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# Framework for specifying performance in buildings

*Cadre de travail pour la spécification de la performance dans les bâtiments*

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# Contents

Page

**Foreword** ..... **iv**
**Introduction** ..... **v**
**1 Scope** ..... **1**
**2 Normative references** ..... **1**
**3 Terms and definitions** ..... **1**
**4 Framework** ..... **4**
4.1 General considerations ..... 4
4.2 Model for specifying performance ..... 5
4.2.1 Four level model ..... 5
4.2.2 Structure of the multiple layer model ..... 5
**Annex A** (informative) **Commentary** ..... **13**
**Annex B** (informative) **Guidelines for the preparation of performance specifications** ..... **20**
**Bibliography** ..... **24**

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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 World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/TC 59, *Buildings and civil engineering works*, Subcommittee SC 3, *Functional/user requirements and performance in building construction*.

This first edition of ISO 19208 cancels and replaces ISO 6240:1980, ISO 6241:1984, ISO 7162:1992, ISO 9699:1994 and ISO/PAS 22539:2007, which have been technically revised.


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# Introduction

The performance concept has historically been used to address fitness for intended use of attributes of a building as a whole or a part thereof. Each characteristic is assessed in terms of whether or not it meets assumed performance.

Over the last decade, this concept has been expanded to be used to address the beneficial or adverse impact of choices made regarding building materials, construction methods and resources, operating energy, water services and sanitary systems on economic conditions, the environment, a society or the quality of life, i.e. the contribution which a building makes to sustainable development. This document provides the necessary framework and principles to describe the performance of a building or a part thereof either in terms of fitness of purpose or beneficial and adverse impacts and to provide the means of evaluation for solutions for all these applications.

This document is intended to assist anyone concerned with specifying performance of attributes and aspects of a building or a part thereof. Those include regulators, specifiers and suppliers, as well as international and national standards committee members.

Specifying performance of a building ranges from fundamental to specific. This document is intended primarily to assist those who are involved in specifying performance in buildings by stating general principles. It includes tables aimed at identifying the main factors to be considered in their elaboration.

a) User requirements and societal expectations,

b) possible uses of the buildings and their spaces,

c) building subsystems of which the product is a part, and

d) agents, of any nature and origin, which are relevant to the performance of a building and related entities in use, and affecting factors.

Documents that specify performance may take various forms or features, such as regulations, specifications, or product standards. Annex B gives an example of application of the principles embodied in this document.

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# Framework for specifying performance in buildings

## 1 Scope

This document provides the framework for specifying the performance of a building as a whole or a part thereof in order to satisfy specified user requirements and societal expectations.

This document covers buildings as constructed and inbuilt fixed components. It does not cover

a) the use of the land for buildings,

b) the design and operation of the environment within which buildings are located, and

c) moveable contents within buildings.

NOTE 1 Guidance on the application of certain clauses is provided in Annex A.

NOTE 2 A part of a building includes subsystems, spaces, elements, assemblies, components, products and materials.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6707-1, *Building and civil engineering — Vocabulary — Part 1: General terms*

ISO 6707-2, *Building and civil engineering — Vocabulary — Part 2: Contract terms*

## 3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

**3.1**
**agent**
whatever acts on the building or parts of a building

**3.2**
**assembly**
set of related *components* (3.6) attached to each other

[SOURCE: ISO 6707-1:2014, 5.5.5]

**3.3**
**attribute**
*characteristic* (3.4) assessed in terms of whether it does or does not meet a given performance

EXAMPLE Go or no go.

