



# BIM *eLearn*



**BIM eLearning  
curriculum**

# About BIMeLearn.com

**Background information regarding who we are, what we do, tutors and the solutions we use to provide our BIM eLearning solutions.**

**ISO 19650 information management alone does provide the solution to improving how we deliver Design and Construction. However, the BIM ELearn.com training courses place information management as the glue that binds together the requirements for delivering structured data and technically competent modelling**

**The Basics of BIM provide free background information on “What is BIM2, as well as the background that has brought us to this point.**

**FREE eLearning**

**The Mervyn Richards Lectures provide access to much of the material provided as part of the Avanti training courses used by BRE as well as Mervyns University Lectures.**

**The Principles of Information Management course series provide access to the latest context and guidance on how to interpret and deliver information management.**

**Premium eLearning  
BIM as ISO 19650**

**Based upon the latest Standards and international guidance.**

## BIMeLearn.com Training

BIMeLearn.com is brought to you by Oakley CAD Services Ltd who have been at the forefront of training and education programmes relating to Computer Aided Design and Building Information Modelling since 2004, delivering software and process-based training both direct to customers and through partner channels. Traditionally, as leading experts in software use and the BIM process, we offered a range of classroom based and mixed learning training.

Our trainers have previously provided software training courses for many Autodesk Resellers over several years as well as writing the content for the Building Research Establishment, BRE Academy BIM Level 2 and ISO 19650 series of training courses from 2015 to 2020. The BIMeLearn.com series of training courses builds on this expertise and considers the latest changes to the many ISO / CEN and associated standards that drive the requirements in this space.

The development of our eLearning platform BIMeLearn.com provides the opportunity to provide cost efficient global eLearning to our customers across the world at a fraction of the price of Classroom based delivery.

For corporates, we also offer bespoke training programmes customised to meet your specific needs and to support progress and learning in this skilled industry.



**UKRLP** UK Register  
of Learning  
Providers

UKPRN: 10025774

## **Principles of BIM as Information Management, according to ISO 19650.**

For centuries, the global construction industry has underperformed, delivering late and over cost for the suffering client base with poor industry perception, profits, and work / life balance. With a growing world population and ever reducing resources the pressure to remove waste from the building lifecycle is growing. The requirement to transform construction is global with a need to build on time and at cost whilst providing better information that facilitates better decisions to support a lifecycle approach.

**BIM as Information Management has been identified as the foundations to enable this transition and a series of International agreed standards under the ISO 19650 banner have been developed to support this requirement.**

To support the Architecture, Engineering, Construction and Operating industry needs BIMeLearn.com has developed the Principles of BIM as Information Management series of training courses that support the adoption of the ISO 19650 standard series, Organization and digitization of information about buildings and civil engineering works – including building information modelling (BIM) – information management using building information modelling.

**The BIMeLearn.com training courses not only provide support in understanding the “WHAT” that is provided by the new ISO 19650 standards, but also covers the “WHY” and “HOW” that is crucial to facilitate change management implementation on projects, companies, and industry.**

These BIMeLearn.com training courses do not cover how to use software solutions but, instead focuses on the processes and function required to educate all practitioners, clients, experts and professionals that there is a better way of working. The training allows them to obtain a common understanding of what the process of BIM as Information Management is and to educate / train them how they can improve their own workflows, limit their liabilities, de-risk their deliverables and increase their profit margins.

**The Information Management process is about collaboration and the BIMeLearn.com approach to the “Principles of BIM as Information Management” is to ensure that ALL project members receive the education and training required to ensure commonality of the message, thus, ensuring everyone has the same understanding of the BIM process, definitions and how to achieve the goals this sets out.**

## Training Course Structure

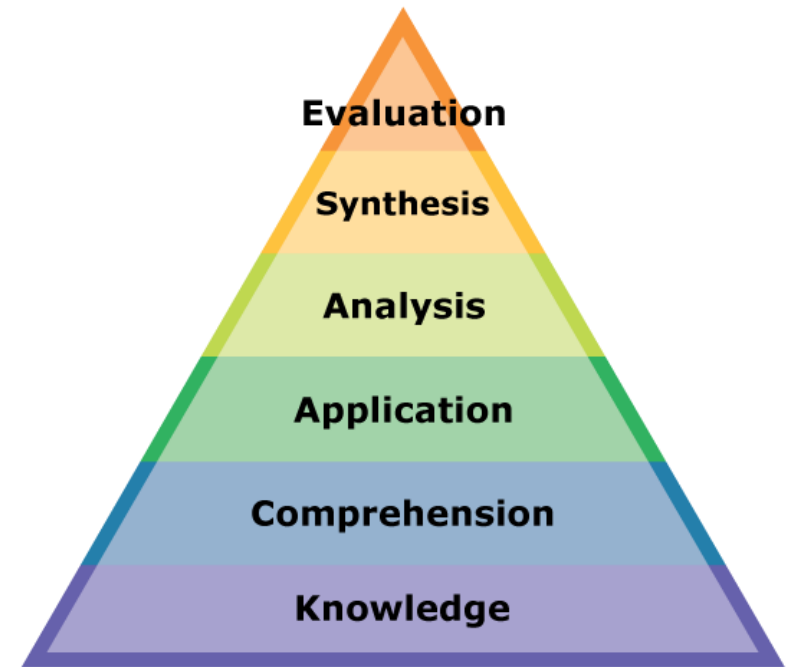
### Course:

Each training course is broken down into a series of lessons. To complete a course, delegates must complete the compulsory lessons identified within the Unit, followed by the prescribed assessment method references to meet the learning outcomes. This is to ensure that those who complete the assessment have successfully achieved that course learning outcomes. Courses are generally limited to approximately 90 minutes of learning.

### Lessons:

Each lesson is a stand-alone element of taught content that will provide enough information to allow the delegate to satisfy that lessons learning outcome. Lessons will generally be no more than 20 minutes based around content being presented, where beneficial case study material is including with some lessons completing with suggested activities

