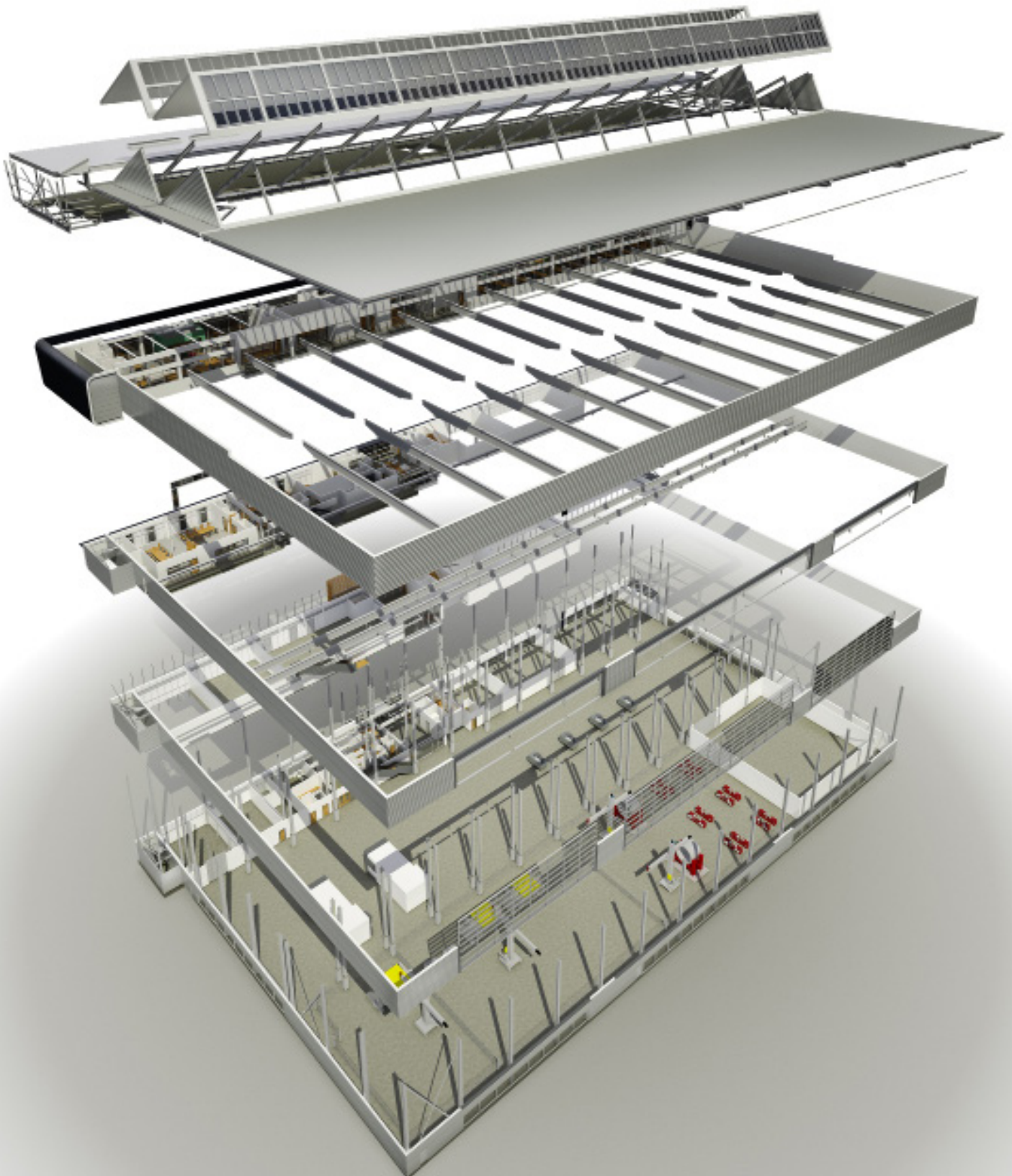


# BIM Dictionary



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## Document revisions

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P3	S0	2013-06-07	Minor amendments
P4	S0	2013-11-11	Minor amendments and draft PAS 1192-3 def
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P6	S0	2014-04-01	Updated in line with PAS 1192-3:2014
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P8	S2	2015-05-26	Updated in line with PAS 1192-5:2015, BS 8541-5:2015 and BS 8541-6:2015
P09	S2	2016-02-10	Updated in line with BS1192:2007+A1:2015 and BS 8536-1:2015. Branding updated. Document number updated in line with BS1192:2007+A1:2015
P10	S2	2016-04-26	Updated in line with BS1192:2007+A2:2016 and other minor amendments.

Front cover image - Nuclear Advanced Manufacturing Research Centre, Rotherham, UK

# BIM Dictionary

## A

**Access** is the ability of reaching and using a service of facility (as defined by BS 8536-1:2015)

**Accessibility** is the ease of reaching and using a service or facility (as defined by BS 8536-1:2015)

**Activity** is the task that is needed to produce a deliverable (as defined by BS 8536-1:2015)

**Adaptability** is the possibility of changing characteristics such as volume, function or space in order to meet new demands or needs (as defined by BS 8536-1:2015)

**Aftercare** is a defined post-handover of an asset/facility in which the design and construction team passes on information and knowledge to the operator, operations team or facility manager, responds to queries and problems, and monitors and reviews the asset's/facility's performance (as defined by BS 8536-1:2015)

**Alignment** is achieving complete agreement between the contents of an information model and the state of a physical asset (as defined by PAS 1192-3:2014)

**Analysis** is the action or process of analysing the model(s) for different purposes or a table or statement of the results of analysis of the model(s) (based on The Chambers English Dictionary)

**Architectural Model** is a model made up solely of architectural building components (as defined by Bond Bryan Architects)

**Archive** is a component of the common data environment (as defined by PAS 1192-2:2013)

**As-built** is defined as the record drawings and documentation defining deviation to the design information occurring during construction at the end of the project (as defined by PAS 1192-2:2013)

**As-constructed** defines the defect and deviation to the designed model occurring during construction. The "as-constructed" model and its appended documentation are continually updated through re-measurement as construction progresses. This allows for deviation to be reviewed with respect to the following packages and making knowledgeable assessment of impact and resolution (as defined by PAS 1192-2:2013)

**As-constructed Information** is the expression of the design, its working detail, construction work and/or installations, functions and operation and maintenance needs of an asset/facility in a form suitable for use in managing that asset/facility (as defined by BS 8536-1:2015)

## BIM Dictionary continued

**Assembly** is a composition or collection of components and/or modelled elements arranged to define part of all of a building, model, structure or site. An Assembly typically contains information that can be referenced without repositioning (as defined by AEC (UK) BIM Protocol v2.0) OR a group of components or types to enable the reuse of standardised design or specification elements improving productivity of design and delivery as well as providing a location to hold specifications and lessons learnt in a simple and useable way. They may hold benchmark data for cost and carbon impacts. The contents of assemblies may themselves have attributes and classifications. These properties may include key data which is attached (to the object) for use once it is placed into a model and may include cost, CO<sub>2</sub>, programme, maintenance and other key information (as defined by PAS 1192-2:2013) OR is a named physical aggregation of a Type or Component into another Type or Component where both the overall (owning) assembly part and the constituent (owned) part has significance for their operation and use (as defined in BS 1192-4:2014) OR a partial model where both the overall assembly and the constituent parts are managed during design, construction or use, and the constituent parts are located relative to the overall assembly (as defined by BS 8541-5:2015)

**Asset** is an item, thing of entity that has potential or actual value to an organization (as defined by PAS 1192-3:2014 and PAS 1192-5:2015) OR includes the overall Facility and the constituent aspects Space (location), Floor (region), Zone, Component, Type and System (as defined in BS 1192-4:2014) OR is an item, thing or entity that has potential or actual value to an organization (as defined by BS 8536-1:2015)

