



Professional Certification

Casey D Rutland

UKBIMA

buildingSMART UK & Ireland

Vice Chair

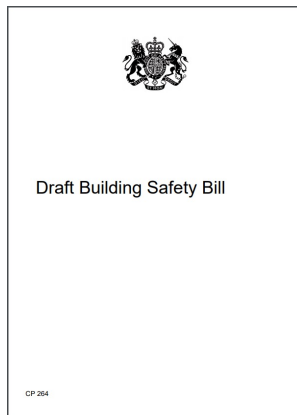
Chair

The importance of 'now'...

digitalgreen.

The demand is (t)here...

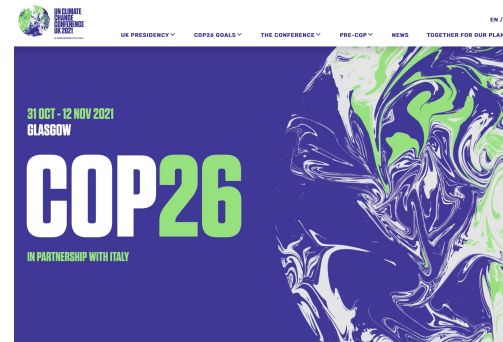
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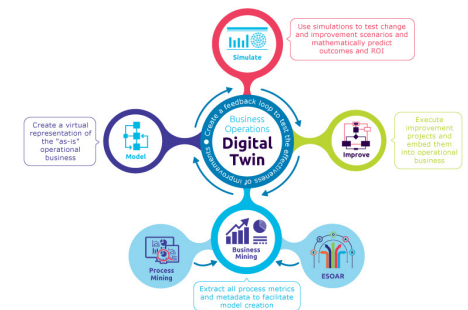
Building Safety Bill



(Social) Infrastructure



Sustainability



Digital Twins

The Information Management Mandate

GOV.UK Search on GOV.UK

→ **Coronavirus (COVID-19)** | Guidance and support

Home > Business and industry > UK economy > UK economic growth > Transforming Infrastructure Performance: Roadmap to 2030

[Infrastructure and Projects Authority](#)

Policy paper

Transforming Infrastructure Performance: Roadmap to 2030

Published 13 September 2021

Contents

1. Ministerial Foreword - Lord Agnew and Financial Secretary to the Treasury
2. Introduction - Nick Smallwood
3. Industry statement, CLC
4. Purpose and vision
5. Building on success
6. Translating the vision into practice
7. Implementing the TIP programme
8. Focus area 1: Delivering new economic infrastructure to drive improved outcomes for people and nature

Infrastructure connects us to each other and the natural environment, and is the foundation for the services that we depend on. It is essential that we focus on the outcomes that we need for people and nature when we are choosing where and how to intervene in this complex system.

The Infrastructure & Projects Authority (IPA) is the government's centre of expertise for infrastructure and major projects. We sit at the heart of government, reporting to the Cabinet Office and HM Treasury, and form a key part of the UK's infrastructure ecosystem:

- National Infrastructure Commission: established in 2015 to provide independent expert advice on the UK's long-term infrastructure needs
- HM Treasury: makes strategic decisions on infrastructure policy and spending
- IPA: drives best practice and innovation in infrastructure delivery
- UK Infrastructure Bank: established in 2021 to provide finance for local and private infrastructure projects

19. Annex B: Information Management Mandate

An updated Information Management Mandate delivered through the application of UK BIM Framework

1. [Building Information Modelling \(BIM\)](#) has been key to digital transformation, and the delivery of improved information management, across the UK built environment since the 2011 [Government Construction Strategy](#) introduced the requirement for fully collaborative BIM as a minimum by 2016. This is referred to as the UK BIM Mandate.
2. BIM is currently defined by the [UK BIM Framework](#) and is based on the emerging ISO 19650 series of standards and any of the remaining BS/PAS 1192 suite of standards. It was previously known as [BIM Level 2](#) until it was superseded by the UK BIM Framework in 2018.
3. BIM is a combination of process, standards and technology through which it is possible to generate, visualise, exchange, assure and subsequently use and re-use information, including data, to form a trustworthy foundation for decision-making to the benefit of all those involved in any part of an asset's lifecycle. This includes inception, capital phase procurement and delivery, asset and facility management, maintenance, refurbishment, and ultimately an asset's disposal or re-use.
4. The implementation of BIM across Government projects, from delivery through operational handover, facilitated by the adoption of [Government Soft Landings \(GSL\)](#), has resulted in greater collaboration, productivity and efficiency in the design and delivery of construction projects delivering both social and economic infrastructure.

The report of the [BIM Interoperability Expert Group \(BIEG\)](#) in [March 2020](#), led in partnership by the Infrastructure and Projects Authority (IPA) and Department for Business, Energy & Industrial Strategy (BEIS) and delivered by the Centre for Digital Built Britain (CDBB), provided evidence that interoperability is fundamental to the ability to build on the success of BIM implementation to date and to the delivery of 'whole-life' beneficial outcomes to all parties.