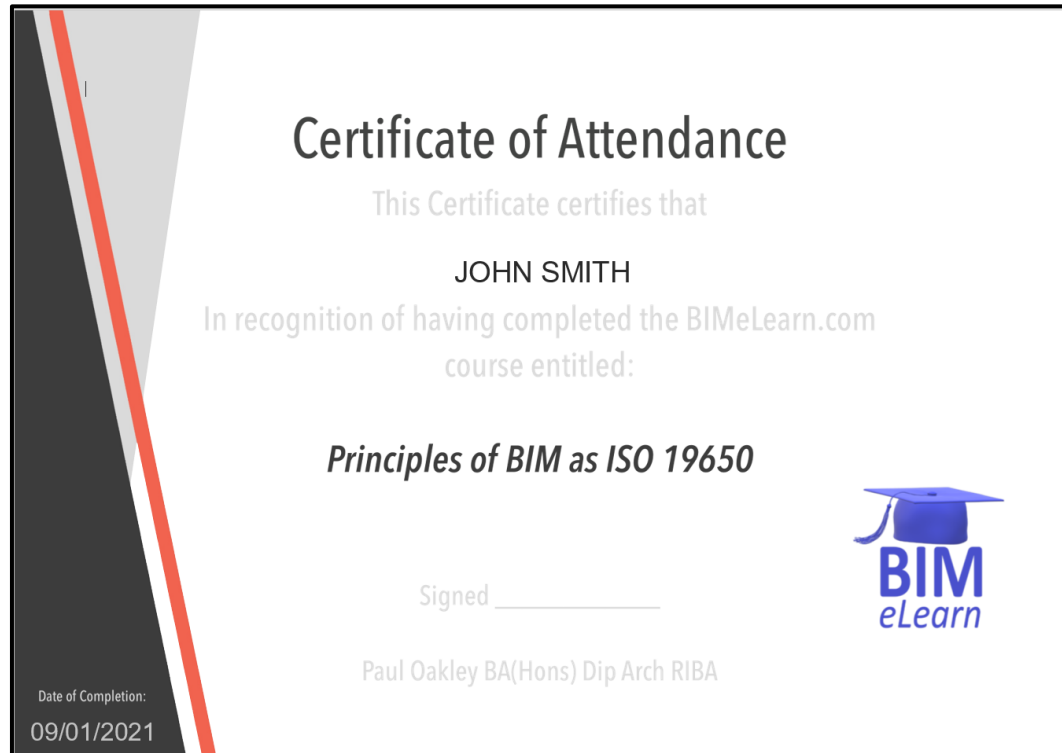
**Learning Outcomes:**  
In order to develop the taught content for this curriculum a series of learning outcomes have been developed. For the BIM aspects of the training the Learning Outcome Framework development by both the UK BIM Task Group and by buildingSMART International have been identified and used for these courses. Through further development these Learning Outcomes are set against bloom's taxonomy to establish an appropriate level of learning and grouped together to form courses. The course content for the Principles of Information Management course presently deals with the foundation Knowledge and Comprehension learning levels.



The Learning Outcome will establish a common working platform for BIM globally, ensuring that everyone internationally has the same understanding of the basics, uses, and understands all the definitions and terminology correctly. This is important to ensure the smooth implementation of BIM between countries and to ensure that national and regional requirements and variations are addressed to provide a course that is relevant to Clients representative, practitioners, professionals and globally.

## Certificate of completion

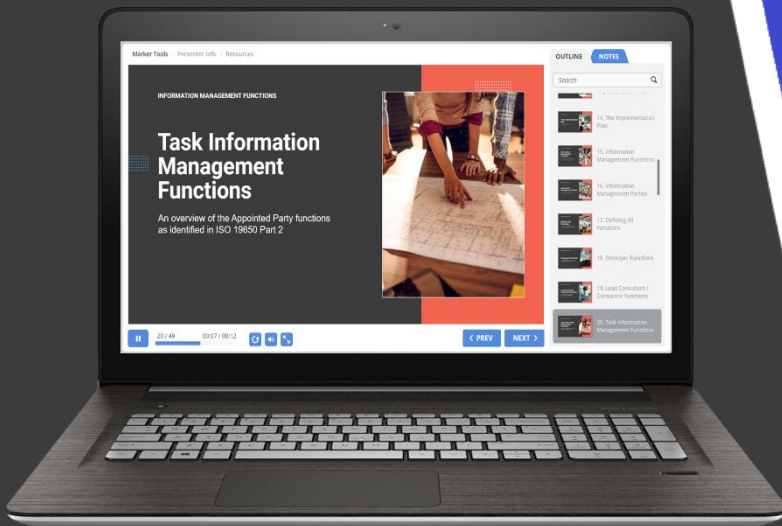
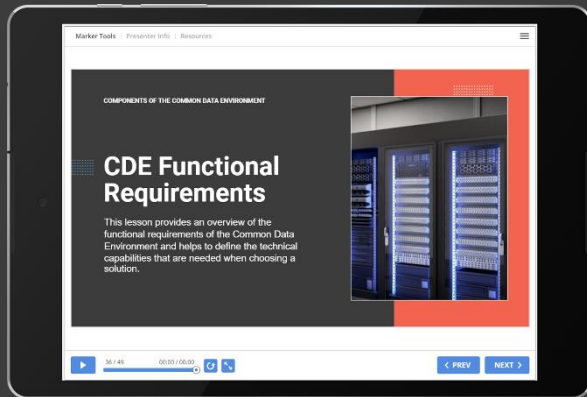
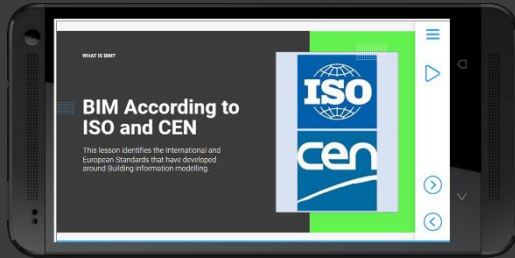
Candidates completing the Principles of BIM according to ISO 19650 series will be issued with a Certificate of Attendance for Continuing Professional Development record purposes.



Candidates obtaining an exam pass of 75% or greater will received a Certificate of Recognition for the Principles of BIM according to ISO 19650 series as well as being awarded the BIM Practitioner badge.



# Platform availability



## Why BIMeLearn.com

Whether at home or on the move BIMeLearn.com is built on Moodle the world's most popular learning management system. Available through any web enabled device and developed with software to optimize your viewing performance.



## Course Tutors

### Professor Mervyn Richards OBE

Professor Mervyn Richards OBE was the original Chair of the ISO 19650 committee as well as being the Author for BS 1192:2007 and PAS 1192-2.

Mervyn also lectures at both the University of Reading and Middlesex University in the UK and was the original author of the Building Research Establishment (BRE) BIM Level 2 training courses.



### Paul Oakley BA(Hons) Dip Arch RIBA

Paul Oakley is a British Standards committee member and ISO Committee member. He has provided International BIM standards guidance and most recently supported the Hong Kong CIC in the development of the BIM Standard (General) and Local Annex to ISO 19650.

Paul previously developed the BRE BIM Level 2 and ISO 19650 Training as well as delivering training across the world including Brazil, Chile, China, Hong Kong, Malaysia, Middle East etc...





## eLearning by BIMeLearn.com to improve your knowledge, understanding and outcomes



Understand the different definitions of BIM and what is required to deliver best practice;



Learn how to apply BIM according to ISO 19650 to create better outcomes for Designers, Contractors and Clients;



Course based upon the latest 2021 standards, versions, guidance, and learning;



Practical input from Tutors who have been there and delivered BIM using the tools now available;



Available for multiple devices from Workstation, Laptop, tablet or phone, including mobile app; and



Earn CPD certificates and digital badge as you learn.