**Asset Information** is data or information relating to the specification, design, construction or acquisition, operation and maintenance, and disposal or decommissioning of an item, thing or entity that has potential or actual value to an organization (as defined in PAS 1192-5:2015)

**Asset Information Management** is the discipline of managing asset-related organizational data and information to a sufficient quality to support organizational objectives and outcomes (as defined by PAS 1192-3:2014)

**Asset Information Model (AIM)** is maintained information model used to manage, maintain and operate the asset (as defined by PAS 1192-2:2013) OR is data and information that relates to assets to a level required to support an organization's asset management system (as defined by PAS 1192-3:2014 and BS 8536-1:2015)

**Asset Information Plan** is the specific information plan for the Information Model used to manage, maintain and operate the asset (as defined by the CIC Outline Scope of Services for the Role of Information Management)

**Asset Information Requirements (AIR)** is data and information requirements of the organization in relation to the asset(s) it is responsible for (as defined by PAS 1192-3:2014 and BS 8536-1:2015)

**Asset Management** is the coordinated activity of an organization to realize value from assets (as defined by PAS 1192-3:2014, PAS 1192-5:2015 and BS 8536-1:2015)

**Asset Management System** is the management system for asset management whose function is to establish the asset management policy and asset management objective (as defined by PAS 1192-3:2014)

**Asset Owner** is an individual or organization that owns the built asset and any associated asset information, is the asset operator or licensee, or is the operator of the system of which the built asset is a component (as defined by PAS 1192-5:2015)

## BIM Dictionary continued

**Attribute** is a piece of data forming a partial description of an object or entity (as defined by PAS 1192-2:2013) OR is a named specific characteristic associated to an asset (as defined in BS 1192-4:2014)

**Auditor** is a testing review body (as defined by BS 8541-6:2015)

**Author** is the originator of model files, drawings or documents (as defined by PAS 1192-2:2013)

### B

**Baseline Security Measures** are contractually required measures relating to personal and commercial information (as defined by PAS 1192-5:2015)

**Basis for Design** is information and data concerning the required function, form, layout, specification and operation of an asset/facility amongst other matters (as defined by BS 8536-1:2015)

**Bill of Quantities (BQ)** means a list of items giving detail identifying descriptions and firm quantities of the work comprised in a contract (as defined by the RICS)

**BIM Execution Plan** - see Building Information Modelling Execution Plan

**'BIM Wash'** is a term describing the inflated - and sometimes deceptive - claim of using or delivering Building Information Modelling products or services (defined by [www.thinkbimspace.com](http://www.thinkbimspace.com))

**Brief** is a working document which specifies at any point in time the relevant needs and aims, resources of the client and user, the context of the project and any appropriate design requirements within which all subsequent briefing (when needed) and designing can take place (as defined by BS 8536-1:2015)

**Briefing** is the process of identifying and analysing the needs, aims and constraints (the resources and the context) of the client and the relevant parties, and of formulating any resulting problems that the designer is required to solve (as defined by BS 8536-1:2015)

**Buildability** is the degree to which the design of a planned asset/facility assists its construction and utilization (as defined by BS 8536-1:2015)

**Building Information Management** see Information Management

**Building Information Model** is a digital representation of the physical and functional characteristics of the project (as defined by AIA Document E202 - 2008 - 1.2.1)

**Building Information Modelling** is the process of designing, constructing or operating a building or infrastructure asset using electronic object-oriented information (as defined by PAS 1192-2:2013 and BS 8536-1:2015) OR discrete set of electronic object-oriented information used for design, construction and operation of a built asset (as defined by PAS 1192-5:2015)

**Building Information Modelling Execution Plan (BEP)** is a plan prepared by the suppliers to explain how the information modelling aspects of a project will be carried out (as defined by PAS 1192-2:2013)



## BIM Dictionary continued

**Built Asset** is a building, multiple buildings (e.g. a site or campus) or built infrastructure (e.g. roads, railways, pipelines, dams, docks, etc.) that is the subject of a construction project or where the asset information is held in a digital format (as defined by PAS 1192-5:2015)

**Built Asset Security Manager** is an individual reporting directly to, or employed by, the employer or asset owner and undertaking the role of security management (as defined by PAS 1192-5:2015)

### C

**Capital/Delivery Phase** are major works where information is managed using PAS 1192-2:2013 and an asset is designed, procured and delivered (as defined by PAS 1192-3:2014)

**Carbon Emissions** are polluting carbon substances released into the atmosphere (as defined by BS 8536-1:2015)

**Carbon Metric** is the measure of weight of carbon dioxide equivalent (CO<sub>2</sub>-eq) emitted per square metre per annum (based on greenhouse gas emissions over a 100-year period) expressed as kgCO<sub>2</sub>-eq/m<sup>2</sup>/annum per building type (as defined by BS 8536-1:2015)

**CDM Coordinator** is an employee whose role is to “advise and assist the client to comply with their duties under the Construction (Design and Management) Regulations (as defined by BS 7000-4:2013)

**CIC Scope of Services** are multi-disciplinary scope of services published by the Construction Industry Council (CIC) for use by members of the project team on major projects (as defined by PAS 1192-2:2013)

**Clash Detection** is detecting possible collisions between elements in a building information model which would not otherwise be desired or buildable on site (as defined by Bond Bryan Architects)

**Clash Rendition (CR)** is rendition of the native format model file to be used specifically for spatial coordination processes. To achieve clash avoidance or to be used for clash detection (as defined by PAS 1192-2:2013)

**Classification** is a systematic arrangement of headings and sub-headings for aspects of construction work including the nature of assets, construction elements, systems and products (as defined by PAS 1192-2:2013)

**Client** is the individual or organisation commissioning a built asset (as defined by PAS 1192-2:2013)

**COBie (Construction Operation Building information exchange)** is structured facility information for the commissioning, operation and maintenance of a project often in a neutral spreadsheet format that will be used to supply data to the employer or operator to populate decision-making tools, facilities management and asset management systems (as defined by PAS 1192-2:2013) OR is structured asset information for the commissioning, operation and maintenance of an asset often in a neutral spreadsheet format that will be used to supply data to the organization to populate decision-making tools and asset management systems (as defined by PAS 1192-3:2014) OR subset of BS ISO 16739 IFC documented as buildingSMART model view definition (MVD) which includes operational information (as defined in BS 1192-4:2014)

**Code** is a sequence of characters, often a mnemonic, having defined meaning when interpreted in the context of the field in which it is entered, used to concisely convey meta-data (as defined by BS1192:2007+A2:2016- 3.1)

## BIM Dictionary continued

**Commissioning** is the process by which equipment, a system, a facility or a plant that is installed, is completed or near completion is tested to verify if it functions according to its design specification and intended application (as defined by BS 8536-1:2015)

**Common Co-ordinates** is a way of identifying the location of the model(s) or building(s) in relation to a specific agreed point. This point could be to global or local co-ordinates and this should be identified as to which has been used (as defined by Bond Bryan Architects / Balfour Beatty Construction)

**Common Data Environment (CDE)** is a single source of information for any given project, used to collect, manage and disseminate all relevant approved project documents for multi-disciplinary teams in a managed process (as defined by PAS 1192-2:2013, PAS 1192-5:2015 and BS 8536-1:2015) OR a single source of information for the Project which collects, manages and disseminates relevant approved documents relating to the project (as defined by the CIC Outline Scope of Services for the Role of Information Management) OR is a single source of information for any given project or asset, used to collect, manage and disseminate all relevant approved files, documents and data for multi-disciplinary teams in a managed process (as defined by PAS 1192-3:2014)

**Component** is an individual building element that can be reused. Examples include doors, stair cores, furniture or internal room layouts, facade panels, etc. Components are typically inserted and moved/rotated into the required position (as defined by AEC (UK) BIM Protocol v2.0) OR a synonym for “occurrence” (as defined by PAS 1192-2:2013) OR named and individually scheduled physical items and features that might require management, such as inspection, maintenance, servicing or replacement, during the in-use phase (as defined in BS 1192-4:2014)