6. Interoperability, by providing a means of information transfer between different technologies while preserving the integrity of the information transferred, results in beneficial outcomes not just for clients, suppliers and end-users who procure, deliver, own, operate, maintain and are served by assets. It helps to unlock societal, health and safety, environmental and economic benefits from the built environment, as well as improving its overall resilience; hence, interoperability is considered a key component of the updated BIM Mandate, now termed the Information Management Mandate.



8 Categories
130 Submissions
22 Finalists
16 Countries
Unfortunately no
finalists from the UK
Winners announced
7th October @ 1pm

UKBIM Alliance & Professional Certification

Our work is for the industry, by the industry.

UKBIMA is here to help the built environment sector:

- to take the first fundamental step on their digital transformation journey
- promote BIM as business as usual
- transform and future proof the way the industry works

buildingSMART is a worldwide industry body:

- Driving the digital transformation of the built asset industry
- Commitment to delivering improvement by the creation and adoption of open, international standards

The buildingSMART Professional Certification Program:

- enables learning organisations to educate and certify individuals according to a recognised global learning framework
- is an individual qualification and not company certification

The Professional Certification programme...

- Should NOT drive commercial gain for any specific certification or training providers
- Should NOT lock you into one or other service provider
- Embraces the buildingSMART Professional Certification Program
- Has industry-wide alignment (UKBIMA, bsi, buildingSMART, CDBB)
- Is a strategy for defining and developing a level of digital competence for UK BIM Framework delivery

buildingSMART UK&I Professional Certification

The programme has the following objectives:

- To support the standardisation of openBIM training content;
- To support the standardisation of UK BIM Framework training content;
- To support the standardisation of UK & Ireland specific guidance training content;
- Enable the recognition of approved training organisations;
- Enable the testing and qualification of individuals.

Benefits of the UK&I Professional Certification



Benefits to Training Providers

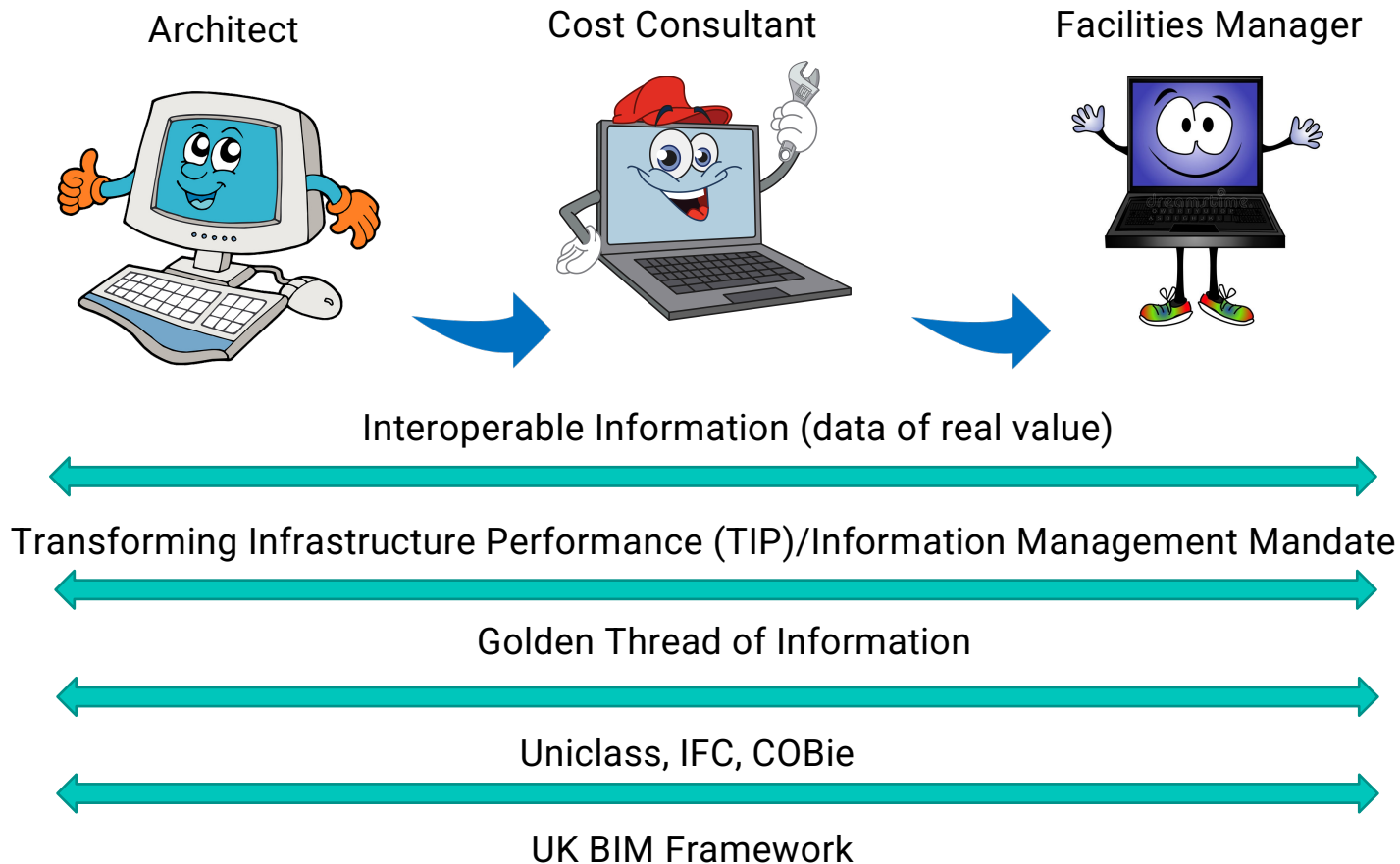
- Kick-start course content development by using the buildingSMART learning framework.
- Ensure courses are up to date and reflective of best practices.
- Benefit from the learning guidelines and support mechanisms from the local chapter.
- Brand your course as 'buildingSMART registered'.



