



BIM Language

4D BIM: A 3D model linked to time or scheduling data. Model objects and elements with this data attached can be used for construction scheduling analysis and management. It can also be used to create animations of project construction processes.

5D BIM: A 3D model linked to cost data. Model objects and elements with this data attached can be used for cost planning and cost management. It can also be used to create life cycle cost analyses.

5D + 4D BIM: A 3D model linked to both cost and time data. Model objects and elements with this data attached can be used for virtual cash flow analysis and visual cost to date and cost to complete assessments.

AE, AEC, AECFM: Abbreviations for Architect/Engineer, Architect/Engineer/Contractor, Architect/Engineer/Contractor/Facility Manager.

Authoring Tool: A task-specific software application that manipulates a building model for some defined purpose and produces a specific outcome. Examples of architectural authoring tools include design applications such as Autodesk Revit, Bentley Architecture, Graphisoft ArchiCAD and Nemetschek Vectorworks.

BIM Deployment Plan (BDP): A formal document that defines how the project will be executed, monitored and controlled with regard to BIM. A BDP is developed at project initiation to provide a master information/data management plan and assignment of roles and responsibilities for model creation and data integration throughout the project.

BIM Execution Plan (BEP) or BIM Management Plan (BMP): A formal document that defines how the project will be executed, monitored and controlled with regard to BIM. A BEP or BMP is developed at project initiation to provide a master information/data management plan and assignment of roles and responsibilities for model creation and data integration throughout design and construction of the project.

Building Information Management (Data Definition): Building information management supports the data standards and data requirements for BIM use.

Data continuity allows for the reliable exchange of information in a context where both sender and receiver understand the information.

Building Information Model (BIM) (Product): An object based digital representation of the physical and functional characteristics of a facility. The building information model serves as a shared knowledge resource for information about a facility, forming a reliable basis for decisions during its lifecycle.

Building Information Modeling (BIM) (Process): A collection of defined model uses, workflows and modelling methods used to achieve specific, repeatable and reliable information results from the model. Modelling methods affect the quality of the information generated from the model. When and why a model is used and shared impacts the effective and efficient use of BIM for desired project outcomes and decision support.

CAD: Computer aided design. A geometric/symbol based computer drawing system that replicates hand drawing techniques.

Construction Operations Building Information Exchange (COBie): A system for capturing information during the design and construction of projects that can be used for facility management purposes including operation and maintenance.

Design and Construct (D&C): The project procurement method in which the client enters into one contract for the design and construction of a building or project with an organisation, generally based on a building company which provides all project management, design, construction and project delivery services.

Design-Bid-Build (DBB): The project procurement method in which the client enters into separate contracts for the design and construction of a building or project. Design and documentation services are generally provided by a professional design consultancy, the documents are used for bidding (tendering) purposes and the successful bidder, generally a building company, enters into a contract with the client to build the project. Often referred to as the 'traditional', 'hard dollar' or 'lump sum' method of procurement.



Geographic Information System (GIS):

A system that integrates hardware, software and data for capturing, managing, analysing and displaying all forms of geographically referenced information.

gbXML: Green Building Extensible Markup Language (XML). A digital file format for exchanging sustainability information in simulation applications.

Globally Unique Identifier (GUID): A unique code identifying each object/space. A GUID should not be confused with “code” in “room code,” “equipment code,” or “space code.” The GUID assigned by the BIM authoring tool persists through room name changes and various other modifications, allowing the object/space to be tracked throughout the project execution process.

HVAC: Heating, Ventilation and Air Conditioning.

Industry Foundation Class (IFC): A system of defining and representing standard architectural and construction related graphic and non-graphic data as 3D virtual objects to allow data exchange among BIM tools, cost estimation systems, and other construction-related applications in a way that preserves ability to perform analysis on those objects as they move from one BIM system to another.

Integrated Project Delivery (IPD): A project procurement method where the client enters into a contract with a number of organisations including design consultants and building contractors at the earliest stages of the project to create an integrated team. It is characterised by an expectation that the team will work collaboratively to deliver a product that meets the client’s requirements.

Integrated Workplace Management System (IWMS):

An enterprise-class software platform that integrates five key components of functionality, operated from a single technology platform and database repository: real estate management, project management, facilities and space management, maintenance management and environmental sustainability.

Level of Development (LOD): Sometimes referred to as level of detail or level of design. The American Institute of Architects defines level of development (LOD) as “the level of completeness to which a model element is developed”. The AIA recognises five levels of development 100, 200, 300, 400 and 500. Each subsequent level builds on the previous level and includes all of its characteristics. LOD applies to individual model elements. When used to describe the BIM model as a whole it is generally taken that all individual model elements are of at least that LOD. The BEP provides a means of specifying the various LOD required for model elements at each phase of the project.

LOD 100: Conceptual - overall building massing indicative of area, height, volume, location and orientation may be modelled in three dimensions or represented by other data.

LOD 200: Approximate geometry - model elements are modelled as generalised systems or assemblies with approximate quantities, size, shape, location and orientation. Non-geometric information may also be attached to model elements.

LOD 300: Precise geometry - model elements are modelled as specific assemblies accurate in terms of quantity, size, shape, location and orientation. Non-geometric information may also be attached to model elements.

LOD 400: Fabrication - model elements are modelled as specific assemblies accurate in terms of quantity, size, shape, location and orientation with complete fabrication, assembly and detailing information. Non-geometric information may also be attached to model elements.

LOD 500: As built - model elements are modelled as constructed assemblies actual and accurate in terms of quantity, size, shape, location and orientation. Non-geometric information may also be attached to model elements.



Master Format: This is the most widely used standard for organising specifications and other written information for commercial and institutional building projects in the U.S. and Canada. Many of the US BIM Guidelines rely upon CSI Master Format to name and code objects. The Master Format Code is a master list of numbers and titles classified by work results or construction practices. It lists divisions and section numbers and titles within each division to follow in organising information about a building's construction requirements and other activities. The format was developed and continues to be improved by the US based Construction Specifications Institute (CSI) and Construction Specifications Canada (CSC).

MEP: Mechanical, electrical, plumbing building services or the engineering disciplines associated with them.

MEPF: Mechanical, electrical, plumbing, fire building services or the engineering disciplines.

Model View Definition (MVD): An IFC view definition, or model view definition, defines a subset of the IFC schema that is needed to satisfy one or many exchange requirements of the AEC industry providing implementation guidance for all IFC concepts (classes, attributes, relationships, property sets, quantity definitions, etc.). It thereby represents the software requirement specification for the implementation of an IFC interface to satisfy the exchange requirements.

OmniClass: The OmniClass construction classification system is a classification system for the construction industry developed by the Construction Specifications Institute (CSI).

SPD: Supply, processing and distribution of materials.

Unifformat: A classification system for building elements (including designed elements) that forms the basis of Table 21 of the Omniclass system. A product of the Construction Specifications Institute (CSI) and Construction Specifications Canada (CSC).