**Component Grade** is the level of detail that the individual building element has been modelled to (as defined by Bond Bryan Architects)

**Computer Aided Design** is a geometric / symbol based computer drawing system that replicated hand drawing techniques (as defined by the Department of Veterans Affairs, USA)

**Computer-Aided Facilities Management (CAFM)** is the support of Facility Management by information technology (definition taken from Wikipedia)

**Concession** is permission to use or release a product that does not conform to specific requirements [BS ISO 10007:2003] OR a concession against a contract requirement (gain permission for non-conformance) (as defined by PAS 1192-2:2013)

**Concurrent Engineering** is a systematic approach to the integrated, concurrent design of products and their related processes, including manufacture and support (based on IDA definition). In a construction context it incorporates both early contractor and owner/operator involvement (as defined by PAS 1192-2:2013)

**Configuration** is interrelated functional and physical characteristics of a product defined in product configuration information (as defined by PAS 1192-2:2013)

**Configuration Item** is an entity within a configuration that satisfies an end use function (as defined by PAS 1192-2:2013)

## BIM Dictionary continued

**Configuration Management** is co-ordinated activities to direct and control configuration (as defined by PAS 1192-2:2013)

**Configuration Status Accounting** is formalised recording and reporting of product configuration information, the status of proposed changes and the status of the implementation of approved changes (as defined by PAS 1192-2:2013)

**Connection** is a named logical relationship between two Components (as defined in BS 1192-4:2014)

**Constant** in constraints, a fixed value, such as a length or specific name (as defined by Digital Building Lab @ Georgia Tech, USA)

**Constraint A** mathematical expression, often algebraic, defining equalities (=) or inequalities (>,<) across various parameters. Constraint may be geometrical, such as parallelism, or a specified angle relation (as defined by Digital Building Lab @ Georgia Tech, USA)

**Consultant Model** mean a model that utilises data imported from a design model or, if none, from a designer's construction documents; and contains the equivalent of shop drawings and other information useful to construction (as defined by ConsensusDOCS 301 BIM Addendum, US)

**Construction Agent** is a human participant in a construction process (as defined by ISO 12006-2:2001 - 2.19)

**Construction Aid** material construction resource not intended for incorporation in a permanent manner in a building or other construction entity (as defined by ISO 12006-2:2001 - 2.18)

**Construction Complex** are two or more adjacent construction entities collectively serving one or more user activity or function (as defined by ISO 12006-2:2001 - 2.5)

**Construction Entity** independent material construction result of significant scale serving at least one user activity or function (as defined by ISO 12006-2:2001 - 2.4)

**Construction Entity Part** is a solid (as distinct from liquid and gaseous), material part of a construction entity, having physically delineated boundaries (as defined by ISO 12006-2:2001 - 2.6)

**Construction Information** is information used to support one or more construction processes (as defined by ISO 12006-2:2001 - 2.20)

**Construction Model** is a model created to show how the building will be built in sequence. This type of model will often include cranes, scaffolding and other elements required to construct the final building (as defined by Bond Bryan Architects)

**Construction Product** material construction resource intended for incorporation in a permanent manner in a building or another construction entity (as defined by ISO 12006-2:2001 - 2.17)

**Construction Process** is a process which transforms construction resources into construction results (as defined by ISO 12006-2:2001 - 2.11)



## BIM Dictionary continued

**Construction Result** is a construction object which is formed or changed in state as the result of one or more construction processes utilising one or more construction resources (as defined by ISO 12006-2:2001 - 2.3)

**Construction Sequencing** is the process of adding a time line to a model. This can be incorporated into both design or construction models (as defined by Balfour Beatty Construction)

**Contact** is a named person and/or organization involved in the Facility lifecycle (as defined in BS 1192-4:2014)

**Container** is a named persistent set of data within a file system or application data storage hierarchy including, but not limited to, directory, sub-directory, data file, or distinct sub-set of a data file, such as a chapter or section, layers or symbol (as defined by BS1192:2007+A2:2016- 3.2)

**Container Model** is an optional repository which can be used to compile assemblies and components for specific purposes including export and publication. A Container can exist for each individual profession/discipline or for multiple disciplines, for buildings or for a complete project (as defined by AEC (UK) BIM Protocol v2.0)

**Contribution** means the expression, design, data or information that a project participant creates or prepares and incorporates, distributes, transmits, communicates or otherwise shares with other project participant(s) for use in or in connection with a model for the project (based on definition by ConsensusDOCS 301 BIM Addendum, US)

**Convention** is an accepted way of drawing an item which may have the nature of a representation, a simplified representation or a symbol (as defined in BS 8541-2:2011)

**Conventional Cartesian Axis Geometric** convention using positive co-ordinates (X,Y,Z) ordered as (East, North, upwards), so that conventional plans use X,Y and Z is upwards (as defined by BS1192:2007+A2:2016- 3.3)

**Co-ordinate** (coordinate) means combining or integrating harmoniously different elements within the model (based on The Chambers English Dictionary) OR is a named position associated to Facility, Floor (region), Space (location), Component or Assembly (as defined in BS 1192-4:2014)

**Cyber Hygiene** are conditions and practices that serve to promote or preserve cyber safety and security by individual system users (as defined by PAS 1192-5:2015)

**Cyber Physical System (CPS)** is a system designed as an entity, or set of entities, with a specific purpose, or to meet a capability objective (as defined by PAS 1192-5:2015)

## D

**Data** is information stored but not yet interpreted or analysed (as defined by PAS 1192-2:2013) OR observations that in context yields information (as defined by PAS 1192-3:2014 / Skyrme & Amidon, Knowledge management, Institute of Management, Corby, 1997)

**Data Capture** means putting information into a form that can be fed directly into a computer (based on The Chambers English Dictionary)

**Data Manager** is the organizational representative responsible for establishing governance and assuring data and information flow to and from the AIM (as defined by PAS 1192-3:2014)

## BIM Dictionary continued

**Data Store** is a repository for data within the AIM (as defined by PAS 1192-3:2014)

**Declarer** is the provider of the declaration, typically the manufacturer or supplier, but can be a library or scheme provider (as defined by BS 8541-6:2015)

**Declaration Scheme** is a set of requirements for characterizing product or facility performance, prepared by an independent body other than the product manufacturer or supplier, and other than the purchaser or owner (as defined by BS 8541-6:2015)

**Deliverable** is a product or service as an outcome of a process (as defined by BS 8536-1:2015)

**Designed Element** is an element for which the work section(s) have been defined (as defined by ISO 12006-2:2001 - 2.9)

**Design Lead** is the role of setting design standards and co-ordinating the design (as defined by the CIC Outline Scope of Services for the Role of Information Management)

**Design Model** means a model of those aspects of the project that have reached the stage of completion that would customarily be expressed by an Architect/Engineer in two-dimensional construction documents. This shall not include models such as analytical evaluations, preliminary designs, studies, or renderings. A model prepared by an Architect/Engineer that has not reached the stage of completion specified is referred to as a model (as defined by ConsensusDOCS 301 BIM Addendum, US)

**Design Intent Model** is the initial version of the project information model (PIM) developed by the design suppliers (as defined by PAS 1192-2:2013)

**Design Review Protocol** is the procedure for ensuring a structured and systematic review of a design at defined points in the project life cycle (as defined by BS 8536-1:2015)

**Design Team** means the architect(s), engineer(s) and technology specialists responsible for the conceptual design aspects of a building, structure or facility and their development into models, drawings, specifications and instructions required for construction and associated processes. The design team is part of the project team (bases on the definition by the RICS) OR is a sub-set of the project delivery team and/or task team that is involved in the delivery of the brief, concept, definition and design stages of the project (as defined in PAS 1192-5:2015)

**Digital Plan of Work (dPoW)** is a generic schedule of phases, roles, responsibilities, assets and attributes, made available in a computable form (as defined in BS 1192-4:2014 and BS 8536-1:2015)