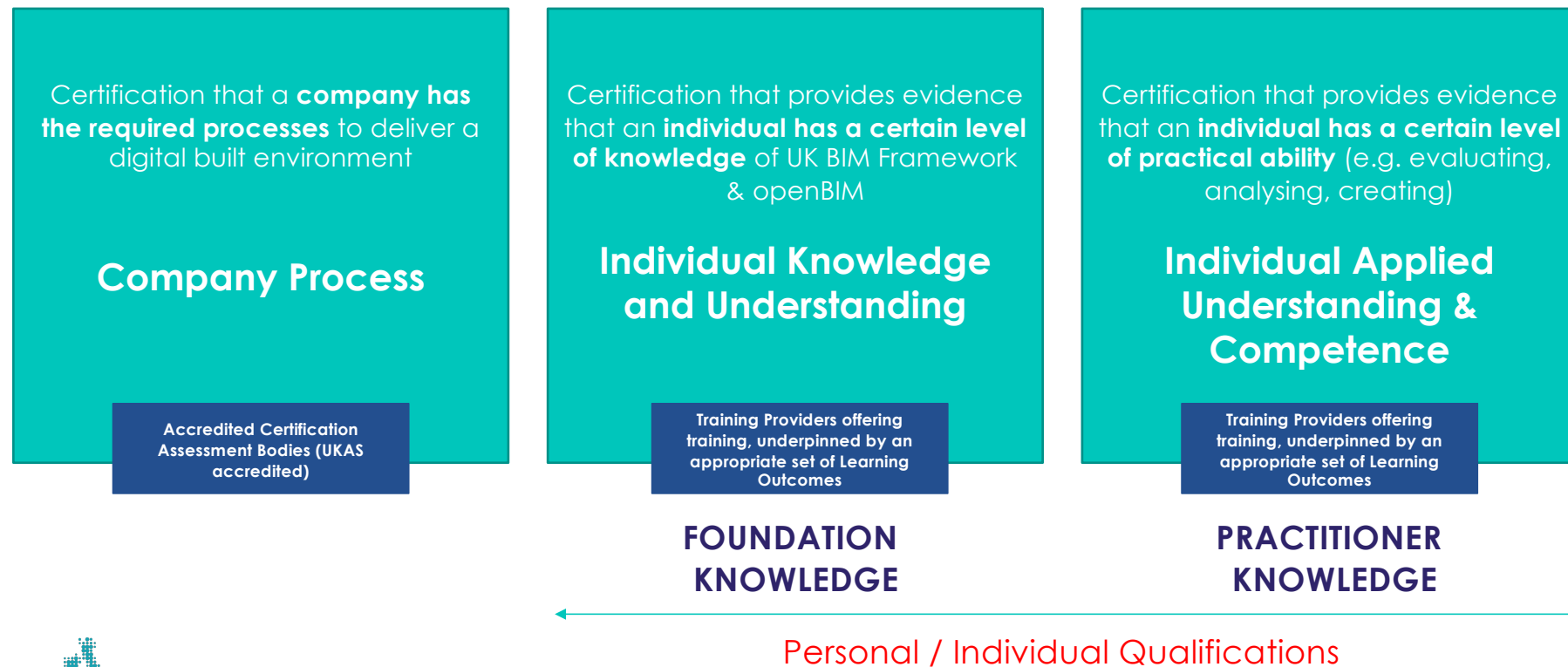
Benefits to Individuals

- Standardised training content based on latest international standards and best practices.
- A globally recognised qualification and mark of quality assurance.
- A simple, fast and secure online testing and qualification process.

