their detail (for example, due to differences in construction culture and legislation), mapping between them should be fairly straightforward. This is because they will be using the same overarching classification framework and construction object class definitions. This, in turn, will help with international construction project work (with participants from many countries), and with development of applications intended to be used internationally.

0.3 The content of this part

This part of ISO 12006 defines a framework for construction-sector classification systems and identifies a set of recommended classification tables and their titles for a range of construction object classes according to particular views, supported by definitions.

Building construction — Organization of information about construction works —

Part 2: Framework for classification

1 Scope

This part of ISO 12006 defines a framework for the development of built environment classification systems. It identifies a set of recommended classification table titles for a range of information object classes according to particular views, e.g. by form or function, supported by definitions. It shows how the object classes classified in each table are related, as a series of systems and sub-systems, e.g. in a building information model.

This part of ISO 12006 does not provide a complete operational classification system, nor does it provide the content of the tables, though it does give examples. It is intended for use by organizations which develop and publish such classification systems and tables, which may vary in detail to suit local needs. However, if this part of ISO 12006 is applied in the development of local classification systems and tables, then harmonization between them will be facilitated.

This part of ISO 12006 applies to the complete life cycle of construction works, including briefing, design, documentation, construction, operation and maintenance, and demolition. It applies to both building and civil engineering works, including associated engineering services and landscaping.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 22274, *Systems to manage terminology, knowledge and content — Concept-related aspects for developing and internationalizing classification systems*

3 Terms and definitions

3.1 General

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

NOTE 1 The definitions are arranged in the following order: construction resource, construction process, construction result, and construction properties.

NOTE 2 In the definitions, terms that are defined elsewhere within this clause are shown in *italics*.

NOTE 3 Examples are given in [Annex A](#).

3.1.1 object

any part of the perceivable or conceivable world

Note 1 to entry: An object is something abstract or physical toward which thought, feeling, or action is directed.

3.1.2

construction object

object ([3.1.1](#)) of interest in the context of a *construction process* ([3.3.2](#))

3.1.3

construction system

interacting *construction objects* ([3.1.2](#)) organized to achieve one or more purposes

Note 1 to entry: Construction systems can be classified in accordance with this International Standard.

[SOURCE: ISO/IEC 15288:2008, modified]

3.1.4

type-of relation

relation between two concepts where the intention of one of the concepts includes that of the other concept and at least one additional delimiting characteristic

Note 1 to entry: Type-of relation is also known as generic relation.

[SOURCE: ISO 1087-1:2000, 3.2.21]

3.1.5

part-of relation

relation between two construction objects where one object constitutes the whole and the other a part of that whole

Note 1 to entry: Part-of relation is also known as partitive relation, part-whole relation, or whole-part relation.

Note 2 to entry: See also ISO/IEC 81346-1.

[SOURCE: ISO 1087-1:2000, 3.2.22, modified]

3.1.6

natural environment

non-artificial environment of any physical *construction object* ([3.1.2](#))

3.1.7

built environment

physical *construction result* ([3.4.6](#)) intended to serve a function or user activity

Note 1 to entry: The built environment may be viewed as a system of either built space or built structure.

3.1.8

space

limited three-dimensional extent defined physically or notionally

3.1.9

activity space

space ([3.1.8](#)) defined by the spatial extension of an activity

Note 1 to entry: A spatial extension of an activity, for example, a table or a bed, and the activity space around them.

3.2 Construction resource

3.2.1

construction agent

human *construction resource* ([3.2.5](#)) carrying out a *construction process* ([3.3.2](#))

3.2.2

construction aid

construction resource (3.2.5) intended to assist in carrying out a *construction process* (3.3.2)

Note 1 to entry: A construction aid is generally not intended for incorporation in a permanent manner in a construction entity.

3.2.3

construction information

information of interest in a *construction process* (3.3.2)

Note 1 to entry: Construction information may be seen both as a construction resource and as a construction result.

3.2.4

construction product

product intended to be used as a *construction resource* (3.2.5)

Note 1 to entry: Construction products have different complexity and can, by themselves or together with others, make up the parts in any level of assembly of construction entities.

3.2.5

construction resource

construction object (3.1.2) used in a *construction process* (3.3.2) to achieve a *construction result* (3.4.6)

3.3 Construction process

3.3.1

construction activity

component process of construction process

3.3.2

construction process

process which uses *construction resources* (3.2.5) to achieve *construction results* (3.4.6)

Note 1 to entry: Each construction process may be split up into its component processes.

Note 2 to entry: See also ISO 22263:2008.

3.3.3

construction process lifecycle

sequence of stages from the start to the end of the *construction process* (3.3.2)

3.3.4

pre-design process

construction process (3.3.2) determining *construction properties* (3.5.1) for the *built environment* (3.1.7) before it is designed

3.3.5

design process

construction process (3.3.2) determining *construction properties* (3.5.1) for the *built environment* (3.1.7) before it is made physical

3.3.6

production process

construction process (3.3.2) resulting in *built environment* (3.1.7)

Note 1 to entry: Production process includes demolition and recycling process.

3.3.7

maintenance process

construction process (3.3.2) preserving the function of, or operating, the *built environment* (3.1.7)