**Dimensional Control** is a risk mitigation process that applied to a project execution task that requires a dimensional accuracy (based on definition in 'Common Scan and Building Information Modelling Terms' by Severn Partnership)

**Dispositioning Authority** is a person or a group of persons assigned responsibility and authority to make decisions on the configuration (as defined by PAS 1192-2:2013)

## BIM Dictionary continued

**Document** is a container for persistent information that can be managed and interchanged as a unit (as defined by BS1192:2007+A2:2016 - 3.4) OR information for the use in the briefing, design, construction, operation, maintenance or decommissioning of a construction project, including but not limited to correspondence, drawings, schedules, specifications, calculations, spreadsheets (as defined by PAS 1192-2:2013) OR is a named external document associated to an asset (as defined in BS 1192-4:2014)

**Document Repository** is an entity including an electronic data management (EDM) system, project extranet or folder hierarchy on a Windows file server (as defined by PAS 1192-2:2013)

**Drawing** is a document used to present graphic information (as defined by BS1192:2007+A2:2016 - 3.5) OR static, printed, graphical representation of part or all of a project or asset (as defined by PAS 1192-2:2013)

**Drawing Title Block** is a framework - often containing the project team's logos - to show the drawing title, number, purpose of issue, status and revision information (as defined by PAS 1192-2:2013)

### E

**Earned Value Analysis (EVA)** is a method of project performance measurement that integrates cost, time and scope (as defined by PAS 1192-2:2013)

**Electronic Document Management System (EDMS)** is a system for storing, retrieving, sharing and otherwise managing electronic documents (as defined by PAS 1192-2:2013)

**Employer** is the individual or organisation named in an appointment or building contract as the employer (as defined by PAS 1192-2:2013, PAS 1192-3:2014 and PAS 1192-5:2015) or means the person appointing the Project Team Member pursuant to the agreement and any valid assignee of the Employer's rights and obligations under this Protocol subject to the terms of such assignment. (BIM Protocol (CIC). First Edition. 2013)

**Employer's Information Requirements (EIR)** is a document setting out the information to be delivered, and the standards and processes to be adopted by the supplier as part of the project delivery process (as defined by PAS 1192-2:2013) OR pre-tender document setting out the information to be delivered, and the standards and processes to be adopted by the supplier as part of the project delivery process (as defined in BS 1192-4:2014 and BS 8536-1:2015)

**Element** is a construction entity part which, in itself or in combination with other such parts, fulfils a predominating function of the construction entity (as defined by ISO 12006-2:2001 - 2.7)

**Elevations Orthographic** views taken directly from the model (as defined by Bond Bryan Architects)

**Employer** means the owner and/or developer of the building; in some cases the ultimate user. The terms Senior Responsibility Owner (SRO) and project sponsor are used for central civil government and defence sector; being the representatives empowered to manage the building project and make project-specific decisions (as defined by the RICS)

**End-user** is a person receiving asset/facility-related services (as defined by BS 8536-1:2015)

**Energy Analysis** is the action or process of analysing the model(s) from an energy point of view or a table or statement of the results of analysis of the model(s) (based on The Chambers English Dictionary)

## BIM Dictionary continued

**Enterprise** is a synonym for “object” (as defined by PAS 1192-5:2015)

**Entity** is an entity constituting multiple organizations within the supply chain (as defined by PAS 1192-2:2013)

**External Envelope** is the roof and facade including openings (as defined by BS 8536-1:2015)

### F

**Facilities Management** is the integration of processes within an organization to maintain and develop the agreed services that support and improve the effectiveness of its primary processes and activities (as defined by BS 8536-1:2015)

**Facility** is the named operational built or geographical asset, typically a building or section of infrastructure along with details and extent of the geographic site and of the temporal project (as defined in BS 1192-4:2014) OR the tangible asset that supports an organization (as defined by BS 8536-1:2015)

**Facility Declaration** is data associated to a facility such as a constructed asset, building or structure, provided or verified by a distinct independent declaration scheme to support evaluation and comparisons (as defined by BS 8541-6:2015)

**Facilities Handbook** is the organized collection of documentation covering the operation of an asset/facility (as defined by BS 8536-1:2015)

**Facility-related Service** is the support provision to the primary processes and activities of an organization, delivered by and internal or external provider (as defined by BS 8536-1:2015)

**Fabrication Model** is a Building Information Model which incorporates components that are suitable for fabrication. It is a development of the Full Design Model to include more detail (as defined by Bond Bryan Architects)

**Federated Model** means a model consisting of linked but distinct component models, drawings derived from the models, texts, and other data sources that do not lose their identity or integrity by being so linked, so that a change to one component model in a federated model does not create a change in another component model in that federated model (as defined by ConsensusDOCS 301 BIM Addendum, US) OR is a model consisting of connected but distinct individual models (BIM Protocol (CIC). First Edition. 2013)

**Field Part** of a container name reserved for meta-data (as defined by BS1192:2007+A1:2015- 3.6)

**File Extension** is an added piece of information to the end of a file name to explain the format of the file. This is often in the form of .abc. Typically file extensions are 3 or 4 characters long (as defined by Bond Bryan Architects)

**File Store** is the repository for information within the asset information model (as defined by PAS 1192-3:2014)

**Flawless Start-up** is a fault-free commencement of operations (as defined by BS 8536-1:2015)

**Floor (region)** is the named intermediate spatial subdivision, including distinct vertical levels and horizontal areas and sections with Spaces allocated (as defined in BS 1192-4:2014)

## BIM Dictionary continued

**Full Design Model** means a model consisting of coordinated structural, architectural, MEP and other design models (based on definition by ConsensusDOCS 301 BIM Addendum, US)

### G

**Gate** is a division of a standardised process map for the acquisition of a facility, at some of which the requirement can be delivered (as defined by PAS 1192-2:2013)

**Generic Object** is a type object intended for use in stages of design when the object is not resolved into a product (as defined in BS 8541-1:2012, BS 8541-3:2012 and BS 8541-4:2012)

**Ground Penetrative Radar (GPR)** is a geophysical method that uses radar pulses to image the subsurface. It can detect objects, changes in material, and voids and cracks (definition taken from Wikipedia)

**Graphical Data** is data conveyed using shape and arrangement in space (as defined by PAS 1192-2:2013)

**Graphical File** is a file format designed specifically for representing graphical images (as defined by PAS 1192-2:2013)

### H

**Handover** is the stage of a capital/delivery project where the asset is made available for use or occupation (as defined by PAS 1192-3:2014) OR the act of passing responsibility for, and control over, an asset/facility to the owner or operator following testing and commissioning (as defined by BS 8536-1:2015)

**Hostile Reconnaissance** is the activity of acquiring information about a target with the view to planning to attack, compromise, disrupt or destroy that target (as defined by PAS 1192-5:2015)

### I

**Impact** is a named economic and environment measure (as defined in BS 1192-4:2014) OR any change that might be adverse or beneficial (as defined by BS 8536-1:2015)

**Inclusive Design** is design that seeks to include everyone irrespective of needs, circumstances or identity (as defined by BS 8536-1:2015)

**Industry Foundation Classes (IFC)** is a neutral and open specification that is not controlled by a single vendor or group of vendors. It is an object-based file format with a data model developed by buildingSMART to facilitate interoperability in the building industry (as defined by Nemetschek - source taken from Wikipedia) OR is a neutral and open specification, object-based file format with a data model developed by building SMART to facilitate interoperability in the architecture, engineering and construction (AEC) industry (as defined by BS 7000-4:2013)

**Information** is the representation of data in a formal manner suitable for communication, interpretation or processing by human beings or computer applications (as defined by PAS 1192-2:2013) OR data arranged and processed into meaningful patterns, put into context (as defined by PAS 1192-3:2014 / Skyrme & Amidon, Knowledge management, Institute of Management, Corby, 1997)

