



BSI Standards Publication

**Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) – Information management using building information modelling**

---

Part 2: Delivery phase of the assets

## National foreword

This British Standard is the UK implementation of EN ISO 19650-2:2018. It is identical to ISO 19650-2:2018. Together with BS EN ISO 19650-1:2018, this document supersedes BS 1192:2007+A2:2016 and the technical content is intended as a replacement for content found in PAS 1192-2:2013, both of which are withdrawn.

The UK participation in its preparation was entrusted to Technical Committee B/555, Construction design, modelling and data exchange.

A list of organizations represented on this committee can be obtained on request to its committee manager.

The UK committee draws users' attention to the [National Annex NA](#), which provides clarifications and recommendations to assist users in the application of this standard. Additional guidance to assist users of this standard can be found in:

- PD 19650-0, *Transition guidance to BS EN ISO 19650*, which is published by BSI; and
- the UK BIM Framework guidance suite published by BSI, CDBB and the UK BIM Alliance at [www.ukbimframework.org](http://www.ukbimframework.org) – in particular *Information management according to BS EN ISO 19650 – Guidance Part 2: Parties, teams and processes for the delivery phase of the assets*, which includes guidance to support the National Annex.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2021  
Published by BSI Standards Limited 2021

ISBN 978 0 559 13892 4

ICS 35.240.67; 91.010.01

**Compliance with a British Standard cannot confer immunity from legal obligations.**

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 January 2019.

### Amendments/corrigenda issued since publication

Date	Text affected
28 February 2021	National Foreword and National Annex updated

EUROPEAN STANDARD

EN ISO 19650-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2018

ICS 35.240.67; 91.010.01

English Version

Organization and digitization of information about  
buildings and civil engineering works, including building  
information modelling (BIM) - Information management  
using building information modelling - Part 2: Delivery  
phase of the assets (ISO 19650-2:2018)

Organisation et numérisation des informations  
relatives aux bâtiments et ouvrages de génie  
civil, y compris modélisation des informations  
de la construction (BIM) - Gestion de  
l'information par modélisation des informations  
de la construction - Partie 2: Phase de  
réalisation des actifs (ISO 19650-2:2018)

Organisation von Daten zu Bauwerken -  
Information management mit BIM - Teil 2:  
Lieferphase der Assets (ISO 19650-2:2018)

This European Standard was approved by CEN on 24 August 2018.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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 19650-2:2018) 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 June 2019, and conflicting national standards shall be withdrawn at the latest by June 2019.

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.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

### Endorsement notice

The text of ISO 19650-2:2018 has been approved by CEN as EN ISO 19650-2:2018 without any modification.

# Contents

Page

<b>Foreword</b> .....	<b>v</b>
<b>Introduction</b> .....	<b>vi</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms, definitions and symbols</b> .....	<b>1</b>
3.1 Terms and definitions.....	1
3.1.1 General terms.....	1
3.1.2 Terms related to assets and projects.....	2
3.1.3 Terms related to information management.....	2
3.2 Symbols.....	2
<b>4 Information management during the delivery phase of assets</b> .....	<b>3</b>
<b>5 Information management process during the delivery phase of asset</b> .....	<b>3</b>
5.1 Information management process — Assessment and need.....	3
5.1.1 Appoint individuals to undertake the information management function.....	3
5.1.2 Establish the project's information requirements.....	4
5.1.3 Establish the project's information delivery milestones.....	4
5.1.4 Establish the project's information standard.....	4
5.1.5 Establish the project's information production methods and procedures.....	5
5.1.6 Establish the project's reference information and shared resources.....	5
5.1.7 Establish the project's common data environment.....	5
5.1.8 Establish the project's information protocol.....	6
5.1.9 Activities for assessment and need.....	6
5.2 Information management process — Invitation to tender.....	7
5.2.1 Establish the appointing party's exchange information requirements.....	7
5.2.2 Assemble reference information and shared resources.....	8
5.2.3 Establish tender response requirements and evaluation criteria.....	8
5.2.4 Compile invitation to tender information.....	8
5.2.5 Activities for invitation to tender.....	9
5.3 Information management process — Tender response.....	9
5.3.1 Nominate individuals to undertake the information management function.....	9
5.3.2 Establish the delivery team's (pre-appointment) BIM execution plan.....	10
5.3.3 Assess task team capability and capacity.....	10
5.3.4 Establish the delivery team's capability and capacity.....	11
5.3.5 Establish the delivery team's mobilization plan.....	11
5.3.6 Establish the delivery team's risk register.....	12
5.3.7 Compile the delivery team's tender response.....	12
5.3.8 Activities for tender response.....	12
5.4 Information management process — Appointment.....	13
5.4.1 Confirm the delivery team's BIM execution plan.....	13
5.4.2 Establish the delivery team's detailed responsibility matrix.....	13
5.4.3 Establish the lead appointed party's exchange information requirements.....	14
5.4.4 Establish the task information delivery plan(s).....	15
5.4.5 Establish the master information delivery plan.....	15
5.4.6 Complete lead appointed party's appointment documents.....	16
5.4.7 Complete appointed party's appointment documents.....	16
5.4.8 Activities for appointment.....	16
5.5 Information management process — Mobilization.....	17
5.5.1 Mobilize resources.....	17
5.5.2 Mobilize information technology.....	17
5.5.3 Test the project's information production methods and procedures.....	18
5.5.4 Activities for mobilization.....	18
5.6 Information management process — Collaborative production of information.....	18