## The Basics of BIM (FREE BIM eLearning)

A series of FREE training courses providing the background of the WHAT and WHY regarding BIM

**“To change or ‘simplify’ any element of the procedure – without an understanding of the impact of that change – puts the improvements at risk, and at best will only maintain the ‘status quo’.”**

Avanti Standards, Methods and Procedure 2006

## Basics of BIM FREE eLearning

The Basics of BIM provides a collection of FREE training courses to upskill and provide common understanding regarding how and why BIM is creating a paradigm shift within the built environment.

### What is BIM (FREE course)

BIM means different things to different people and this course introduces the different meanings of the acronym BIM and the concept of the information model, the key acronyms and terminology, BIM Dimensions and highlights the issues relating to BIM Deliverables.

The Course includes many of the key requirements for understanding What is BIM and provides the background needed to gain value from the further courses on offer. The material has previously been delivered in seminars and workshops across the world and provides the foundation for further learning.

### BIM Level 2 to BIM as ISO 19650 (FREE course)

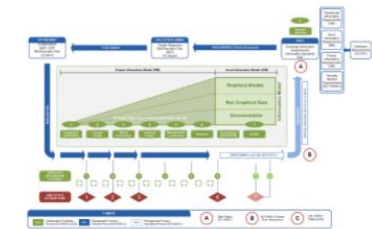
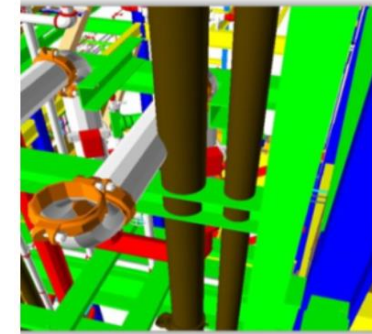
The course BIM Level 2 to BIM as ISO 19650 provides not only the background to the Standards which defined BIM Level 2 and were moved into the ISO 19650 series but also provides an update on all the other ISO and CEN work items aiding to resolve the implementation of BIM issues as well as driving digital construction.

It is important to understand the context and variety of other standards, guidance and protocols available that support international development as well as practical implementation.

### The Need for Change, the Professor Mervyn Richards OBE Lectures (FREE course)

The content of the six lectures by Mervyn was initially used as part of the BRE / Avanti BIM Level 2 training courses and has become the basis for the Lecture series provided at Middlesex and Reading Universities. These six lectures provide the background to why BIM Level 2 was required, the problems that needed to be resolved and the methodology required to remove risk and waste, whilst improving productivity.

**Just visit [BIMeLearn.com](http://BIMeLearn.com) use 'Add to cart' and check out for FREE access to these eLearning courses.**



Add to cart

# Basics of BIM Syllabus (FREE Courses)

## Course: What is BIM

**BIM, BIM and BIM**



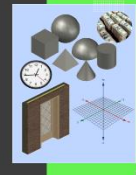
The lesson introduces the different meanings of the acronym BIM and the concept of the information model.

**BIM Acronyms & Terminology**



This lesson introduces the different meanings of the acronym BIM and the concept of the information model.

**The BIM Dimensions**



This lesson introduces the key BIM Dimensions of 7D, 4D and 5D and their meanings.


**The BIM problem**



This lesson highlights the issues relating to deliverable and understanding the processes that determine a BIM workflow.

## Course: BIM Level 2 to ISO 19650

**UK BIM Level 2**



This lesson explains the development of the UK BIM Level 2 and its development from the BIM Strategy to the launch of ISO 19650.

**BIM According to ISO and CEN**



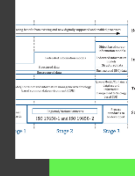
This lesson identifies the international and European standards that have developed around Building Information Modelling.

**The UK BIM Framework**



This lesson introduces the UK BIM Framework which emerges to support the UK BIM Level 2 process using the ISO 19650 context.

**Measuring BIM Maturity**



This lesson introduces further terminology in the context of BIM maturity levels and the multiple definitions available for use.

## Course: The Need for Change (Mervyn Richards Lectures)

**CASE STUDIES AND RESEARCH PART 1**

**THE NEED FOR CHANGE**



1.1

**CASE STUDIES AND RESEARCH PART 2**

**THE NEED FOR CHANGE**



1.2

**Drivers for Change**

**The Need for Change**



1.3

**IMPACTS CAUSE AND EFFECTS**

**THE NEED FOR CHANGE**



1.4

**BARRIERS TO COLLABORATION & BENEFITS**

**THE NEED FOR CHANGE**



1.5

**Barriers to Collaboration & Benefits Part 2**

**The Need for Change**



1.6

## 'What is BIM' Course (FREE)

### Course Overview

*The Basics of BIM* provides an understanding of why BIM as Information Management is a fundamental requirement in delivering change within the AEC Industry and provides a common understanding of the acronyms, terms and definitions to facilitate collaborative exchange as we start to take advantage of the digital capabilities available to us.

### Duration

The Course is made up of 4 eLearning Lessons (Approx. 90 Minutes total).

### Prerequisites

No Prerequisites. This course is suitable for everyone who requires an understanding of BIM and is a suggested prerequisite of those attending the Principles of Information Management according to ISO 19650 course

### Lesson 1. BIM, BIM, & BIM.

This lesson introduces the concept and the different meanings of the acronym BIM and the concept of the information model;

### Lesson 2. BIM Acronyms and Terminology.

This lesson identifies the key acronym and terminology that have developed around Building information modelling;

### Lesson 3. BIM Dimensions.

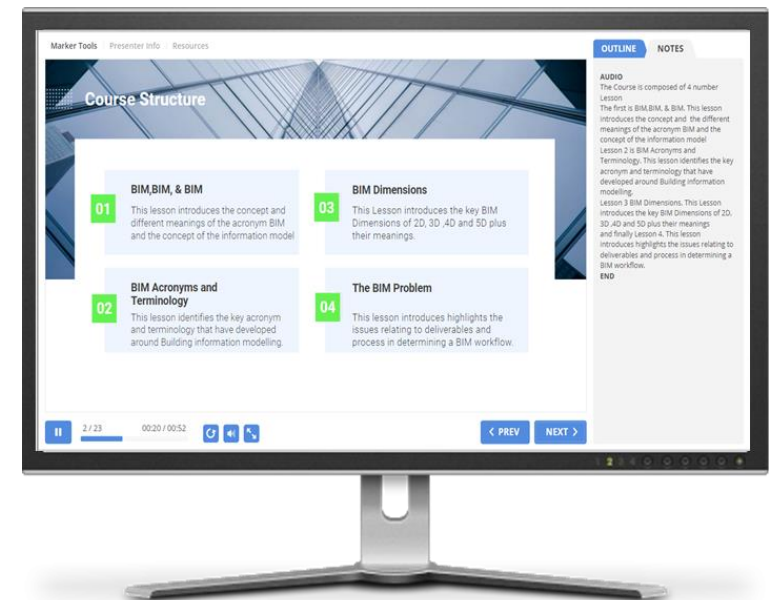
This Lesson introduces the key BIM Dimensions and their meanings; and

### Lesson 4. The BIM Problem

This lesson introduces highlights the issues relating to deliverables and process in determining a BIM workflow.

