
Document management —

Part 5:

**Application of metadata for the
construction and facility management
sector**

Gestion de documents —

*Partie 5: Application des métadonnées dans le secteur de
la construction et de la gestion d'installation*

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 82045-5 was prepared by Technical Committee ISO/TC 10, *Technical product documentation*, Subcommittee SC 8, *Construction documentation*.

ISO/IEC 82045 consists of the following parts, under the general title *Document management*:

- *Part 1: Principles and methods*
- *Part 2: Metadata elements and information reference model*
- *Part 5: Application of metadata to the construction and facility management sectors*

Maintenance of the information reference model and archiving are to form the subjects of future Parts 3 and 4.

Introduction

The approach taken by this part ISO/IEC 82045 is to be useful and sufficient for practice within its application domain, not to be a rich and all-encompassing set of metadata. It specifies subsets of the cross-industry standard presented in IEC 82045-1 and IEC 82045-2, and presents industry-specific details. It is suitable for all parties involved in preparing and using technical documentation and, although its specifications are primarily intended for document users, system developers are expected to develop tools capable of implementing and supporting its specifications.



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Document management —

Part 5:

Application of metadata for the construction and facility management sector

1 Scope

This part ISO/IEC 82045 specifies elements and methods for sharing and exchanging management data (metadata) for documents, to be used with electronic or paper-based document management systems. The document concept, which includes CAD files and all other information entities that need to be managed, is according to IEC 82045-1. The specific application domain of this part of ISO/IEC 82045 is the AEC and FM sectors.

2 Normative references

The following referenced documents are indispensable for the application 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 635 (all parts), *Codes for the representation of names of languages*

ISO 5455:1979, *Technical drawings — Scales*

<https://www.iso.org/standard/5455-5-2005>
ISO 12006-2, *Building construction — Organization of information about construction works — Part 2: Framework for classification of information*

IEC 82045-1:2001, *Document management — Part 1: Principles and methods*

IEC 82045-2:2004, *Document management — Part 2: Metadata elements and information reference model*

3 Terms and definitions and abbreviated terms

For the purposes of this document, the terms and definitions given in IEC 82045-1, IEC 82045-2 and ISO 12006-2 and the following abbreviated terms apply.

AEC architecture, engineering and construction

FM facility management

CAD computer aided design

- DWF drawing web format ¹⁾
- PDF portable document format ²⁾
- TIFF tagged image file format ³⁾

4 Relationship of this part of ISO/IEC 82045 to IEC 82045-1 and IEC 82045-2

IEC 82045-1 provides general principles and methods for the use of metadata in management of technical product documents. It provides the framework for the other parts.

IEC 82045-2 presents an extensive model that specifies all metadata elements required for such document management, as well as a list including definitions for the metadata elements.

This part of ISO/IEC 82045 is primarily intended to give more extensive support to the practical use of metadata for construction projects and continued use of the information for facility management purposes. It is prescriptive to some extent, but also provides information to facilitate the understanding of metadata concepts and how to apply them in AEC and FM activities.

5 Document life-cycle in construction and facility management processes

5.1 General

This clause describes document management activities related to AEC/FM, where metadata are used to support the process. For each group of activities, guidelines on methods for creating, exchanging, using and storing metadata are given.

5.2 Producing construction documents

The creation of documents in a construction project is normally distributed among a number of participating organizations. Each of the participants may utilize any document management system, configured with the participant's own specific metadata set.

For sharing purposes, a well-defined *common metadata set* shall be used throughout the project. The project team shall define this set by selection from the elements of this part of ISO/IEC 82045. The values allowed for each metadata element, where not stated by the standard, can be specified on the national or project level.

5.3 Document exchange and distribution

In the design phase, the responsibility for storing the original documents rests with each of the participants that produced the document. Current document versions are shared in a common location or distributed between the participants. Each *document version* shall be unambiguously identifiable and, in many cases, there is also a requirement to document the *distribution process*.

1) DWF is the trade name of a product supplied by Autodesk. This information is given for the convenience of users of this part of ISO 82045 and does not constitute an endorsement by ISO and IEC of the product named. Equivalent products may be used if they can be shown to lead to the same results.

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