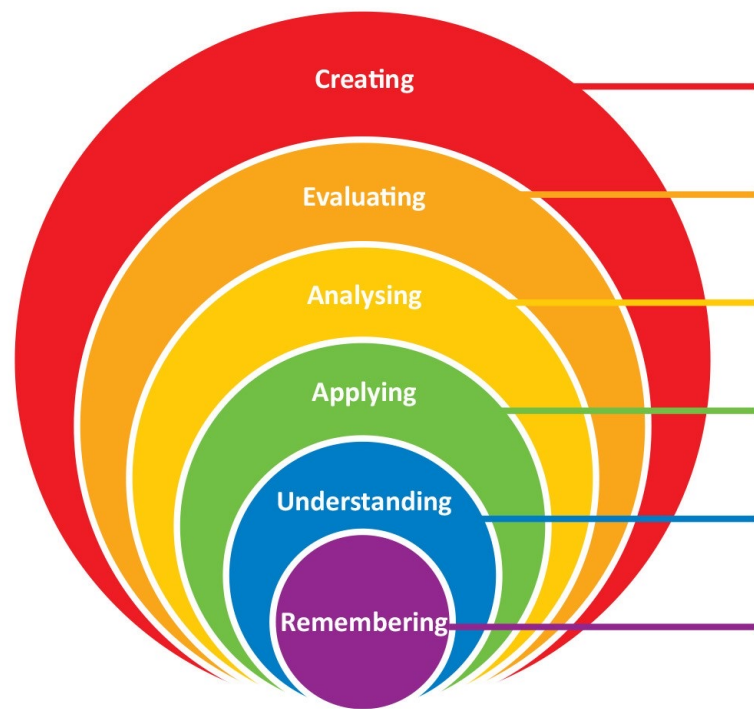
Engaging Industry in the Right Things...



Three Types of Certification



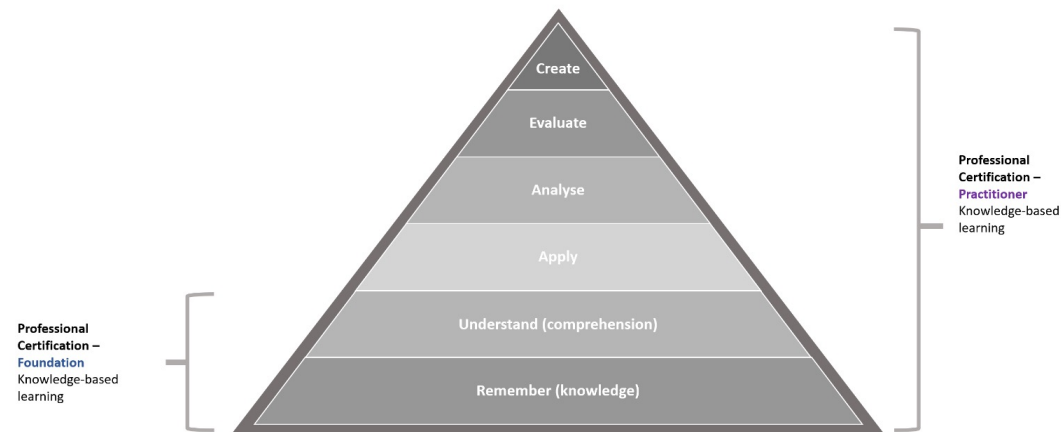
Blooms Digital Taxonomy – The Learning Process



The increasing complexity and interdependence on different levels:

- Before we can understand a concept, we must remember it
- Before we can apply a concept, we must understand it
- Before we analyse a concept, we must be able to apply it
- Before we evaluate a concept, we must have analysed it
- Before we can create something based on a concept, we must have remembered, understood, applied, analysed and evaluated the concept