5.6.1	Check availability of reference information and shared resources.....	18
5.6.2	Generate information.....	18
5.6.3	Undertake quality assurance check.....	19
5.6.4	Review information and approve for sharing.....	19
5.6.5	Information model review.....	20
5.6.6	Activities for collaborative production of information.....	20
5.7	Information management process — Information model delivery.....	21
5.7.1	Submit information model for lead appointed party authorization.....	21
5.7.2	Review and authorize the information model.....	21
5.7.3	Submit information model for appointing party acceptance.....	22
5.7.4	Review and accept the information model.....	22
5.7.5	Activities for information model delivery.....	22
5.8	Information management process — Project close-out.....	23
5.8.1	Archive the project information model.....	23
5.8.2	Capture lessons learned for future projects.....	23
5.8.3	Activities for project close-out.....	23
<b>Bibliography</b> .....		<b>25</b>
<b>Annex A (informative) Information management assignment matrix</b> .....		<b>26</b>

## 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](http://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](http://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 of the voluntary nature of standards, 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 [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 59, *Buildings and civil engineering works*, Subcommittee SC 13, *Organization and digitalization of information about buildings and civil engineering works, including building information modelling (BIM)*.

A list of all parts in the ISO 19650 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

### 0.1 Purpose

This document is designed to enable an appointing party to establish their requirements for information during the delivery phase of assets and to provide the right commercial and collaborative environment within which (multiple) appointed parties can produce information in an effective and efficient manner.

This document is applicable to built assets and construction projects of all sizes and all levels of complexity. This includes large estates, infrastructure networks, individual buildings and pieces of infrastructure, and the projects or programmes that deliver them. However, the requirements included in this document should be applied in a way that is proportionate and appropriate to the scale and complexity of the asset or project. In particular, procurement and mobilization of asset or project appointed parties should be integrated as far as possible with documented processes for technical procurement and mobilization.

This document makes wide use of the phrase “shall consider”, particularly in the requirements in [Clause 5](#). This phrase is used to introduce a list of items that the person in question needs to think about carefully in connection with the primary requirement described in the clause. The amount of thought involved, the time taken to complete it and the need for supporting evidence will depend on the complexity of the project, the experience of the person(s) involved and the requirements of any national policy on introducing building information modelling. On a relatively small or straightforward project, it can be possible to complete, or dismiss as not relevant, some of these “shall consider” items very quickly.

One way to help identify which of the “shall consider” statements are relevant, can be to review each statement and create templates for projects of different sizes and complexity.