**Information Device** is a convention indicating an abstract item (as defined in BS 8541-2:2011)



## BIM Dictionary continued

**Information Exchange** is the structured collection of information at one of a number of pre-defined stages of a project with defined format and fidelity (as defined by PAS 1192-2:2013) OR is the structured collection of information at one of a number of predefined stages of a project (as defined by BS 8536-1:2015)

**Information Management** means measures that protect and defend information and information systems with respect to their availability, integrity, authentication, confidentiality, and nonrepudiation. These measures include providing for restoration of information systems by incorporating protection, detection, and reaction capabilities (as defined by ConsensusDOCS 301 BIM Addendum, US) OR are tasks and procedures applied to inputting, processing and generation activities to ensure accuracy and integrity of information (as defined by PAS 1192-2:2013) OR policies, processes, procedures and tasks applied to inputting, processing and generation activities to ensure accuracy, authenticity, confidentiality and integrity of information (as defined by PAS 1192-5:2015)

**Information Management Process (IMP)** is the process to manage information related to the operational phase of an asset (as defined by PAS 1192-3:2014)

**Information Management Role** means a role in connection with the Project which includes, inter alia, the establishment and management of the processes, protocols and procedures set out in the Information Requirements. (BIM Protocol (CIC). First Edition. 2013)

**Information Manager** means one or more individuals responsible for the BIM's Information Management program (based on definition by ConsensusDOCS 301 BIM Addendum, US) OR means the person appointed, initially by the Employer, to perform the Information Management Role. (BIM Protocol (CIC). First Edition. 2013) OR is an organizational representative appointed by the employer or asset owner, who is responsible for establishing governance and assuring data and information flow to and from the common data environment (CDE) during the design, construction, operation and maintenance, and disposal or decommissioning of a built asset (as defined by PAS 1192-5:2015)

**Information Model** is a model comprising: documentation, non-graphical information and graphical information (as defined by PAS 1192-2:2013) OR is all documentation, non-graphical information which the Project Team is required to provide into the Information Model by the Scope of Services for the Project Team and which is provided for the purpose of delivering Project Outputs (as defined by the CIC Outline Scope of Services for the Role of Information Management)

**Information Modelling** is the use of data to provide information through better understanding, by applying logic or mathematical functions to derive new data (as defined by PAS 1192-2:2013)

**Information Requirements** means the document attached to this Protocol at Appendix 2 setting out the way in which Models shall be produced, delivered and used on the Project, including any processes, protocols and procedures referred to therein. (BIM Protocol (CIC). First Edition. 2013)

**Instance** is an occurrence of an entity at a particular location and orientation within a model (as defined by BS1192:2007+A2:2016 - 3.7)

**Interoperability** is the ability of two or more systems or components to exchange information and to use the information that has been exchanged (as defined by IEEE on Wikipedia)

## BIM Dictionary continued

**International Framework for Dictionaries (IFD)** is the standard terminology for libraries or ontologies (as defined by BS 7000-4:2013) Note: this is now called buildingSMART Data Dictionary (bsDD)

**Integrated Project Delivery (IPD)** is a collaborative alliance of people, systems, business structures and practices into a process that harnesses the talents and insights of all participants to optimise project results, increase value to the owner, reduce waste, and maximise efficiency through all phases of design, fabrication and construction (as defined by AIA - source taken from Wikipedia)

**Issue** is a named deficiency in the information or risk associated to an asset (as defined in BS 1192-4:2014)

### J

**Job** is the named task or activity during the in-use phase associated to Types (as defined in BS 1192-4:2014)

### K

**Key Performance Indicator (KPI)** is a measure that provides essential information about the performance of asset/facility-related services delivery (as defined in BS 8536-1:2015)

### L

**Laser Scanning** is controlled steering of laser beams followed by a distance measurement at every pointing direction used to rapidly capture shapes of objects, structures, buildings and landscapes (based on definition taken from Wikipedia)

**Layer** is a container comprising selected entities, typically used to group for purposes of selective display, printing and management operations (as defined by BS1192:2007+A2:2016 - 3.8) OR is an attribute given to entities with CAD files enabling their visibility to be controlled. Further values may be assigned to the attribute to enable control whether it can be edited or deleted (as defined by PAS 1192-2:2013)

**Lean** is production focused on delivering value for the employer or client and eliminating all non-value-adding activities using an efficient workflow (as defined by PAS 1192-2:2013)

**Lean Principles** is understanding value from a client's perspective, identifying the value stream, establish a balanced flow of work, in which the demand for product is pulled from the next customer, with a constant drive for continuous improvement and perfection (Based on "Lean Thinking", Womack & Jones, 2003 edition) (as defined by PAS 1192-2:2013)

**Level of Attributing** is categorization based on a minimum content of attributing information on a library object (as defined by BS 8541-3:2012)

**Levels of Definition** is the collective term used for and including "level of model detail" and the "level of information detail" (as defined by PAS 1192-2:2013)

**Level of Detail** means the level of detail required for a Model as specified in Appendix 1 attached to this Protocol. (BIM Protocol (CIC). First Edition. 2013) OR completeness and accuracy of a virtual shape representation compared to the physical and functional characteristics of the actual object (as defined in BS 8541-3:2012) See also Levels of Model Detail

## BIM Dictionary continued

**Level of Development (LOD)** describes the level of completeness to which a Model Element is developed (as defined by AIA Document E202 - 2008 - 1.2.2) - Note: This does not apply to UK projects - see Level of Definition.

**Level of Information (LOI)** - See Levels of Model Information

**Level of Measurement** is the completeness and accuracy of a virtual measurement compared to the physical and functional characteristics of the actual object (as defined by BS 8541-3:2012)

**Levels of Model Detail** is a description of graphical content of models at each of the stages defined for example in the CIC Scope of Services (as defined by PAS 1192-2:2013)

**Levels of Model Information** is a description of non-graphical content of models at each of the stages defined for example in the CIC Scope of Services (as defined by PAS 1192-2:2013)

**'Lonely BIM'** is a non-collaborative 3D model produced by a single designer (phrase coined by Robert Klaschka of Studio Klaschka; definition by Bond Bryan Architects)

**Life Cycle Assessment** is the methodology used to establish a Life Cycle Costing for a material or a product (as defined by Willmott Dixon)

## M

**Main Contractor** (or Prime Contractor) means the contractor responsible for the total construction and completion process of the building project. The term prime contractor is often used in central civil government and the defence sector to mean main contractor (as defined by the RICS)

**Maintainer** is the individual, department or organization engaged by either the owner or operator of an asset to carry out maintenance on or in connection with that asset (as defined by PAS 1192-3:2014)

**Maintenance** is the combination of all technical and associated administrative actions to retain or restore an asset to a state in which it can perform its required function (as defined by PAS 1192-3:2014 / adapted from BS ISO 15686-1:2011, BS ISO 6707-1:2004)

**Major Works** are works within the scope of PAS 1192-2:2013 (as defined by PAS 1192-3:2014)

**Manageable Assets** are those aspects of the facility that may be managed during the facility life-cycle include both physical and spatial objects, and their functional groupings (as defined by PAS 1192-2:2013)

**Management of Assets** are operational activities carried out on assets in support of those assets meeting their requirements (as defined by PAS 1192-3:2014)

**Marked-up Drawing** is a paper or electronic drawing that has been marked up with comments from other disciplines or the client (as defined by PAS 1192-2:2013)

**Master Information Document Index (MIDI)** is the index specifying a detailed list of deliverables for a project; for model, sub-models, documents and data also allocating responsibility to deliver and the programme for delivery of a project supply chain (as defined by PAS 1192-2:2013)

## BIM Dictionary continued

**Master Information Delivery Plan (MIDP)** is the primary plan for when project information is to be prepared, by whom and using what protocols and procedures, incorporating all relevant task information delivery plans (as defined by PAS 1192-2:2013)