### Course Learning Outcomes

- Outline the difference between BIM, BIM, & BIM
- Define what constitutes an information model
- Recognize and define the key BIM terminology
- Identify the industry adopted BIM dimensions;
- Identify the difference between the process and deliverable requirements; and
- Recognize the need for deliverables to identify the process from which they were developed.



## BIM Level 2 to BIM as ISO 19650 (FREE)

### Course Overview

This course explains the development from the UK BIM Level 2 mandate into the International Standard for Information Management, ISO 19650. The Course is composed of 4 number Lesson which reflect this development.

### Duration

The lectures are available as 5 Units eLearning (Approx. 3 Hours).

### Prerequisites

No Prerequisites. This course is suitable for everyone who requires an understanding of BIM and is a suggested prerequisite of those attending the Principles of Information Management according to ISO 19650 course

### What is BIM series

#### Lesson 1 UK BIM Level 2

This lesson explains the principles of the UK BIM Level 2 development from the HMG Mandate till the launch of ISO 19650;

#### Lesson 2 BIM According to ISO and CEN

This lesson identifies the International and European Standards that have developed around Building information modelling;

#### Lesson 3 UK BIM Framework

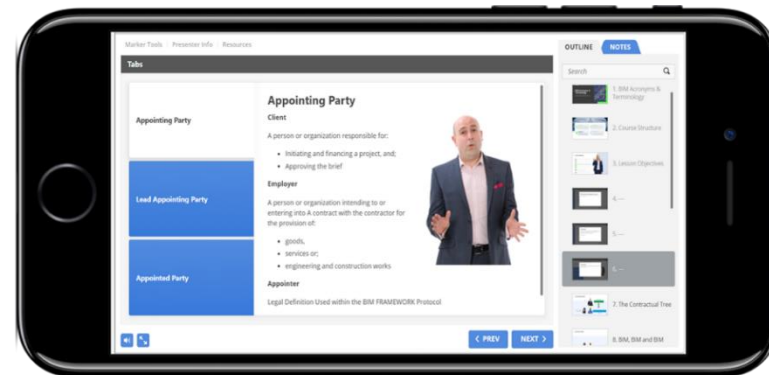
This lesson explains how the UK BIM Framework has developed and the implications for UK Construction; and

#### Lesson 4 Measuring BIM Maturity

This lesson introduces further terminology in the form of the BIM maturity levels and the multiple definitions available for use.

### Course Learning Outcomes

- Identify the UK BIM Level 2 British Standards.
- Recognize the core documents and deliverables required for BIM Level 2.
- Outline the areas of BIM Standardization being undertaken by ISO and CEN
- Identify the suite of Standards, and guidance which makes up the UK BIM Framework.
- Outline the need for BIM maturity levels
- Recognize the differing BIM maturity models developed globally.



## The Need for Change, the Professor Mervyn Richards OBE Lectures (FREE)

The Need for Change is a series of six Lectures by Professor Mervyn Richards OBE dealing with the history that led to the development of the UK BIM Level 2 strategy and the problems it was attempting to resolve.

### **Lecture 1: Case studies and Research Part 1**

Case Studies and Research Part 1 explores the development of BIM from the early concepts of the single model environment to the development of the Construction Production Information Council (CPIC);

### **Lecture 2: Case Studies and Research Part 2**

Case Studies and Research Part 2 explores the development of BIM from the initial CPIC work, through AVANTI into BIM Level 2;

### **Lecture 3: Driver for Change**

The UK Government BIM strategy was largely based on the Mark Bew and Mervyn Richards maturity diagram. This shows a progressive introduction of more collaborative ways of working to achieve the outcomes required by the strategy and also built the foundations for what is now called Digital Built Britain. This Lecture explains the background and the drivers for change;

### **Lecture 4: Impacts, causes and effects**

The first step to solving a problem is to accept there is one... This is not always the case, particularly in the boardrooms, they think it is a BIM thing. They do not realize it is a business problem.

The industry needs to accept that there is a problem, also confirmed through any number of reports since 1901 and still being reported in the 2018's McKinsey Report and Farmer report. This Lecture explains the background and the impacts, causes and effects that have led to the need for change;

### **Lecture 5: Barriers to Collaboration and Benefits Part 1**

The fifth Lecture in this series looks at the industry and its ability to collaborate. We find many barriers to achieving this goal. Some are technical, some are perceived economic problems, but in the most part they are cultural. These are based on self-protection perceptions, that it's the other person responsibility, that I do my job properly and I cannot trust others; and

### **Lecture 6: Barriers to Collaboration and Benefits Part 2**

The final Lecture in this series carries on the looking at the industry's ability to collaborate and introduces the concept of the Super 6 steps to improvement.



**Principles of Information management according to ISO 19650 Package  
+ Course Assessment + badge**



**A series of premium  
eLearning courses with the  
aim of putting the “I” back  
into BIM...**

**“I didn’t know, what I didn’t  
know, until I took this course...”  
enlightened student**

**£200 for the package**





## Principles of BIM as Information Management

Principles of BIM as Information Management, incorporating the ISO 19650 series provides access to the 7 Courses and final assessment which make up the series.

The ISO 19650 series of standards define the high-level requirements for delivering BIM as information management. However, BIM is a collaborative exercise and information management is only one aspect of that. This Principles of BIM as Information Management courses not only provides the detail to implementing the ISO 19650 series of standards but also puts this into the context of the other existing and developing International and European standard.

The courses provided are:

- ISO 19650-2 Requirements and Responses
- ISO 19650 Information management functions
- ISO 19650-2 Procurement, Planning and Production
- Mobilization, Production and Close-out
- Components of the Common Data Environment
- Standards, Methods, and procedures
- Open BIM
- Online Assessment
- +Badge (\*Dependent upon Assessment result)

This collection of courses provides training and education relating to the latest 2021 versions of the various ISO and CEN standards as well as internationally released guidance and best practice.



