BIM Definitions

There are many definitions of BIM. Some say BIM is a type of software, some say BIM is a 3D virtual model of the building while others refer to it as a process. The table below highlights just some of the definitions of BIM currently in circulation.

Definition	Source
Construction of a model that contains the information about a building from all phases of the building life cycle	ISO 16757-1: 2015[1]
discrete set of electronic object-oriented information used for design, construction and operation of a built asset	PAS 1192-5:2015[2]
digital representation of the physical and functional characteristics of a building over its life cycle	BS 8536:2010[3]
A rich information model, consisting of potentially multiple data sources, elements of which can be shared across all stakeholders and be maintained across the life of a building from inception to recycling	National Building Specification (NBS)[4]
Shared digital representation of physical and functional characteristics of any built object (including buildings, bridges, roads, etc.) which forms a reliable basis for decisions.	BS ISO 29481-1 2010[5]
the development and use of a multi-faceted computer software data model to not only document a building design, but to simulate the construction and operation of a new capital facility or a recapitalized (modernized) facility	General Services Administration (GSA)[6]
A BIM is a digital representation of physical and functional characteristics of a facility. As such it serves as a shared knowledge resource for information about a facility forming a reliable basis for decisions during its lifecycle from inception onward	National Institute of Building Science (NIBS)[7]
Building Information Modelling is digital representation of physical and functional characteristics of a facility creating a shared knowledge resource for information about it forming a reliable basis for decisions during its life cycle, from earliest conception to demolition	RIBA, CPIC
BIM is a process that involves creating and using an intelligent 3D model to inform and communicate project decisions. Design, visualisation, simulation and collaboration enabled by Autodesk BIM solutions provide greater clarity for all stakeholders across the project lifecycle. BIM makes it easier to achieve project and business goals.	Autodesk

ACE BIM Definition considerations

Regardless of these formal definitions above the following points should be considered that define the true essence of BIM.

Building

BIM isn't just about architecture. 'Building' should be considered as a verb 'to build' rather than the noun 'a building'. The concept is relevant to any asset of the built environment including, railways, highways, bridges, tunnels and utilities.
It is also suitable for other sectors such as land surveying, landscape architecture, tunnelling and mining.

Information

The sharing of structured information is at the very heart of BIM. An 'information model' consists if the 3D Model geometry, non graphical information, documents and drawings. The Project Information model (PIM) is delivered during Capital expedite (CAPEX) and include project information. The Asset Information Model (AIM) is the information model managed and maintained during Operating Expenditure (OPEX) and includes asset information.

Model/Modelling

Building information management or modelling? Does the acronym refer to refer to model as a deliverable or is it modelling as the process of creating the deliverable? While geometric representation is important, we must be able to simulate the various facets of the design of an asset (structural, architectural, building services etc), the construction of the asset and the operation of the asset.

Reference

[1] ISO 16757-1:2015: Data structures for electronic product catalogues for building services – Part 1: Concepts, architecture and model (Online) Available at: http://www.iso.org/iso/catalogue_detail.htm?csnumber=57613

[2] BSI PAS 1192-5:2015: Specification for security-minded building information modelling, digital built environments and smart asset management (Online) Available at: http://shop.bsigroup.com/ProductDetail/?pid=000000000030314119

[3] BS 8536:2010: Facility management briefing – Code of practice (Online) Available at: http://shop.bsigroup.com/ProductDetail/?pid=000000000030212807

[4] NBS (2011) National BIM Report March 2011. RIBA Enterprises Ltd, Avilable at. www.thenbs.com/pdf/bimResearchReport_2011-03.pdf

[5] ISO 29481-1:2010: Building information modelling – Information delivery manual – Part 1: Methodology and format (Online) Available at: http://www.iso.org/iso/catalogue_detail.htm?csnumber=45501

[6] General Services Administration (2007) GSA BIM Guide Series 01 (Online) Available at: http://www.gsa.gov/graphics/pbs/GSA_BIM_Guide_v0_60_Series01_Overview_05_14_07.pdf

[7] http://www.wbdg.org/bim/bim.php