



**Improving the Sustainability of the Built Environment by Training its Workforce in
More Efficient and Greener Ways of Designing and Constructing Through the
Horizon2020 Energy BIMcert Project**

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Delivering **better outcomes**
for Irish Construction



Energy and climate change
30% of global greenhouse gas emissions are attributable to buildings

Urbanization & housing crisis
200K people are added daily to urban areas and need affordable and healthy housing

\$1 tn Huge infrastructure gap
annual investments are needed to close the global infrastructure gap

No. 1 consumer of global raw materials is the construction industry

Resource scarcity

Demand shift to emerging countries

65%
of the next decade's growth in construction will happen in emerging countries

Talent gap and ageing workforce

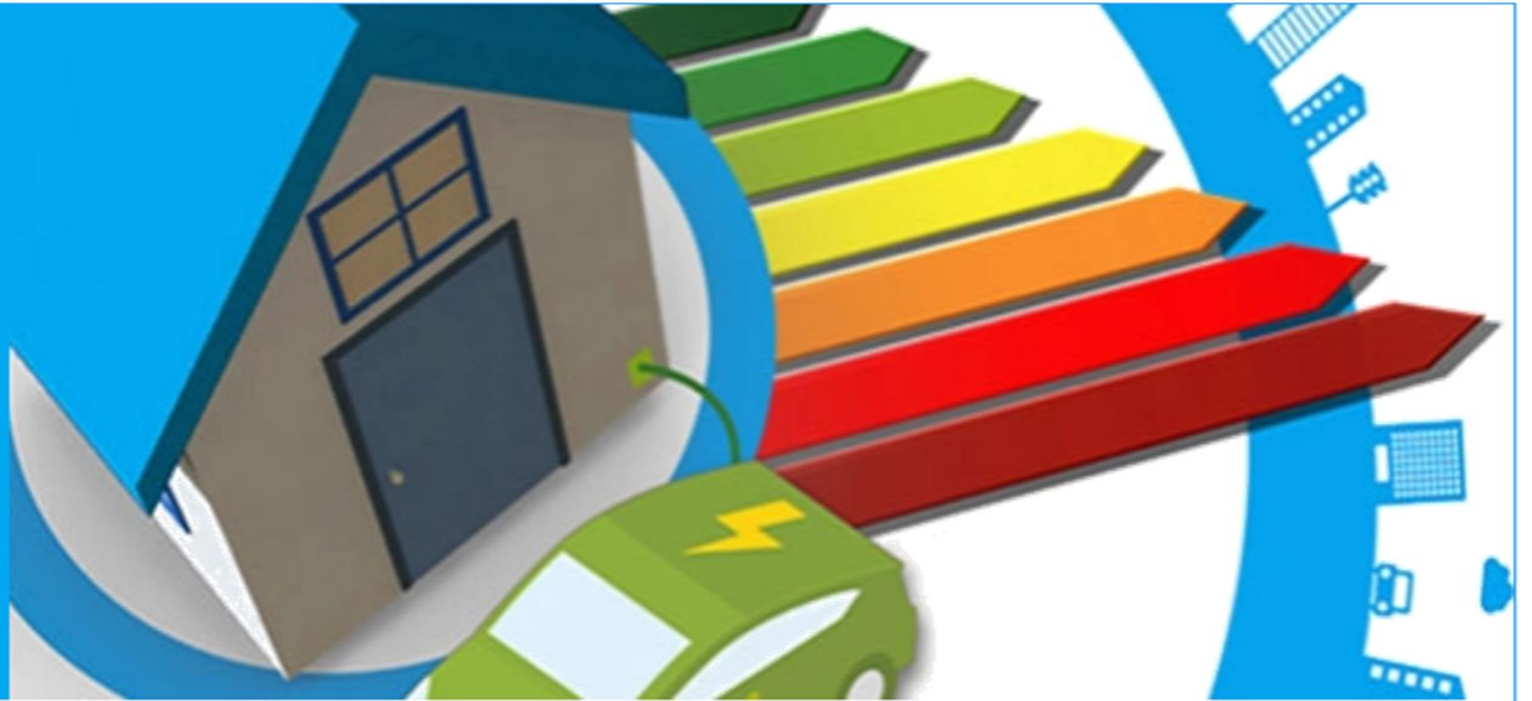
50%
of general contractors are concerned about finding experienced crafts workers



BIMcert OVERVIEW - The Project

More or specific skills required.