## Features and Pricing Options

Features	Individual License	Team License
Full access to all learning resources for 365 days	✓	✓
Up to date courses referencing the latest ISO and CEN standards	✓	✓
Individual Email User License	✓	✓
Course and Series assessment undertaken	✓	✓
Series Certificate available	✓	✓
Easy online purchases	✓	-
Invoice Option	-	✓
Volume Discounts (Please contact us)	-	✓

Pricing Options for Bulk purchases	Individual License	Bulk License
Individual License	£200	-
2 to 5 Licenses	£175	£875 for 5 Users
6 to 10 Licenses	£150	£1500 for 10 Users
Up to 25 Licenses	£125	£3125 for 25 Users
Up to 50 Licenses	£100	£5000 for 50 Users
Up to 100 Licenses	£90	£9000 for 100 Users
120 + Licenses	£75	Please contact us:

# Principles of Information Management Series of Courses

## Course: Requirments & Responses

REQUIREMENTS & RESPONSES

### Resources and Content

An overview of resources and content as outlined in ISO 15650 Part 2: 2018



REQUIREMENTS & RESPONSES

### Information Requirements

An overview of Information Requirements as outlined in ISO 15650 Part 2: 2018



REQUIREMENTS & RESPONSES

### The Pre Appointment Implementation Plan

An overview of the Pre-Appointment Implementation Plan as outlined in ISO 15650 Part 2: 2018



REQUIREMENTS & RESPONSES

### The Implementation Plan

An overview of the implementation plan for collaborative working



## Course: Information Management functions

INFORMATION MANAGEMENT FUNCTIONS

### Information Management Parties

This lesson introduces the information management parties as identified within the ISO 15650 series



INFORMATION MANAGEMENT FUNCTIONS

### Employer Functions

An overview of the Functions to be undertaken by the Employer and Appointing Party



INFORMATION MANAGEMENT FUNCTIONS

### Lead Consultant / Contractor Functions


An overview of the Lead appointed party functions, identified for ISO 15650:2



INFORMATION MANAGEMENT FUNCTIONS

### Task Information Management Functions

An overview of the task team functions as identified in ISO 15650 Part 2



## Course: Assessment, Procurement, and Appointment

PRINCIPLES OF INFORMATION MANAGEMENT

### Assessment, Procurement, and Appointment

This lesson provides an overview of the ISO 15650 assessment, procurement and appointment functions, including the roles and objectives of each activity



PROCUREMENT, PLANNING, AND PRODUCTION

### Life Cycle Activities

This lesson expresses the information activities and the lifecycle approach



PROCUREMENT, PLANNING, AND PRODUCTION

### Assessment and Need

This lesson defines the role of the Employer in defining the information requirements



PROCUREMENT, PLANNING, AND PRODUCTION

### Appointment

This lesson defines the role of the Employer in the appointment of the project team for collaborative working



## Course: Mobilization, Production and Close-out

PROCUREMENT, PLANNING, AND PRODUCTION

### Mobilization

This lesson defines the mobilization activities needed prior to the start of production



PROCUREMENT, PLANNING, AND PRODUCTION

### Collaborative production

This lesson defines the collaborative production activities and the quality management and data management



PROCUREMENT, PLANNING, AND PRODUCTION

### Information delivery


This lesson looks at the data processes of information delivery and the role of the Employer in the information delivery



PROCUREMENT, PLANNING, AND PRODUCTION

### Project close out

This lesson looks at the project close out process, including the validation of information and the requirements for final data delivery



# Principles of Information Management Series of Courses

## Course: Components of the Common Data Environment

**The Information Environments**

This lesson provides an overview of the functional sections of the Common Data Environment as well as the identified gateways.

**The expanded CDE process**

This lesson explains the principles of the expanded Common Data Environment process.

**Nomenclature and Metadata**

This lesson explains the implementation requirements of both nomenclature and metadata necessary to facilitate the Common Data Environment.

**CDE Functional Requirements**

This lesson provides an overview of the functional requirements of the Common Data Environment and helps to define the business capabilities that are needed when choosing a solution.

## Course: Standards, Methods, and Procedures

**The Need for Standards**

This lesson describes the importance of standards in the context of the course.

**Model / Document Delivery**

This lesson describes the importance of delivering the model and documents in a consistent and interoperable manner.

**Collaborative Working**

This lesson describes the importance of collaborative working in the context of the course.

**Structure Information**

This lesson describes the importance of structure information in the context of the course.

## Course: OpenBIM

**BuildingSMART & OpenBIM**

This lesson covers BuildingSMART initiatives, the organization and the comprehensive OpenBIM using with the standards.

**Industry Foundation Classes (IFCs)**

This lesson covers IFC the standard to represent and the format that can be interoperable between authoring tools.

**Model View Definitions (MVDs)**

This lesson covers MVDs which are used to standardize the approach to filtering information to meet requirements.

**Information Delivery Manuals (IDMs)**

This lesson introduces IDMs as a structured way of defining processes for automation.

## Course: OpenBIM cont'd, Series Assessment + Badge for 75%+

**International Framework for Dictionaries (IFD)**

This lesson introduces IFD which is the basis for the BuildingSMART Data Dictionary.

**BIM Collaboration Format (BCF)**

This lesson introduces the BCF which is the basis for the BuildingSMART Data Dictionary.

**Principles of BIM Assessment**

20 questions to be completed in 75 minutes with a 70% pass rate required to receive the BIM eLearn badge.



## Principles of Information management according to ISO 19650 Package + Course Assessment + badge

Developed by world leading experts in BIM as Building Information Management involved in both the development of the UK and International learning outcomes frameworks, the courses are intended not just to provide a page turner on the ISO 19650 standards themselves, but practical knowledge of the information management framework to improve your project delivery.

The ISO 19650 Principles of Building Information Management course is the second step towards understanding the BIM requirements as identified in the international standard ISO 19650. This course provides a general overview of Building Information Management, the needs and benefits as well as providing an overview of the key terminology and concepts. It then introduces the key concepts which are developed further in the second Delivering Information Management course.

### Prerequisites

No Prerequisites. This course is suitable for everyone who requires an understanding of BIM but should have a design or construction background.

We would recommend that you do the FREE “Basic of BIM” courses to become familiar with the Acronyms and Terminology used.



+



or



**For those obtaining 75% or greater in the final assessment**

## **Course: Requirements and Responses according to ISO 19650-2**

### **Duration**

Approx. 90 minutes eLearning

### **Prerequisites**

It is recommended that students complete the BIM Basics Training course prior to taking this course.

### **Overview**

ISO 19650-2 identifies a series of resources and content required to fulfil the information management processes throughout the eight identified activities. This course introduces the various resources and content and how these are grouped to define the Appointing Party Information requirements and delivery team responses. the course is divided into 4 lessons which include:

#### **Lesson 1 Resources and Content**

An overview of resources and content as outlined in ISO 19650 Part 2: 2018;

#### **Lesson 2 Information Requirements**

An overview of Requirements as outlined in ISO 19650 Part 2: 2018;

#### **Lesson 3 Pre-Appointment Implementation plans**

An overview of the Tender response as outlined in ISO 19650 Part 2: 2018; and

#### **Lesson 4 The implementation plan**

An overview of the implementation plan for collaborative working.