**Material** means all information in any electronic medium prepared by or on behalf of the Project Team Member comprised in: (a) the Specified Models; and (b) the Federated Models, to the extent that these comprise Specified Models or to the extent that the Project Team Member owns any additional rights in any Federated Model, excluding any material forming part thereof which is provided to the Project Team Member by or on behalf of the Employer. (BIM Protocol (CIC). First Edition. 2013)

**MEP Model** is a model made up solely of mechanical, electrical and plumbing components (note: other information may exist within this model that is referenced from others but this is only used for reference purposes) (as defined by Bond Bryan Architects)

**Meta-data** is data used for the description and management of documents and other containers of information (as defined by BS1192:2007+A2:2016 - 3.9)

**Metrics** acceptability of the deliverable may be assessed against the requirements shown in the examples and/or against indicative ratios and counts based on the information provided (as defined by PAS 1192-2:2013)

**Minor Works** are works carried out on an asset where information is managed using PAS (as defined by PAS 1192-3:2014)

**Model** is a collection of containers organised to represent the physical parts of objects, for example a building or a mechanical device (as defined by BS1192:2007+A2:2016 - 3.10) OR a three-dimensional representation in electronic format of building elements representing solid objects with true-to-scale spatial relationships and dimensions. A model may include additional information or data (as defined by ConsensusDOCS 301 BIM Addendum, US) OR means a digital representation of part of the physical and/or functional characteristics of the Project. (BIM Protocol (CIC). First Edition. 2013)

**Model Element** is a portion of the Building Information Model representing a component, system or assembly within a building or building site (as defined by AIA Document E202 - 2008 - 1.2.3)

**Model Element Author (MEA)** is the party responsible for developing the content of a specific Model Element to the Level of Development (LOD) required for a particular phase of the project (as defined by AIA Document E202 - 2008 - 1.2.4)

**Model File** is a native, proprietary format, CAD file that can be a 2D or 3D model (as defined by PAS 1192-2:2013)

**Model Production and Delivery Table** means the table attached to this Protocol at Appendix 1 specifying the subject matter of each Model, the person who is to produce and deliver each Model (described in the table as "Model Originator") at each Stage and the Level of Detail for each Model at each Stage. (BIM Protocol (CIC). First Edition. 2013)

**Model User** refers to any individual or entity authorised to the use the model on the project, such as for analysis, estimating or scheduling (as defined by AIA Document E202 - 2008 - 1.2.5)

BIM Dictionary continued**N**

**Need-to-know** is grant of access to data or information relating to sensitive assets and systems for an individual or organization where such access must be necessary in order for them to perform their role satisfactorily and safely (as defined by PAS 1192-5:2015)

**Neighbouring Built Assets** are built assets that share a boundary (including beneath it or overhead) with the built asset under consideration, or that are in the neighbourhood of that built asset but physically separated by a public or private street, public or privately-owned open space or similar features (as defined by PAS 1192-5:2015)

**Non-graphical Data** is data conveyed using alphanumeric characters (as defined by PAS 1192-2:2013)

**O**

**Object** is any part of the perceivable or conceivable world (as defined by ISO 12006-2:2001 - 2.1) OR an item having state, behaviour and unique identity - for example, a wall object (as defined by PAS 1192-2:2013)

**Occupant** is the user who spends a significant proportion of their time in or about a facility (as defined in BS 8536-1:2015)

**Occurrence Object** is a representation of an actual occurrence (instance) of an object in a building (as defined in BS 8541-1:2012, BS 8541-3:2012 and BS 8541-4:2012)

**OGC Gateway Process** is a process that examines programmes and projects at key decision-points in their lifecycle. It looks ahead to provide assurance that the employer can progress to the next stage (as defined by the RICS (partial))

**OGC Gateway(s)** are the key decision points within the OGC Gateway Process (as defined by the RICS)

**OPEN BIM** is a unique approach to collaborative design and realisation of buildings allowing project members to participate regardless of the tools they use (as defined by Graphisoft)

**Operability** is capable of being put into use as intended (as defined in BS 8536-1:2015)

**Operational Information** is information specifying operational activity associated to Types (as defined in BS 1192-4:2014)

**Operational Strategy** is the overall approach to managing the production or use of an asset/facility (as defined in BS 8536-1:2015)

**Operations Team** is the functional group responsible for the day-to-day running and maintenance of an asset/facility (as defined in BS 8536-1:2015)

**Operator** is an organization that uses an asset to create value but does not own the asset (as defined by PAS 1192-3:2014) OR is an organization responsible for the day-to-day operation of an asset/facility (as defined by BS 8536-1:2015)

**Organization** is a person or group of people that has its own functions with responsibilities, authorities and relationships to achieve its objectives (as defined by PAS 1192-3:2014 / ISO/FDIS 55000:2013 and PAS 1192-5:2015)



## BIM Dictionary continued

**Organizational Information Requirements (OIR)** is data and information required to achieve the organization's objectives (as defined by PAS 1192-3:2014 and BS 8536-1:2015)

**Origin** is a setting out point for a project or programme using co-ordinate geometry or related to the OS or geospatial reference (as defined by PAS 1192-2:2013)

**Originator** is the agent responsible for production of a container (as defined by BS1192:2007+A2:2016 - 3.11) OR is the author of models, drawings and documents (as defined by PAS 1192-2:2013)

**Other Project Team Member** means any person having responsibilities in relation to the production, delivery and/or use of Models and appointed by the Employer in relation to the Project, excluding the Project Team Member. (BIM Protocol (CIC). First Edition. 2013)

**Output File** (see also Views) is a generated rendition of graphical or non-graphical information (a plan, section, elevation, schedule, table or other view of a project) (as defined by AEC (UK) BIM Standard Version 1 Page 7)

**Owner** is an organization that owns an asset and uses the asset either directly or indirectly to create value (as defined by PAS 1192-3:2014) OR an individual or organization owning or procuring an asset/facility (as defined by BS 8536-1:2015)

### P

**Parameters** are variables used in a function or equation to assign values: coordinate, dimension, material, distance, angle, colour, unit price, energy coefficient, and so forth (as defined by Digital Building Lab @ Georgia Tech, USA)

**Performance** is the ability to fulfil required functions under intended use conditions or behaviour when in use (as defined in BS 8536-1:2015)

**Permitted Purpose** means a purpose related to the Project (or the construction, operation and maintenance of the Project) which is consistent with the applicable, Level of Detail of the relevant Model (including a Model forming part of a Federated Model) and the purpose for which the relevant Model was prepared. (BIM Protocol (CIC). First Edition. 2013)

**Personally Identifiable Information** is personal data as defined in the Data Protection Act 1998 (as defined by PAS 1192-5:2015)

**Personnel** are individuals employed by an organization, including contractors or temporary staff used to fulfil roles that may be undertaken by that organization (as defined by PAS 1192-5:2015)

**Placeholder** is simplified or generic representation of a 3D object (as defined by PAS 1192-2:2013)

**Plain Language Questions** are questions asked of the supply chain by the employer to inform decision-making at key stages of an asset life cycle or project (as defined by PAS 1192-3:2014) OR a request for information that is expressed in simple, easy-to-understand terms (as defined by BS 8536-1:2015)

## BIM Dictionary continued

**Point Cloud** is a set of vertices in a three-dimensional coordinate system. These vertices are usually defined by X, Y and Z coordinates, and typically are intended to be representative of the external surface of an object. Point clouds are most often created by 3D scanners. These devices measure in an automatic way a large number of points on the surface of an object, and often output a point cloud as a data file. The point cloud represents the set of points that the device has measured (as defined on Wikipedia)

**Post-occupancy Evaluation (POE)** is the process of evaluating an asset/facility after it has been completed and is in use to understand its actual performance against that required and to capture lessons learned (as defined in BS 8536-1:2015)

**Product Declaration** is data related to a product provided or verified by a distinct independent declaration scheme to support specification and selection (as defined by BS 8541-6:2015)