Applying Blooms Taxonomy to the Professional Certification Program

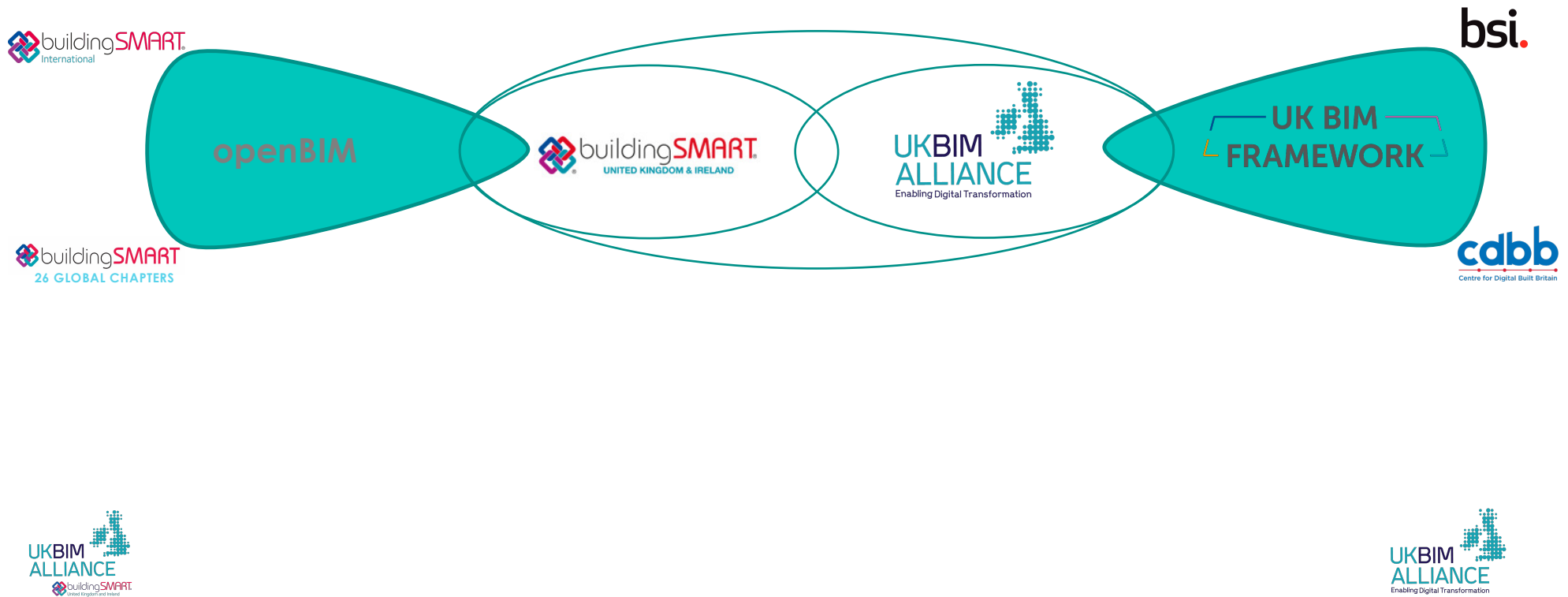


Foundation Programs



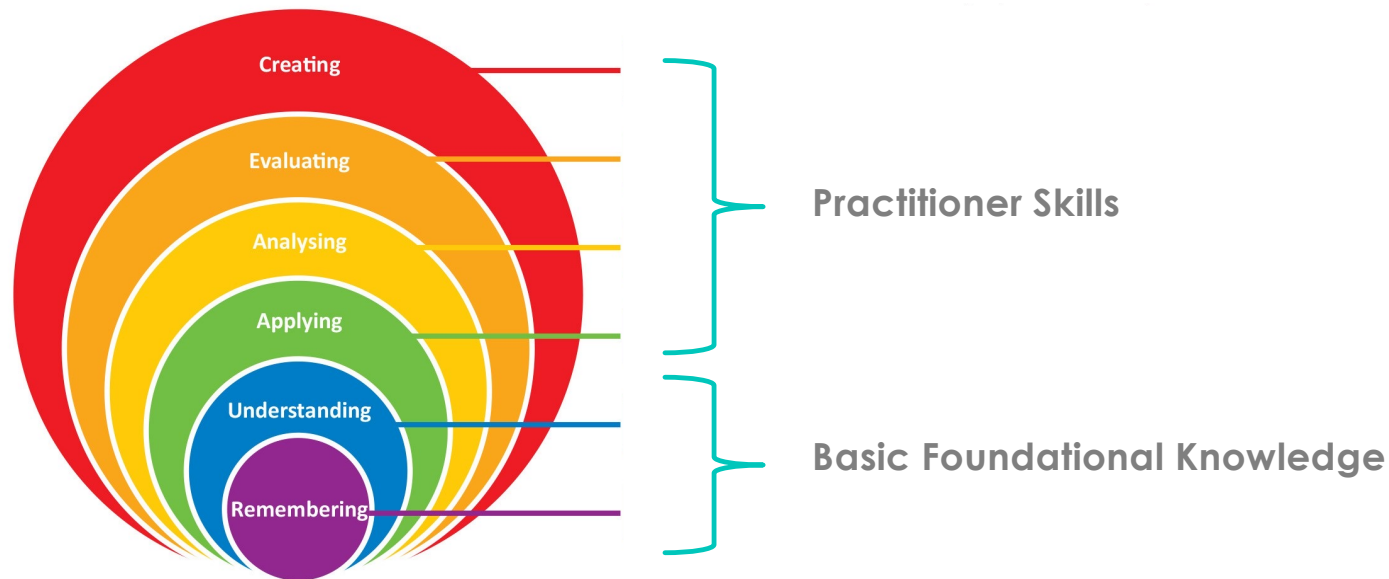
We are initially focused on launching the Foundation (Basic) Professional Certification and will review the others as they are developed

Industry Alignment.....the key relationships



Education Guidance

UKBIMA Upskilling Program (Education Stream) supports the UK BIM Framework & openBIM