### **Course Learning Outcomes**

- Describe the key components of the ISO 19650 resources and content;
- Explain the three key groupings of resources and content;
- Describe the benefits of information requirements;
- Express the key components of the information requirements;
- Express the key components of the pre appointment or draft implementation plan; and
- Express the key components of the implementation plan.

## **Course: ISO 19650 Information Management Functions**

### **Duration**

Approx. 90 minutes eLearning divided into 5 Lessons.

### **Prerequisites**

It is recommended that students complete the BIM Basics Training course prior to taking this course.

### **Overview**

This unit provides an overview of the Information Management Functions as outlined in the ISO 19650 Standards series.

### **Lesson 1 Information Management Parties,**

This Lesson introduces the Information management parties as identified within the ISO 19650 series;

### **Lesson 2 Defining Information Management Functions.**

An overview of the information management functions as identified in the ISO 19650 series;

### **Lesson 3 Appointing Party Functions.**

An overview of the Appointing Party Functions identified for ISO 19650-2;

### **Lesson 4 Lead Appointed Party Functions.**

An overview of the Lead appointed party functions identified for ISO 19650-2; and

### **Lesson 5 Task Team Functions.**

An overview of the task Team functions as identified in ISO 19650 Part 2.

### **Course Learning Outcomes**

- Express the Information Management parties and associated activities;
- Explain why Information Management functions are required;
- Define Employers Information Management roles and responsibilities;
- Define Lead Designer / Contractors Information Management roles and responsibilities;
- Define Task team Information Management roles and responsibilities; and
- Express the implications of Information Management roles in working methods.



## **Course: ISO 19650-2 Procurement, Planning and Appointment**

### **Duration**

Approx. 90 minutes eLearning divided into 5 Lessons.

### **Prerequisites**

It is recommended that students complete the BIM Basics Training course prior to taking this course.

### **Overview**

This course is the first of two courses that step you through the ISO 19650 Activities and explains the associated processes, requirements parties and obligations to facilitate collaborative working using building information modelling (BIM).

### **Lesson 1 Life Cycle & Activities.**

This Lesson Identify the information life cycle and associated activities;

### **Lesson 2 Assessment & Need.**

This Lesson identifies the role of the Employer in defining their information requirements;

### **Lesson 3 Invitation to Tender.**

This Lesson looks at how the Client need to define their information requirements;

### **Lesson 4 Tender response**

This Lesson looks at the development of the draft implementation plan and other requirements of the tender response; and

### **Lesson 5 Appointment.**

This Lesson looks at the development of the implementation plan as a proposal for collaborative working.

### **Course Learning Outcomes**

- Identify the information life cycle and associated activities
- Identify the key tasks associated with assessment and need;
- Identify the key tasks associated with an invitation to tender;
- Identify the key tasks associated with a tender response; and
- Identify the key tasks associated with an appointment.



## Course: Mobilization, Production and Close-out

### Duration

Approx. 90 minutes eLearning divided into 4 Lessons.

### Prerequisites

It is recommended that students complete the ISO 19650-2 Procurement, Planning and Production course prior to taking this course.

### Overview

This course steps you through the second half of ISO 19650-2 Activities and explains the associated processes, requirements parties and obligations to facilitate mobilization, collaborative production, information delivery and the close-out activity

### Lesson 1 Mobilization

This Lesson looks at the mobilization activities needed prior to the commencement of collaborative working as outlined in ISO 19650 Part 2: 2018;

### Lesson 2 Collaborative Production

This Lesson looks at Collaborative production of information and the quality processes required to share information as outlined in ISO 19650 Part 2: 2018;

### Lesson 3 Information Delivery

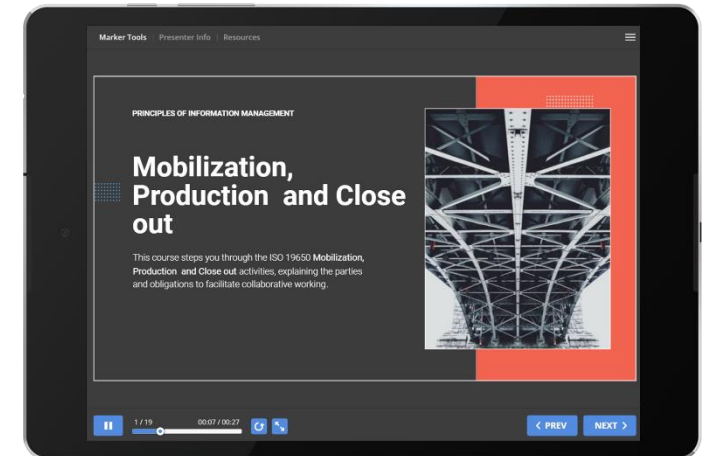
This Lesson looks at the quality process of information delivery to meet the information management requirements.; and

### Lesson 4 Close out

This Lesson identifies the project close out process, verification and validation, plus the needs for Post occupancy evaluation.

### Course Learning Outcomes

- The Course objectives identify that at the end of the course you will be able to:
- Identify the tasks associated with mobilization;
- Identify the tasks associated with the collaborative production of information;
- Express the key considerations when producing information;
- Identify the key tasks associated with information model delivery; and
- Describe the relationship between verification, validation, authorisation, and acceptance.



## Course: Components of the Common Data Environment

### Duration

Approx. 90 minutes eLearning divided into 4 Lessons.

### Prerequisites

It is recommended that students complete the BIM Basics Training course prior to taking this course.

### Overview

The Components of the Common Data Environment course explains the basic principles of the Common Data Environment identified as a requirement for information Management in ISO 19650. The CDE is now an integral part of the ISO 19650 process. However, many of the simplifications applied have lost that original understanding. The aim of this course is to rectify this understanding to facilitate the improvements necessary to improve the way information is delivered.

### Lesson 1 Information Environments:

This lesson provides an overview of the functional sections of the Common Data Environment as well as the identified gateways;

### Lesson 2 The Expanded CDE Process:

This lesson explains the principles of the expanded Common Data Environment process;

### Lesson 3 Nomenclature and Metadata:

This lesson explains the implementation requirements of both nomenclature and metadata; and

### Lesson 4 Functional Requirements:

This lesson provides an overview of the functional requirements of the Common Data Environment.

### Course Learning Outcomes

- Describe the purpose of the Common Data Environment
- Express the CDE functional sections and gateways
- Recognize the requirements of the expanded CDE process
- Recognize the requirements for standardised nomenclature
- Recognize the requirements for project and document metadata
- Recognize the functional requirements of the solutions that support the CDE process.