**Product Object** is a type object intended to represent an obtainable product, either as a requirement or exemplar or as-built (as defined in BS 8541-1:2012, BS 8541-3:2012 and BS 8541-4:2012)

**Project Delivery Team** are a group of organisations or individuals contracted either directly or indirectly to deliver services or products to the project (as defined by PAS 1192-2:2013) OR are a group of organizations or individuals contracted either directly or indirectly to deliver services or products to the project, and personnel from the employer or asset owner who are directly involved in the management, planning and delivery of the project (as defined by PAS 1192-5:2015)

**Point Density** is the number of points per unit. Usually the higher the point density is, the better representation of features are (as defined in 'Common Scan and Building Information Modelling Terms' by Severn Partnership)

**Project BIM Protocol** is the Project Specific BIM Protocol setting out the obligations of the principal members of the Project Team in respect of the use of BIM on the Project (as defined by the CIC Outline Scope of Services for the Role of Information Management)

**Project Delivery Team** are groups of organisations or individuals contracted either directly or indirectly to deliver services or products to the project (as defined by PAS 1192-2:2013)

**Project Execution Strategy** is a high-level statement of the intentions and arrangements for a project (as defined in BS 8536-1:2015)

**Project Information Model (PIM)** is the information model developed during the design and construction phase of a project, consisting of documentation, non-graphical information and graphical information defining the delivered project (as defined by PAS 1192-2:2013) OR is the information model developed during the design and construction phase of a project (as defined by PAS 1192-3:2014 and BS 8536-1:2015)

**Project Information Plan** is the plan for the structure and management and exchange of information from the Project Team in the Information Model and the related processes and procedures (as defined by the CIC Outline Scope of Services for the Role of Information Management)

**Project Implementation Plan (PIP)** is a statement relating to the suppliers' IT and human resources capability to deliver the EIR (as defined by PAS 1192-2:2013)

## BIM Dictionary continued

**Project Outputs** is configured information delivered from the Information Model for a specific Permitted Purpose e.g. Stage Outputs, Employer information exchanges, submissions for planning, procurement, construction. (as defined by the CIC Outline Scope of Services for the Role of Information Management)

**Project Stage** is a period of time in the duration of a construction project identified by the overall character of the construction process which occurs within it (as defined by ISO 12006-2:2001 - 2.15)

**Project Team** is comprised of the Project Team Members (as defined by the CIC Outline Scope of Services for the Role of Information Management)

**Project Team Member** means the person appointed by the Employer pursuant to the Agreement. (CIC BIM Protocol. First Edition. 2013) OR any person having responsibilities in relation to the production, delivery and/or use of the content of the Information Model and appointed by the Employer in relation to the Project (as defined by the CIC Outline Scope of Services for the Role of Information Management)

**Project Team Models** means any Models which Other Project Team Members produce and deliver as specified in the Model Production and Delivery Table and any Federated Models (or any part thereof) produced and delivered by Other Project Team Members. (CIC BIM Protocol. First Edition. 2013)

**Published** is published information that refers to documents and other data from Shared information. Typically this will include exported data, contract drawings, reports and specifications (reference BS1192:2007+A2:2016) (as defined by AEC (UK) BIM Protocol v2.0) OR a component of the CDE for drawing renditions that have been approved as suitable for a specific purpose - for example, suitable for construction (as defined by PAS 1192-2:2013)

**Purpose of Issue** states the purpose for issuing the document (as defined by PAS 1192-2:2013)

**Purposes** are those aspects of the Facility that are intended to be managed by the facility owner (as defined by PAS 1192-2:2013)

### Q

**Quality** is the degree to which a set of inherent characteristics fulfils requirements (as defined in BS 8536-1:2015)

### R

**RACI** indicator is an abbreviation used to identify which of a group of participants or stakeholders are responsible for ("R"), authorize ("A"), contribute to ("C") or are kept informed about ("I") a project activity (as defined by PAS 1192-2:2013)

**RAG** report is a performance report summarizing a series of assessments as red (does not meet requirement), amber (does not meet requirement but plan in place to bring up to standard), or green (meets requirements) (as defined by PAS 1192-3:2014)

**Reference File** is a CAD model file associated or linked with another CAD model file. Also referred to as an "X-ref" (as defined by PAS 1192-2:2013)

**RIBA Outline Plan of Work** summarises the deliverables required under each RIBA Work Stage (as defined by the RICS)

## BIM Dictionary continued

**RIBA Work Stage** means the stage into which the process of designing building projects and administering building contracts may be divided (as defined by the RICS)

**Rendition** is documentation in a form enabling the information to be viewed, printed and marked up. For example, PDF and DWF files are documentation consisting of snapshots (as defined by PAS 1192-2:2013)

**Requirements** are the documented expectations of facility owners/commissioners for sharable structured information. These are also referred to as the Employers Information Requirements (EIR) (alternatively, the Clients Information Requirements) (as defined by PAS 1192-2:2013)

**Representation** is the scale view of an object (as defined in BS 8541-2:2011)

**Resource** is named material or skill required to execute Jobs (as defined in BS 1192-4:2014)

**Revision** is used to identify revisions of documents, drawing and model files (as defined by PAS 1192-2:2013)

**Risk Appetite** is the function of an organization's capacity to bear risk (as defined by PAS 1192-5:2015)

## S

**Scope of Work** is design, construction work and/or installation, testing and commissioning, handover and start-up activities necessary to deliver an operational asset/facility (as defined in BS 8536-1:2015)

**Security Management** is a role in connection with the project or the management of the asset which is responsible for security of the built asset and associated asset information during the design, construction, operation and maintenance, and disposal or decommissioning of a built asset (as defined by PAS 1192-5:2015)

**Security-minded** is the understanding and routine application of appropriate and proportionate security measures in any business situation so as to deter and/or disrupt hostile, malicious, fraudulent and criminal behaviours or activities (as defined by PAS 1192-5:2015)

**Sensitive Built Asset** is a built asset, as a whole or in part, that may be of interest to a threat agent for hostile, malicious, fraudulent and/ or criminal behaviours or activities (as defined by PAS 1192-5:2015)

**Sensitive Information** is information, the loss, misuse or modification of which, or unauthorized access to, could: adversely affect the privacy, welfare or safety of an individual or individuals; compromise intellectual property or trade secrets of an organization; cause commercial or economic harm to an organization or country; and/or jeopardize the security, internal and foreign affairs of a nation, depending on the level of sensitivity and nature of the information (as defined by PAS 1192-5:2015)

**Service Level** is the complete description of requirements of a product, process or system, with their characteristics (as defined in BS 8536-1:2015)

## BIM Dictionary continued

**Shared** information that has been checked and approved and is made available across the project team such as information for data exchange between BIM software, like gbXML, CIS/2 and IFC files. (reference BS1192:2007+A2:2016) (as defined by AEC (UK) BIM Protocol v2.0) OR component of the CDE. The shared section of the CDE is where information can be made available to others in a “safe” environment. The early release of information assists in the rapid development of the design solution. To allow this to be achieved, the concept of information “status/suitability” has been adopted (as defined by PAS 1192-2:2013)

**Simplified Representation** is a scale view incorporating only the essential shape, size or features of an object (as defined in BS 8541-2:2011)

**Smart** is the application of autonomous or semi-autonomous technology systems to achieve greater utilization of resources, limiting or reducing per capita resource consumption to maintain or improve quality of life (as defined by PAS 1192-5:2015)

**Smart City** is the effective integration of physical, digital and human systems in the built environment to deliver a sustainable, prosperous and inclusive future for its citizens (as defined by PAS 1192-5:2015)

**Smart Grid** is an electricity network that uses information and communications technology (ICT) to integrate the actions of all users connected to it – generators, consumers and those that do both – in order to efficiently deliver sustainable, economic and secure electricity supplies (as defined by PAS 1192-5:2015)