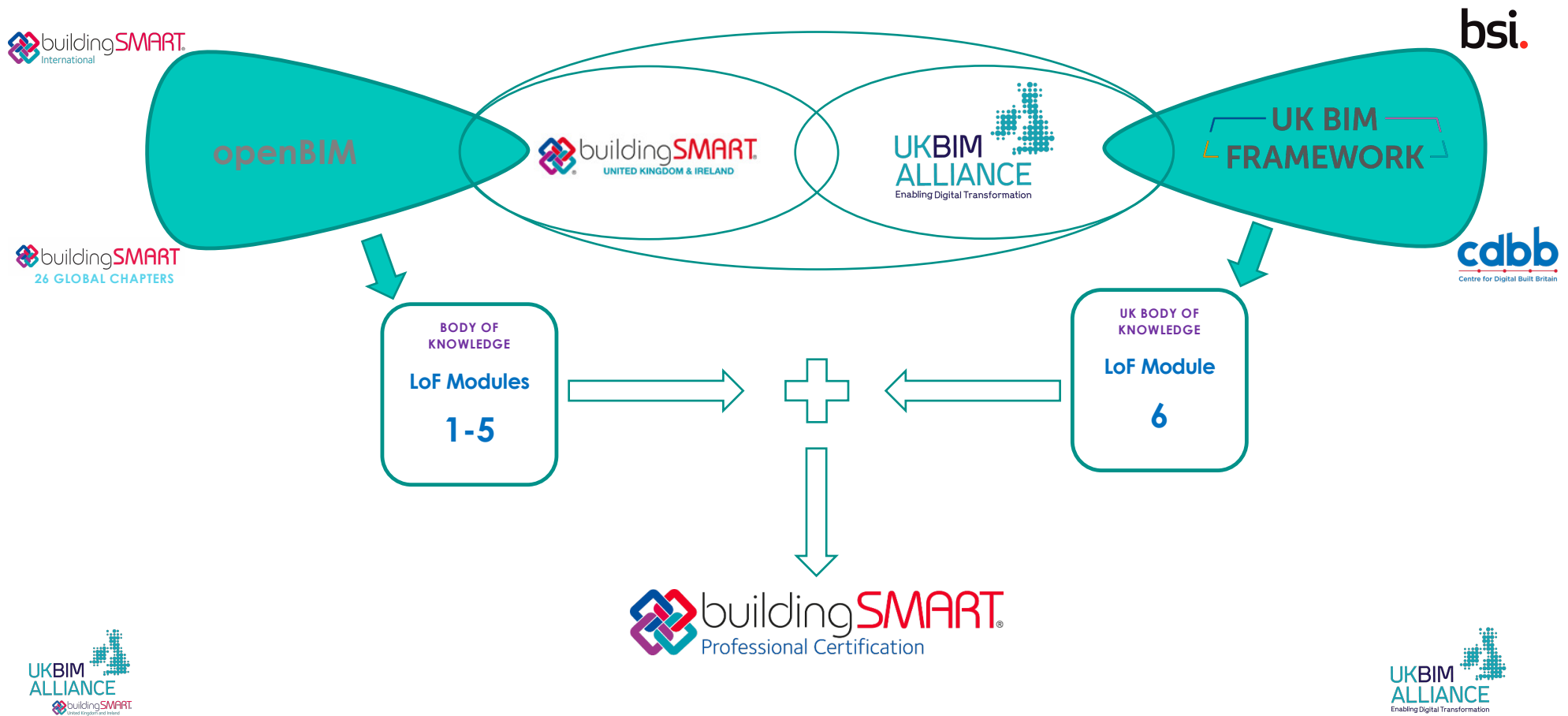


The UK BIM Alliance recommends that individuals that want to take an educational training program:

- Take a course that embodies the **UK BIM Framework and open BIM**
- The UK BIM Alliance has ensured via the buildingSMART UK&I Steering Committee that when launched, that the UK&I version of the **Professional Certification (PCERT)** fully aligns to the **UK BIM Framework** (and it's published Learning Outcomes) and **openBIM**