## **Course: Standards, Methods and Procedures**

### **Duration**

Approx. 90 minutes eLearning divided into 4 Lessons.

### **Prerequisites**

It is recommended that students complete the BIM Basics Training course prior to taking this course.

### **Overview**

Key to collaborative working and information management is the standards, methods and procedures required to facilitate the process. ISO 19650 defines the requirements for Project information Standards and Project information production methods and procedures. However, what should be included and their important is provided within this course. the course is divided into 4 lessons which include:

#### **Lesson 1 The Need for Standards**

The Lesson explains the range of standards, methods and procedures needed to facilitate information management;

#### **Lesson 2 Model / Document Delivery**

This Lesson explains the standards, methods and procedures required for model and document delivery;

#### **Lesson 3 Collaborative Working**

This Lesson explains the standards, methods and procedures required for collaborative working; and

#### **Lesson 4 Delivering Structured information**

This Lesson identifies the standards, methods and procedures required for delivery of structure information.

### **Course Learning Outcomes**

- Recognize the need for standards at different levels to support collaborative working.
- Express the methods and procedures to enable document delivery in a collaborative environment,
- Identify the key model and document standards identified to aid model and document delivery.
- Identify the collaborative working standards, methods and procedures.
- Recognize the requirements for standardised nomenclature, project and document metadata.
- Recognize the SMPs required to deliver structured information.





## Course: OpenBIM

### Duration

Approx. 90 minutes eLearning divided into 4 Lessons.

### Prerequisites

It is recommended that students complete the BIM Basics Training course prior to taking this course.

### Overview

Key to collaborative working and interoperability are the open exchange standards, methods and procedures required to facilitate the process. buildingSMART International has been for decades the home of OPENBIM and this course takes you through the main components of the buildingSMART portfolio.

### Lesson 1 buildingSMART & Open BIM

This Lesson covers buildingSMART International, the organization, and the components of OpenBIM;

### Lesson 2 Industry Foundation Classes (IFCs)

This Lesson covers IFC the core data schema and file format that provides interoperability between authoring tools;

### Lesson 3 Model View Definitions (MVDs)

This Lesson covers MVDs which provide a standardised approach to filtering information to meet requirements;

### Lesson 4 Information Delivery Manuals (IDMs)

This Lesson introduces IDMs a standardised way of defining processes for automation;

### Lesson 5 International Framework for Dictionaries (IFD)

This Lesson identifies the standards, methods and procedures required for delivery of structure information; and

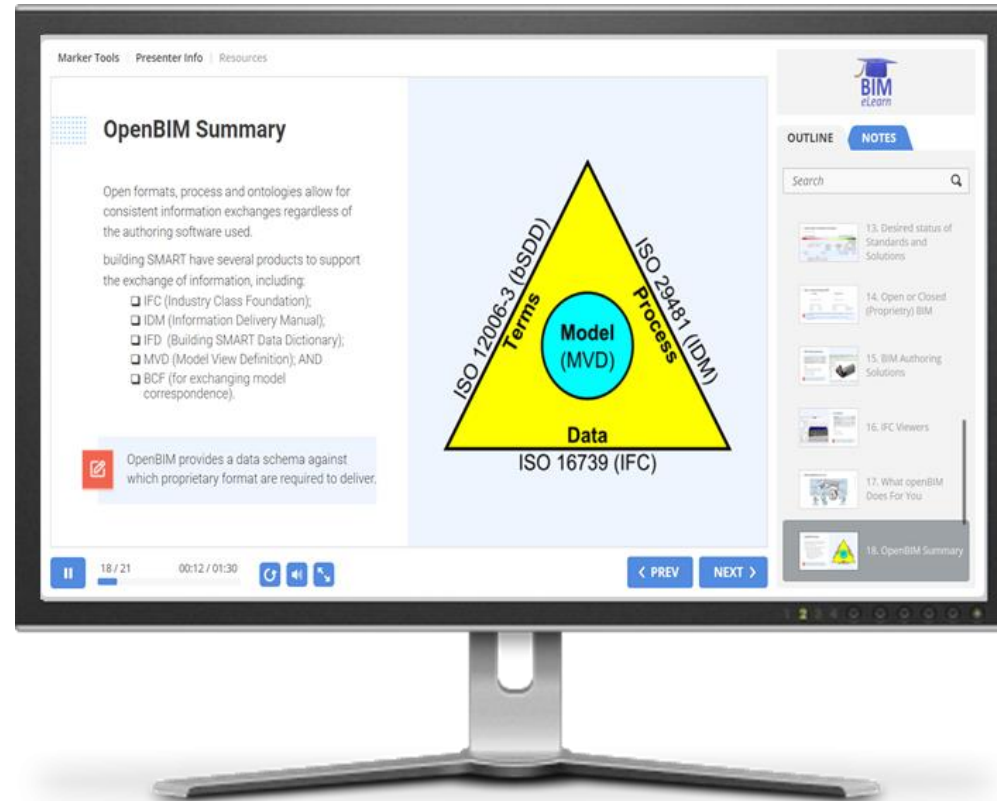
### Lesson 6 BIM Collaboration Format (BCF)

This Lesson covers BCF as an Open standard for communicating comments, issues, and clashes.

## Course: OpenBIM

### Course Learning Outcomes

- Describe what buildingSMART is and what it represents;
- Define OpenBIM and its benefits compared to using proprietary solutions;
- Express what IFC is, and its benefits;
- Identify what MVDs are, and their benefits;
- Express what IDMs are, and their benefits;
- Identify what the IFD is, and its benefits; and
- Express what BCF is, and its benefits.



## Series Assessment: Principles of Information Management

### Duration

Approx. 45 minutes maximum time limit.

### Prerequisites

Completion of the Principles of Information Management Course.