**Soft Landings** are graduated handover of a built asset from the design and construction team to allow structured familiarisation of systems and components and fine tuning of controls and other building management systems (as defined by PAS 1192-2:2013) OR a process for the graduated handover of a new or refurbished asset/facility, where a defined period of aftercare by the design and construction team is an owner’s requirement that is planned and developed from the outset of the project (as defined by BS 8536-1:2015)

**Space** three dimensional, material construction result contained within, or otherwise associated with, a building or other construction entity (as defined by ISO 12006-2:2001 - 2.10) OR named location for activities such as use, inspection or maintenance, including un-occupied or un-inhabitable Spaces, but not necessarily inaccessible voids (as defined in BS 1192-4:2014)

**Spare** is a named replaceable part associated to Types (as defined in BS 1192-4:2014)

**Specification** is identification of the requirements on objects including the subsequent selection of products during installation and replacement (as defined by BS 8541-4:2012)

**Specified Models** means the Model or Models which the Project Team Member is to produce and deliver as specified in the Model Production and Delivery Table. (BIM Protocol (CIC). First Edition. 2013)

**Stage** (see also Gate) is the division of a standardized process map for the acquisition of a facility, at some of which the requirements can be delivered (as defined by BS 8536-1:2015)

**Stakeholder** is the person, group or organization that has interests in, or can affect, be affected by or perceive itself to be affected by, any aspect of the project (as defined in BS 8536-1:2015)



## BIM Dictionary continued

**Stakeholder Impact Analysis** is the method for evaluating the influence that stakeholders possess in regard to an organization, asset/facility or project (as defined in BS 8536-1:2015)

**Standard Font** is the agreed set of font types and sizes used for the project (as defined by PAS 1192-2:2013)

**Standard Layering Convention** is the single layering convention used by the project team (as defined by PAS 1192-2:2013)

**Standard Method and Procedure** are a set of standard methods and procedures covering the way information is named, expressed and referenced (as defined by PAS 1192-2:2013)

**Statement of Needs** is the expression of the objectives and needs of an individual or organization and the extent to which they are likely to be satisfied by an asset/facility (as defined in BS 8536-1:2015)

**Status** defines the “suitability” of information in a model, drawing or document. Not to be confused with the status in architectural documentation as “new build”, “retain” or “demolish” (as defined by PAS 1192-2:2013)

**Steady State** is stable operation and use (as defined in BS 8536-1:2015)

**Structural Analysis** is the action or process of analysing the model(s) from a structural point of view or a table or statement of the results of analysis of the model(s) (based on The Chambers English Dictionary)

**Structural Model** is a model made up solely of structural components (as defined by Bond Bryan Architects)

**Subcontractor** means a contractor employed by the main contractor to undertake specific work within the building project; also known as specialist, works, trade, work package, and labour only contractors (as defined by the RICS)

**Sub-model** is a model included as an instance in another model (as defined by BS1192:2007+A2:2016 - 3.12)

**Supervisory control and data acquisition (SCADA)** are systems that collect operational data from assets to support supervisory and other managerial activities (as defined by PAS 1192-3:2014)

**Supplementary Information** is additional descriptive information associated to the assets (as defined in BS 1192-4:2014)

**Supplier** is the provider of services or goods either directly to the employer or to another supplier in a supply chain (as defined by PAS 1192-2:2013)

**Supplier Information Modelling Assessment Form** is a form conveying the capability and experience of a supplier to carry out information modelling in a collaborative environment (as defined by PAS 1192-2:2013)

**Supplier Information Technology Assessment Form** is a form conveying the capability and IT resources of a supplier for exchanging information in a collaborative environment (as defined by PAS 1192-2:2013)

**Supply Chain Capability Assessment Form** is a form summarizing the human resource and IT capability of each organization in a supply chain (as defined by PAS 1192-2:2013)

## BIM Dictionary continued

**Symbol** is a graphic device without scale used: a) on a drawing to indicate the occurrence and/or location of an item; b) in annotation to indicate one or more of the attributes of an item (as defined in BS 8541-2:2011)

**Symbol Element** (Element) is a graphic device without scale used only in combination with a symbol (or symbols) or with other elements, to form a symbol (as defined in BS 8541-2:2011)

**System** is a group of components that work together to provide a specific building service such as envelope, ventilation or fire protection (as defined by PAS 1192-2:2013) OR named set of manageable Components providing a common function (as defined in BS 1192-4:2014)

**System (IFC)** are organised combination of related parts, composed for a common purpose or function or to provide a service. System is essentially a functionally related aggregation of products (as defined by PAS 1192-2:2013)

**Systems Engineering** is an interdisciplinary approach enabling the realisation of successful systems (as defined by PAS 1192-2:2013)

### T

**Task Information Delivery Plan (TIDP)** is federated lists of information deliverables by each task, including format, date and responsibilities (as defined by PAS 1192-2:2013)

**Template Object** is a type object intended to guide the production of generic objects and product objects by providing schedules of classification values and a minimum set of attributes (as defined in BS 8541-1:2012, BS 8541-3:2012 and BS 8541-4:2012)

**Tester** is a testing body (as defined by BS 8541-6:2015)

**Third Party Capability Assessment Form** is a form conveying the information management and IT capabilities of non-design, non-construction organisations in a supply chain (as defined by PAS 1192-2:2013)

**Threat** is the potential cause of an incident which may result in harm to a system or organization (as defined by PAS 1192-5:2015)

**Trigger** is a planned or unplanned event that changes and asset or its status (as defined by PAS 1192-3:2014)

**Trigger-related Event** is a response to a trigger and the reflection of the altered state of the asset in the AIM (as defined by PAS 1192-3:2014)

**Type** is a named specification for Components providing a common function (as defined in BS 1192-4:2014)

**Type (Library) Object** is a representation of the common features of a product or group, including its classifications and properties (as defined in BS 8541-1:2012, BS 8541-3:2012 and BS 8541-4:2012)

## BIM Dictionary continued

### U

**Uniclass** (Unified Classification for the Construction Industry) published by the Construction Project Information Committee (CPIC) this is a UK standard for classification

**User** is an individual using a built asset for its designed purpose (as defined by PAS 1192-2:2013)

### V

**Value Improving Practice** is the practice with a demonstrated, statistically-reliable connection between its use and a better outcome (as defined in BS 8536-1:2015)

**Verification** is confirmation, through the provision of objective evidence, that specified requirements have been fulfilled (as defined by BS 8541-6:2015)

**Version** is sub-indexing to revision as used in the common data environment to show the development of information and information models, e.g. if a version is named P1.1, P1 is the revision number and the .1 is the version to that revision (as defined by PAS 1192-2:2013)

**Views** (see also Output files) is a generated rendition of graphical or non-graphical information (a plan, section, elevation, schedule, or other view of a project (as defined by AEC (UK) BIM Protocol v2.0)

**Virtual Construction Model** is the subsequent version of the project information model developed from design intent model by the construction supplier and their supply chain (as defined by PAS 1192-2:2013)

**Volume** is manageable spatial subdivision of a project, defined by the project team as a subdivision of the overall project that allows more than one person to work on the project models simultaneously and consistent with analysis and design process (as defined by PAS 1192-2:2013) Note: this term is defined as “zone” in BS 1192:2007

**Vulnerability** is the weakness of an asset or group of assets that can be exploited by one or more threats (as defined by PAS 1192-5:2015)

### W

**Work In Progress (WIP)** is each individual company or discipline’s own work. This is information that has not been approved or verified as fit to share across the project team (reference BS1192:2007) (as defined by AEC (UK) BIM Protocol v2.0)

### X

**X-ref** is a CAD model file associated or linked with another CAD model file. Also referred to as a “reference file” (as defined by PAS 1192-2:2013)

### Z

**Zone** is a named set of Spaces (locations) sharing a specific Attribute, such as activity, access, management or conditioning (as defined in BS 1192-4:2014)

## BIM Dictionary continued

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