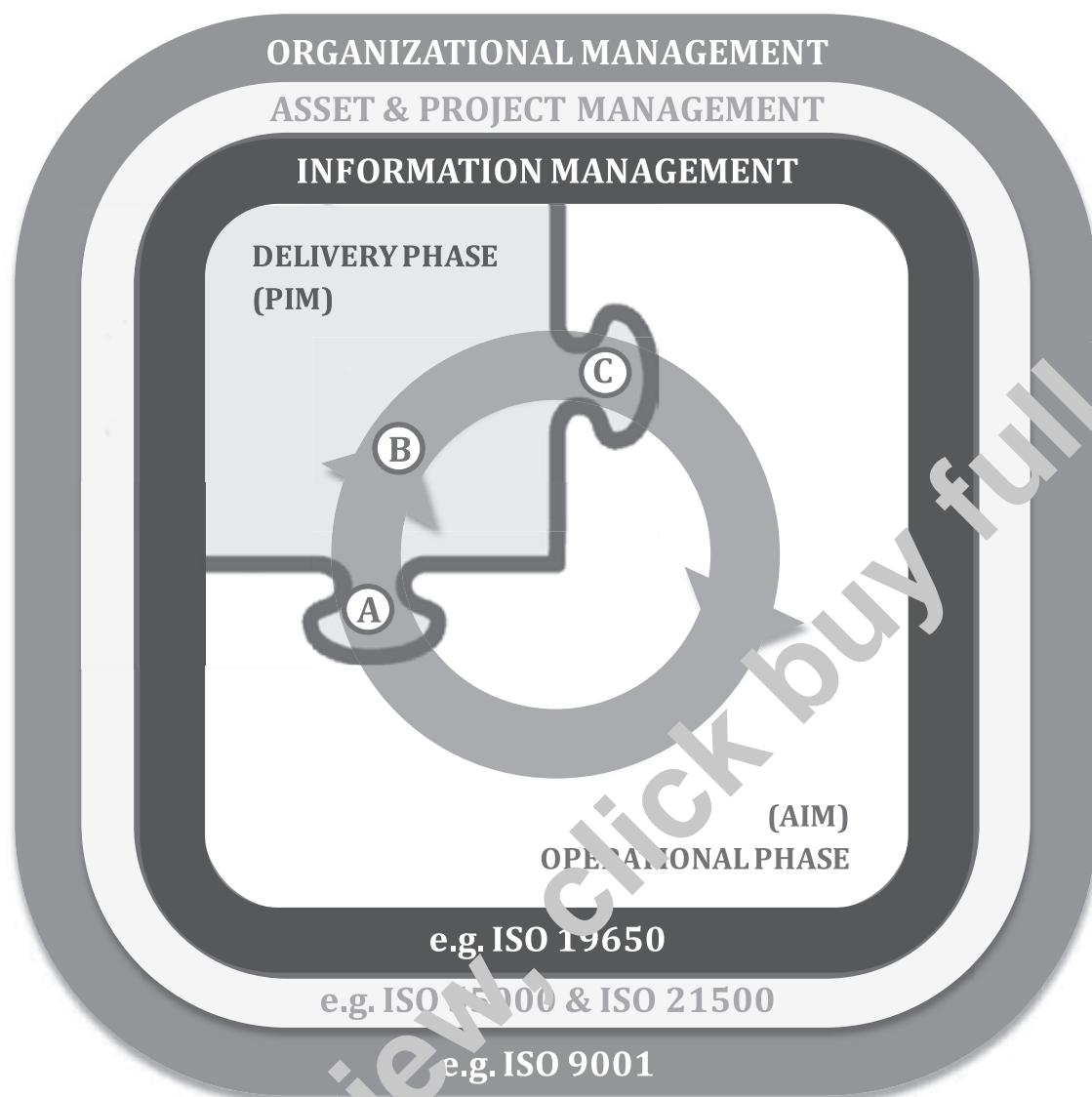
This document can be used by any appointing party. If the appointing party intends this document to apply to any asset (project) this should be reflected in the appointment.

This document defines the information management process, containing the activities through which delivery teams can collaboratively produce information and minimize wasteful activities.

This document is primarily intended for use by the following (see [Figure 1](#)):

- those involved in the management or production of information during the delivery phase of assets;
- those involved in the definition and procurement of construction projects;
- those involved in the specification of appointments and facilitation of collaborative working;
- those involved in the design, construction, operation, maintenance and decommissioning of assets; and
- those responsible for the realization of value for their organization from their asset base.

This document contains the requirements associated with the management of information during the delivery phase of built assets, which will need to be reviewed and revised on a regular basis until the best practice is established.



**Key**

- AIM asset information model
- PIM project information model
- A start of delivery phase — transfer of relevant information from AIM to PIM
- B progressive development of the design intent model into the virtual construction model
- C end of delivery phase — transfer of relevant information from PIM to AIM

**Figure 1 — Scope of this document**

**2 National annex with relevant national standards**

There are several standards required for the successful implementation of this document, relating to specific regions or countries, that are currently not suitable for inclusion within an international standard. As such, national standards bodies are encouraged to compile and document the standards, relevant to the region or country they represent, within a national annex. National annexes can also provide localised guidance and advice on how to implement this document for projects of varying complexity.

### 0.3 Relationship with other standards

The concepts and principles relating to the application of the requirements within this document are provided in ISO 19650-1.

General information on asset management can be found in ISO 55000.