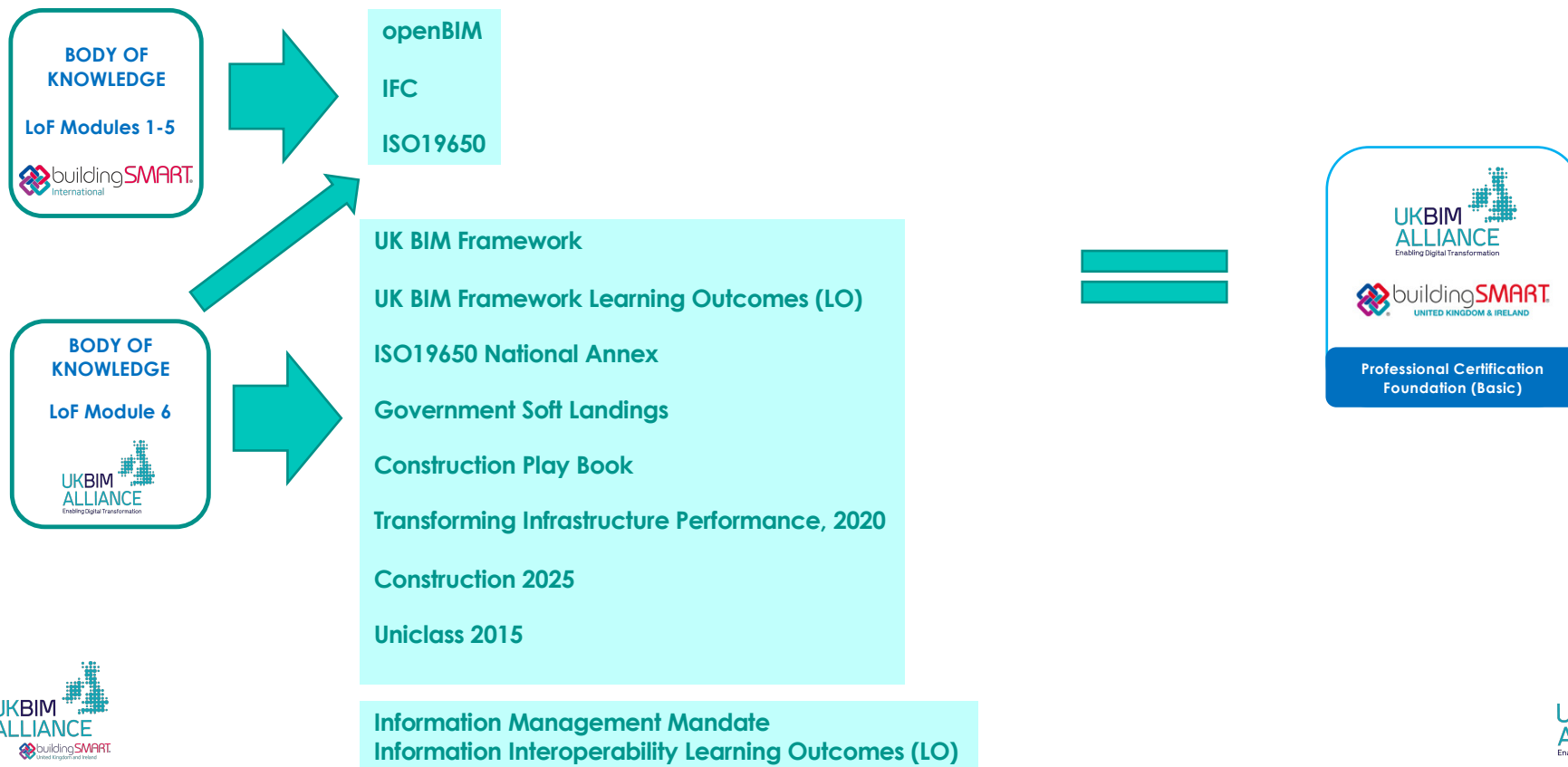
Assessment Development

The Education Plan.....



buildingSMART UKI Professional Certification

Signpost to training content



buildingSMART Professional Certification



BASIC - Learning Outcomes

1) Understand what BIM is, why it is needed, and recognise its specific terminology.

- 1-1) Define the drivers that have led to BIM;
- 1-2) Define BIM;
- 1-3) Identify & Define key BIM terminology;
- 1-4) Know the stages of information management (IM) maturity;
- 1-5) Define what constitutes an Information Model.

2) Recognise the advantages of BIM compared to traditional project delivery.

- 2-1) Know why collaborative and new ways of working are required;
- 2-2) Identify the effects of poor information management on projects;
- 2-3) Identify the process and standards developed to mitigate poor information;
- 2-4) Identify the benefits of BIM for design and construction professionals;
- 2-5) Identify the benefits of BIM for facility owner and operators.

3) Understand the project information management, with BIM, according to the ISO 19650 series.

- 3-1) Understand why appointing parties need to clearly define their requirements
- 3-2) Understand the content and value of a BIM Execution Plan (BEP);
- 3-3) Know why consistent exchange of information are required;
- 3-4) Identify the key elements and benefits of using a Common Data Environment (CDE);
- 3-5) Know why clearly defined information management rules are required;
- 3-6) Know why assessing potential supply chain members before appointment is required.

4) Recognise the need for open and interoperable solutions

- 4-1) Know what buildingSMART is and what it represents;
- 4-2) Define openBIM and its benefits compared to using proprietary solutions;
- 4-3) Know what IFC is, and its benefits;
- 4-4) Know what WVDs are, and their benefits;
- 4-5) Know what IDMs are, and their benefits;
- 4-6) Know what ISO15926 is, and its benefits;
- 4-7) Know what is B2F and its benefits.

