BUILDING INFORMATION MODELLING

"Use of a shared digital representation of a built asset to facilitate design, construction and operation processes to form a reliable basis for decisions."

(Source: EN ISO 19650-1:2018)

MAIN TECHNICAL COMMITTEES ON BIM STANDARDIZATION

- International level -

➢ ISO/TC 59/SC 13 – Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM)

Standards	21	Projects	13	National delegates	2

Scope

SC 13 is charged by TC 59 to focus on international standardization of information through the whole life cycle of buildings and infrastructure across the built environment:
- to enable interoperability of information;
- to deliver a structured set of standards, specifications and reports to define, describe, exchange, monitor, record and securely handle information, semantics and processes, with links to geospatial and other related built environment information;
- to enable object-related digital information exchange.

8 Working Groups

JWG 12	Joint ISO/TC 59/SC 13 - ISO/TC 184/SC 4 WG: Development of building data related standards	JWG 14	Joint ISO/TC 59/SC 13 - ISO/TC 211 WG: GIS-BIM interoperability
TF 1	Terminology	TF 2	Business Planning and Strategy
WG 2	Classification of the information on the construction industry	WG 8	Building information models - Information delivery manual
WG 11	Product data for building services systems model	WG 13	Implementation of collaborative working over the asset lifecycle

- European level -

➢ CEN/TC 442 – Building Information Modelling (BIM)

Standards	25	Projects	19	National delegates	7

Scope

Standardization in the field of structured semantic life-cycle information for the built environment. The committee will develop a structured set of standards, specifications and reports which specify methodologies to define, describe, exchange, monitor, record and securely handle asset data, semantics and processes with links to geospatial and other external data.

10 Working Groups

WG 1	Terminology	WG 2	Exchange information
WG 3	Information Delivery Specification	WG 4	Support Dictionaries
WG 5	Chair's Advisory Group	WG 6	Infrastructure
WG 7	Horizontal role	WG 8	Competence
WG 9	Digital twins in built environment	WG 10	Strategy and planning

MAIN STANDARDS ON BIM

Building construction - Organization of information about construction works	
ISO 22263:2008	Framework for management of project information
EN ISO 12006-2:2020	Part 2: Framework for classification
EN ISO 12006-3:2022	Part 3: Framework for object-oriented information
Industry Foundation Classes (IFC) for data sharing in the construction and facility management industries	
EN ISO 16739-1:2024	Part 1: Data schema
Information structure based on EN ISO 16739-1 to exchange data templates and data sheets for construction objects	
EN 17549-2:2023	Building information modelling - Information structure based on EN ISO 16739 1 to exchange data templates and data sheets for construction objects - Part 2: Configurable construction objects and requirements
Data structures for electronic product catalogues for building services	
EN ISO 16757-1:2019	Part 1: Concepts, architecture and model
EN ISO 16757-2:2019	Part 2: Geometry
Information management using building information modelling	
EN ISO 19650-1:2018	Part 1: Concepts and principles
EN ISO 19650-2:2018	Part 2: Delivery phase of the assets
EN ISO 19650-3:2020	Part 3: Operational phase of the assets
EN ISO 19650-4:2022	Part 4: Information exchange
EN ISO 19650-5:2020	Part 5: Security-minded approach to information management
CEN/TR 17439:2020	Guidance on how to implement EN ISO 19650-1 and -2 in Europe
CEN/TR 17654:2021	Guideline for the implementation of Exchange Information Requirements (EIR) and BIM Execution Plans (BEP) on European level based on EN ISO 19650-1 and -2
Information container for linked document delivery - Exchange specification	
EN ISO 21597-1:2020	Part 1: Container
EN ISO 21597-2:2020	Part 2: Link types
Building information modelling and other digital processes used in construction	
EN ISO 23386:2020	Methodology to describe, author and maintain properties in interconnected data dictionaries
Data templates for construction objects used in the life cycle of built assets	
EN ISO 23387:2020	Concepts and principles
Building information models - Information delivery manual	
EN ISO 29481-1:2017	Part 1: Methodology and format
EN ISO 29481-2:2016	Part 2: Interaction framework
EN ISO 29481-3:2022	Part 3: Data schema
CEN/TR 17741:2021	Guidance for understanding and utilize EN/ISO 29481-1 - Part 1: Methodology and format
Level of Information Need	
EN 17412-1:2020	Part 1: Concepts and principles
Semantic modelling and linking (SML)	
EN 17632-1:2022	Building information modelling (BIM) - Semantic modelling and linking (SML) - Part 1: Generic modelling patterns
BIM in infrastructure	
CEN/TR 17920:2023	BIM in infrastructure - Standardization need and recommendations
Other publications	
EN ISO 22014:2024	Library objects for architecture, engineering, construction and use
ISO 12911:2023	Framework for specification of BIM implementation
ISO 16354:2013	Guidelines for knowledge libraries and object libraries
ISO/TR 23262:2021	GIS (geospatial) / BIM interoperability

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