Appointing parties can find that consideration of the concepts and principles contained within both ISO 19650-1 and ISO 55000 can assist the implementation of the requirements presented in this document and development of asset management in their organization.

### 0.4 Benefits of the ISO 19650 series

The aim of this series is to support all parties towards achieving their business objectives through the effective and efficient procurement, use and management of information during the delivery phase of assets.

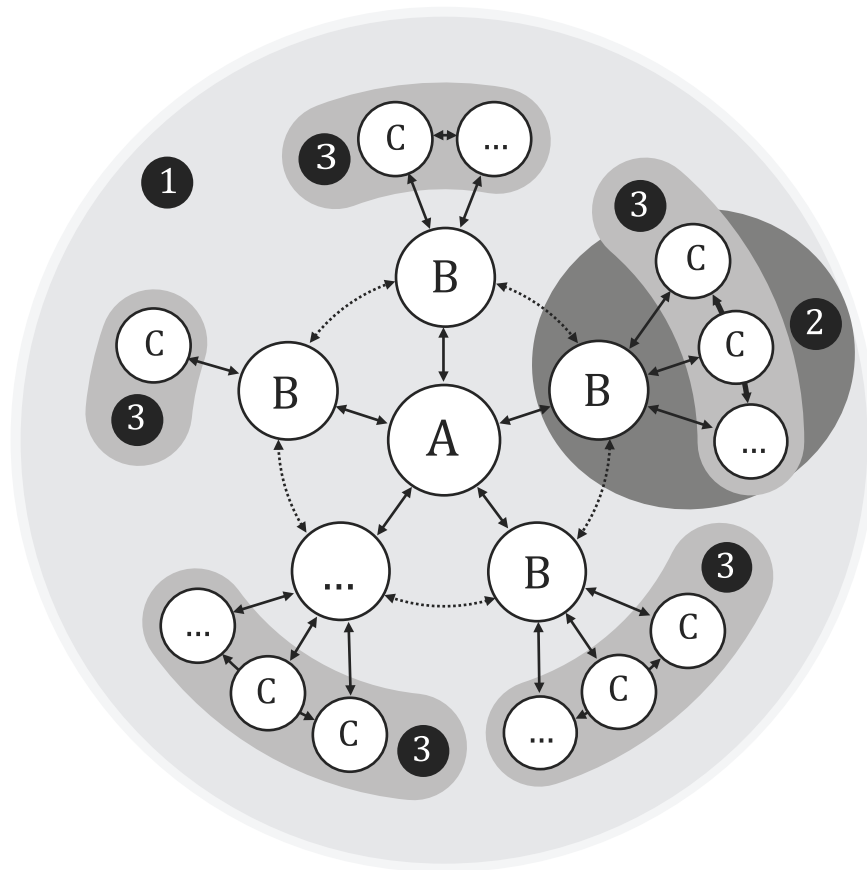
International cooperation in the preparation of these documents has identified a common information management process that can be applied to the broadest range of assets, in the broadest range of organizations, across the broadest range of cultures and under the broadest range of appointment routes.

### 0.5 Interfaces between parties and teams for the purpose of information management

For the purpose of this document, [Figure 2](#) shows the interfaces between parties and teams in terms of information management and should not be seen as identification of contractual relationships.

The terms for both parties and teams have been used throughout this document to identify and assign the accountable party for each sub-activity.

NOTE Delivery teams can join and leave the project team at any time.



**Key**

- A appointing party
- B lead appointed party
- C appointed party
- ... variable amount
- 1 project team
- 2 illustration of a delivery team
- 3 task team(s)
- ↔ information requirements and information exchange
- ⋯↔ information coordination

**Figure 2 — Interfaces between parties and teams for the purpose of information management**

# Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) – Information management using building information modelling —

## Part 2: Delivery phase of the assets

### 1 Scope

This document specifies requirements for information management, in the form of a management process, within the context of the delivery phase of assets and the exchanges of information within it, using building information modelling.

This document can be applied to all types of assets and by all types and sizes of organizations, regardless of the chosen procurement strategy.

### 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 19650-1, *Organization of information about construction works — Information management using building information modelling — Part 1: Concepts and Principles*

ISO 12006-2, *Building construction — Organization of information about construction works — Part 2: Framework for classification*

### 3 Terms, definitions and symbols

#### 3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 19650-1 and the following apply.

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

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

##### 3.1.1 General terms

###### 3.1.1.1

###### acceptance criteria

evidence required for considering that requirements have been fulfilled

[SOURCE: ISO 22263:2008, 2.1]