5) Understand the terms and measures of BIM capability within an organisation

- 5-1) Understand the potential benefits for a company in adopting BIM;
- 5-2) Understand the factors that define an organisations level of BIM Maturity;
- 5-3) Know why BIM adoption needs to align to Organizational goals;
- 5-4) Identify the benefits and challenges to BIM adoption;
- 5-5) Know what the data security implications are for adopting BIM.



MODULE 6: Understand the national standards and guidance with regards to the management of information on UKI projects

6.1) Recognise the contextual requirements for the UK BIM Framework and its connection to the UKI Government Construction and Industrial Strategies, including any Government Mandates.

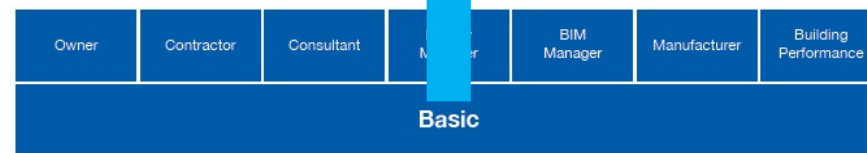
6.2) Understand UKI specific information requirements for the management and exchange of information and the associated localised annex information (Capital Delivery)

6.3) Understand additional UKI information requirements in relation to asset or organisational lifecycle management environment.

6.4) Understand the nature of UKI contractual and legal requirements including the usage of the Information Protocol in the built environment.

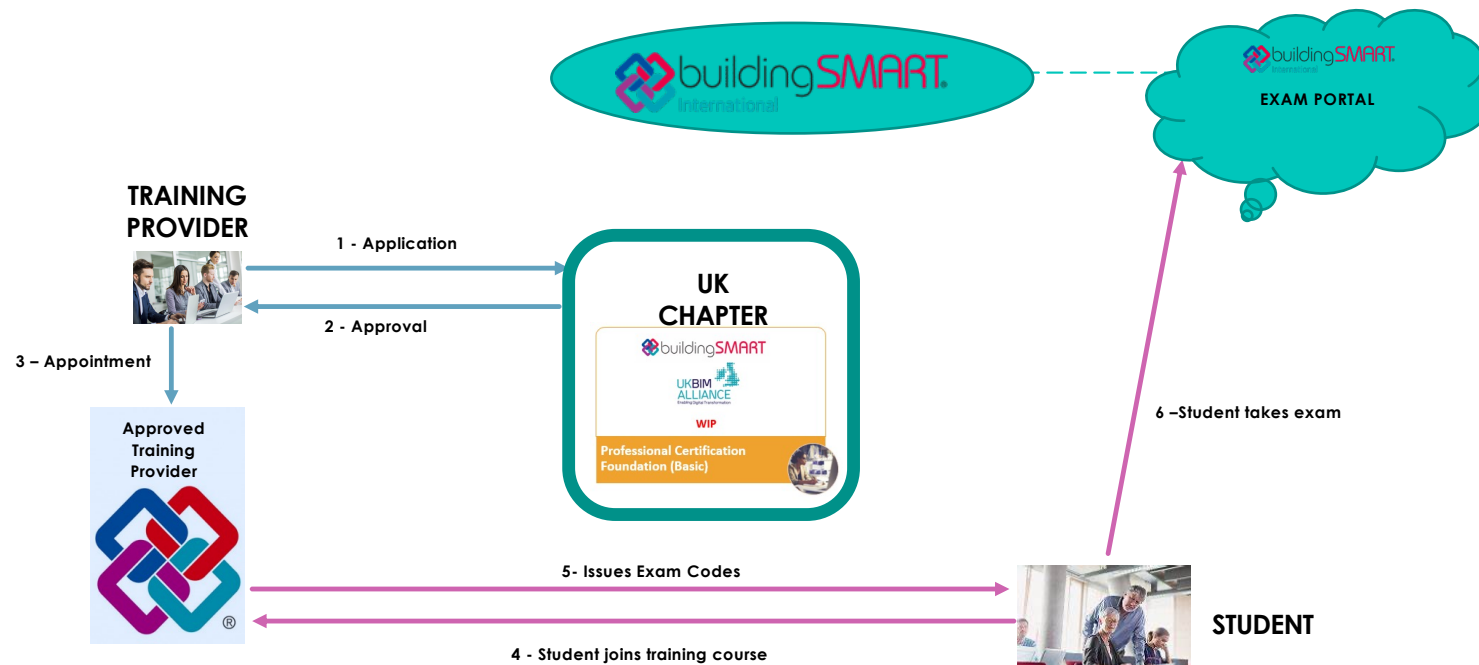
6.5) Understand the need and delivery of security and secure data requirements within the UKI built environment.

6.6) Understand the requirements for the inclusion of Health and Safety information in the UKI and CDM regulations within a managed project information exchange.



Application Process

The Application Process





Thank you.