### Overview

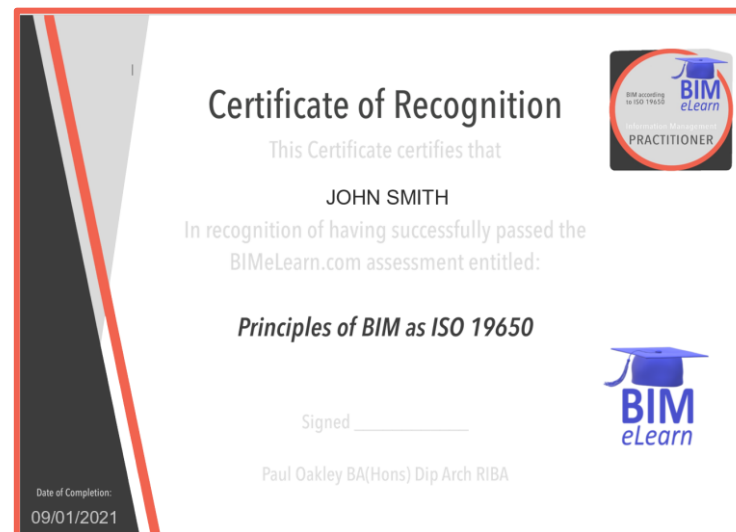
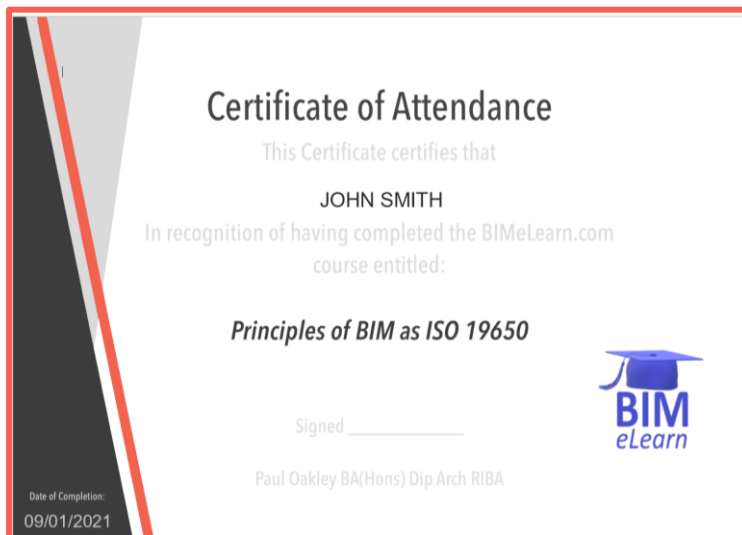
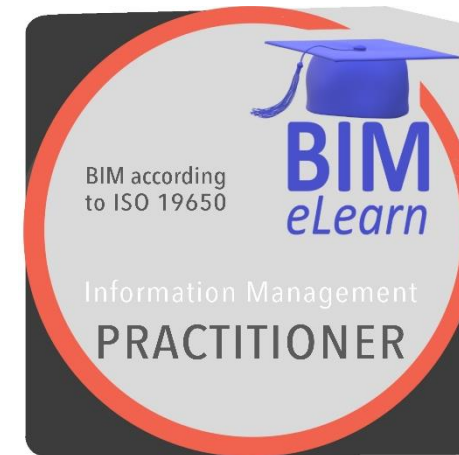
Online Assessment made up of multiple choice, true / false, matching to test the knowledge gained from the training courses.

### Pass mark

As Assessment pass of 75% or greater will be awarded a BIMeLearn Practitioner badge and will have the opportunity to be listed on the BIMeLearn website.

### Certificates

Both a certificate of completion or a Certificate of Recognition for those obtaining 75% or more can be obtained.



## **Bibliography used throughout the BIMeLearn.com BIM Training courses:**

### **ISO 19650 Series:**

Organisation and digitisation of information about buildings and civil engineering works, including building information modelling (BIM) – Information management using building information modelling –

[ISO 19650-1:2018, Part 1](#): Concepts and principles (First Edition, 2018)

- [BS EN ISO 19650-1:2018, Part 1](#): Concepts and principles (First Edition, 2018)

[ISO 19650-2:2018, Part 2](#): Delivery phase of the assets (First Edition, 2018)

- BS EN ISO 19650-2:2018 Part 2: Delivery phase of the assets (First Edition, 2018)
- [BS EN ISO 19650-2:2018 Part 2](#): Delivery phase of the assets (Incorporating corrigendum February 2021) – UK National Annex
- [IS EN ISO 19650-2:2018 Part 2](#): Delivery phase of the assets -Irish National Annex
- [ISO 19650-2:2018](#) -Hong Kong Local Annex
- BIM Standard for Public Projects Information Exchange between Appointing and Appointed Parties – PlanBIM

[ISO 19650-3:2020](#), Part 3: Operational phase of the assets (First Edition, 2020)

[ISO 19650-5:2020](#), Part 5: Security-minded approach to information management (First Edition, 2020)

### **British Standard (BSI)**

[BS 1192-4:2014](#), Collaborative production of information – Fulfilling employer’s information exchange requirements using COBie – Code of practice

[BS 8536-1:2015](#), Briefing for design and construction - Part 1: Code of practice for facilities management (Building’s infrastructure)

[BS 8536-2:2016](#), Briefing for design and construction - Part 2: Code of practice for asset management (Linear and geographical infrastructure)

[BS 8541-1:2012](#) Library objects for architecture, engineering and construction. Identification and classification. Code of practice

[BS 8541-2:2011](#) Library objects for architecture, engineering and construction. Recommended 2D symbols of building elements for use in building information modelling

## **Other CEN/ ISO Standards**

[ISO 7200:2004\(en\)](#) Technical product documentation – Data fields in title blocks and document headers

[ISO 12006-2:2015](#), Building construction – Organization of information about construction works – Part 2: Framework for classification

[ISO 12006-3:2007](#) Building construction – Organization of information about construction works – Part 3: Framework for object-oriented information

[ISO 13567-1:2017\(en\)](#) Technical product documentation – Organization and naming of layers for CAD – Part 1: Overview and principles

[ISO 13567-2:2017\(en\)](#), Technical product documentation – Organization and naming of layers for CAD – Part 2: Concepts, format and codes used in construction documentation

[BS EN ISO 13567-2](#), Technical product documentation – Organization and naming of layers for CAD – Part 2: Concepts, format and codes used in construction documentation (UK National Forward)

[ISO 16739-1:2018](#), Industry Foundation Classes (IFC) for data sharing in the construction and facility management industries – Part 1: Data schema

[EN 17412-1:2020](#), Building Information Modelling – Level of Information Need

[ISO 23386:2020](#) Building information modelling and other digital processes used in construction – Methodology to describe, author and maintain properties in interconnected data dictionaries

[ISO 23387:2020\(en\)](#) Building information modelling (BIM) – Data templates for construction objects used in the life cycle of built assets – Concepts and principles

[ISO 29481-1:2016](#) Building Information Modelling - Information Delivery Manual - Part 1: Methodology and Format”



## **Other standards and documentation**

[buildingSMART International](#) Technical Site

[Construction Industry Council \(CIC\)](#) Building Information Modelling (BIM) Standards - General (Version 2 - December 2020)

[PlanBIM](#) Chile, BIM Standard for Public Projects Information Exchange between Appointing and Appointed Parties

[CPIx](#) Building Information Modelling (BIM) Execution Plan (BEP)

[CPIx](#) BIM Assessment Form

[CPIx](#) Supplier Assessment Form

[BIM Forum](#) LOD Specification 2019

[Open BIM Object Standard](#)

[UK BIM Framework](#)

## **Contact Us**

**Email:** [Info@BIMeLearn.com](mailto:Info@BIMeLearn.com)

**Web:** <https://bimelearn.com/>