

Industry Foundation Classes (IFC) for data sharing in
the construction and facility management industries -
Part 1: Data schema (ISO 16739-1:2024)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>See Eesti standard EVS-EN ISO 16739-1:2024 sisaldab Euroopa standardi EN ISO 16739-1:2024 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 03.04.2024.</p> <p>Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN ISO 16739-1:2024 consists of the English text of the European standard EN ISO 16739-1:2024.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 03.04.2024.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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ICS 25.040.40

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English Version

Industry Foundation Classes (IFC) for data sharing in the
construction and facility management industries - Part 1:
Data schema (ISO 16739-1:2024)

Classes IFC pour le partage des données dans le secteur
de la construction et de la gestion de patrimoine -
Partie 1: Schéma de données (ISO 16739-1:2024)

Industry Foundation Classes (IFC) für den
Datenaustausch in der Bauwirtschaft und im
Anlagenmanagement - Teil 1: Datenschema (ISO
16739-1:2024)

This European Standard was approved by CEN on 3 February 2024.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

This document (EN ISO 16739-1:2024) has been prepared by Technical Committee ISO/TC 59 "Buildings and civil engineering works" in collaboration with Technical Committee CEN/TC 442 "Building Information Modelling (BIM)" the secretariat of which is held by SN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2024, and conflicting national standards shall be withdrawn at the latest by October 2024.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 16739-1:2020.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

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Endorsement notice

The text of ISO 16739-1:2024 has been approved by CEN as EN ISO 16739-1:2024 without any modification.

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Abstract

This document represents an open international standard for information used in Building Information Modeling (BIM) that is exchanged and shared among software applications used by the various participants in the construction or facility management industry sector. This document includes definitions that cover information required for buildings and infrastructure works over their life cycle. This edition of the document added coverage of information required for infrastructure facilities including bridges, roads, railways, waterways and port facilities.

This document comprises the publication of a data schema, its documentation, the property and quantity set definitions and the mechanism of an exchange file format structure.

Definitions from this document are used to support different recognized work flows in the construction and facility management industry sector, representing information deliveries. Such information deliveries can be described according to ISO 29481.

Different implementation levels of this document can be defined to better support multiple information deliveries, they are referred to as a Model View Definition (MVD). Each MVD identifies which subset of the definitions of this document imposes requirements for implementation in software applications. Conforming software applications need to identify the model view definition they conform to when applying for software certification.

The following are within the scope of this edition of this document:

1. BIM exchange format definitions that are required during the life cycle phases of buildings and infrastructure:
 - demonstrating the need;
 - conception of need;
 - outline feasibility;
 - substantive feasibility study and outline financial authority;
 - outline conceptual design;
 - full conceptual design;
 - coordinated design;
 - procurement and full financial authority;
 - production information;
 - construction;
 - operation and maintenance.
2. BIM exchange format definitions that are required by the various disciplines involved within the life cycle phases:
 - architecture and civil engineering design;
 - service and utilities engineering;
 - structural engineering;
 - procurement;
 - construction planning;
 - facility and utility management;
 - project management;
 - client requirement management;
 - industry authorities for permits and approval.

3. BIM exchange format definitions including:

- project structure;
- physical components;
- spatial components;
- analysis items;
- processes;
- resources;
- controls;
- actors;
- context definition.