[SOURCE: ISO 6707-1:2014, 9.1.5, modified]

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**3.4**
**characteristic**
*property* (3.15) that distinguishes the totality of specific items under consideration

[SOURCE: ISO 6707-1:2014, 9.1.4, modified]

**3.5**
**competent person**
person who has demonstrated his ability to apply knowledge and skills to make a determination regarding the performance of building attributes in relation to the required performance

[SOURCE: ISO 9000:2015, 3.1.6, modified]

**3.6**
**component**
*product* (3.14) manufactured as a distinct unit to serve a specific function or functions

[SOURCE: ISO 6707-1:2014, 6.1.3]

**3.7**
**impact**
change that may be beneficial or adverse

**3.8**
**indicator**
quantitative or qualitative measure of impacts

**3.9**
**performance**
ability to fulfil required functions under intended use conditions, behaviour when in use or impact on economic conditions, the environment, society or quality of life

[SOURCE: ISO 6707-1:2014, 9.1.1]

**3.10**
**performance description**
*performance* (3.9) demanded or expected to be fulfilled by an attribute

**3.11**
**performance parameters**
group of variables used to quantitatively describe performance of attributes or group of indicators used to evaluate the performance of attributes

**3.12**
**performance specification**
document that establishes the required performance and the means for evaluating performance in terms of such statement for one or more attributes or aspects

**3.13**
**performance statement**
*performance* (3.9) demanded or expected to be fulfilled in response to user requirements

[SOURCE: ISO 6707-1:2014, 9.1.16, modified]

**3.14**
**product**
item manufactured or processed for incorporation in buildings

[SOURCE: ISO 6707-1:2014, 6.1.2]


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**3.15**
**property**
inherent or acquired feature of an item

[SOURCE: ISO 6707-1:2014, 9.1.3]

**3.16**
**requirement**
expression in the content of a document conveying criteria to be fulfilled if compliance with the document is to be claimed and from which no deviation is permitted

[SOURCE: ISO/IEC directives — Part 2]

**3.17**
**scale**
extent of an impact

Note 1 to entry: Examples of scale include the user; neighbourhood, regional, national or global.

**3.18**
**space**
area or volume bounded actually or theoretically

[SOURCE: ISO 6707-1:2014, 4.1.1]

**3.19**
**specification**
document that prescribes the performance requirements to be fulfilled

[SOURCE: ISO/IEC Guide 2]

**3.20**
**societal expectations**
what society deems as acceptable

Note 1 to entry: Societal expectations provide motives for actions taken.

**3.21**
**standard**
document, established by consensus and approved by an appropriate body, that provides for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context

Note 1 to entry: Standards should be based on the consolidated results of science, technology and experience, and aimed at the promotion of optimum community benefits.

[SOURCE: ISO/IEC Guide 2, 3.2]

**3.22**
**subsystem**
part of a building, including space, fulfilling one or several of the functions needed to meet the user requirements and/or societal expectations

**3.23**
**sustainable development**
development that meets the needs of the present without compromising the ability of future generations to meet their own needs

[SOURCE: ISO 15392:2008, 3.21]

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**3.24**
**suitable**
capable of fulfilling or having fulfilled the intended function or fit for its intended purpose

**3.25**
**user**
organization, person, animal or object for which a building is designed

[SOURCE: ISO 6707-1:2014, 8.1]

**3.26**
**user requirement**
statement of need to be fulfilled

[SOURCE: ISO 6707-1:2014, 9.1.2]

Note 1 to entry: User requirements can be driven by societal expectations.

# 4 Framework

## 4.1 General considerations

The objectives of this document relate to behaviour in use and typically relate to health, safety, convenience, comfort and protection of property. They may also relate to contributions to sustainable development.

Performance may be categorized into the following four types:

a) reaction to agents;

b) influence on human activities;

c) impact on society;

d) change in performance over time.

The performance of a building as a whole may vary from its parts. The performance of a part of a building, such as a subsystem, element or component may also influence the performance of a building as a whole. The relationship between a part of a building and the whole of the building depends upon its intended or designed role.

There are forward and backward linkages between the building as a whole and its parts, such as subsystems, spaces, elements, assemblies, components, products and materials, as illustrated in Figure 1. Accordingly, an objective and associated performance of a part of a building need not be identical to the objective and performance specified for the building as a whole. For example, if the object of the building as a whole is to minimize operational energy usage, the objectives for walls and floors may relate to thermal performance.

On the other hand, a part of a building may have multi-faceted objectives derived from the multi-faceted performance of the building as a whole. For example, a wall might be required to satisfy thermal, tightness and structural performance requirements.

Performance specified for a component should be project specific and not generic as the context within which the component is used needs to be considered.


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