BIM (Digital construction) skills required :
as enabling tools for change, efficiency in the AEC industry and to tackle climate change.

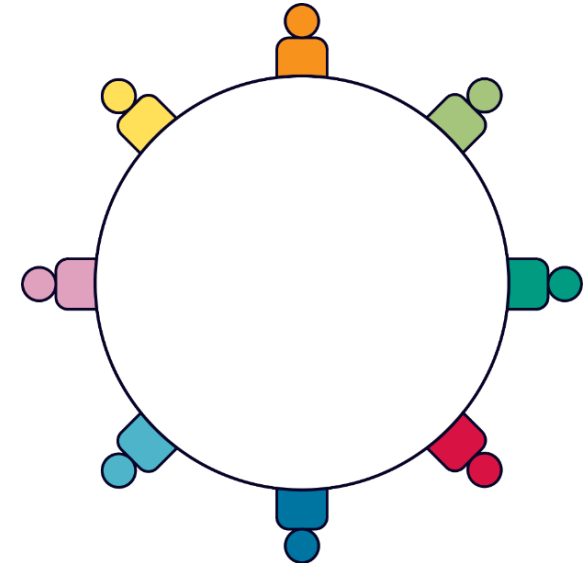


<https://ec.europa.eu/energy/en/topics/energy-efficiency/energy-efficiency-directive>



Embedding BIM skills within construction, targeting the entire design chain, material life cycles, energy production/consumption and sustainability

- Industry Advisory Panel (IAP)
- Technical Advisory Panel (TAP)
- Core Application Partners (CAP)



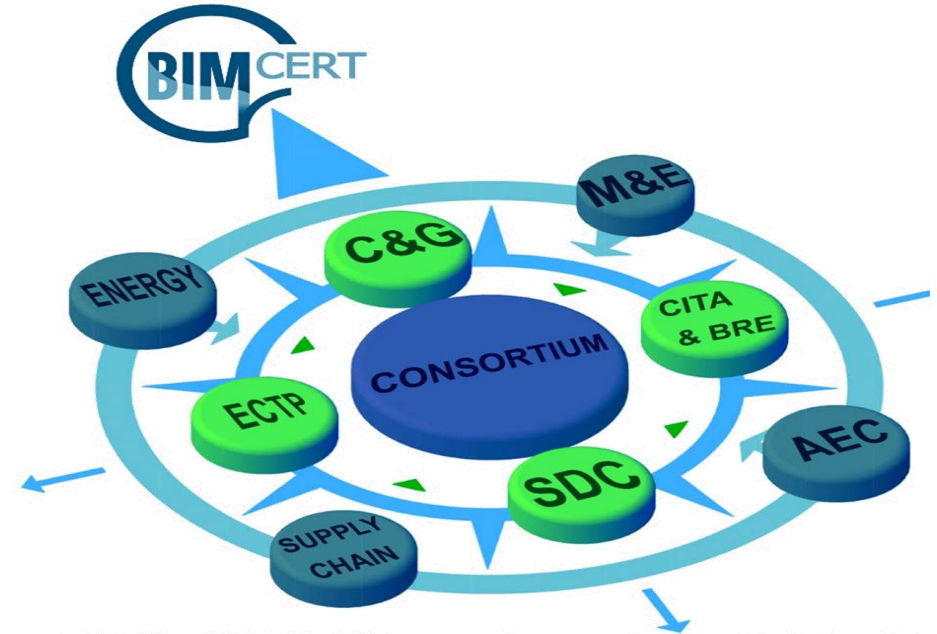


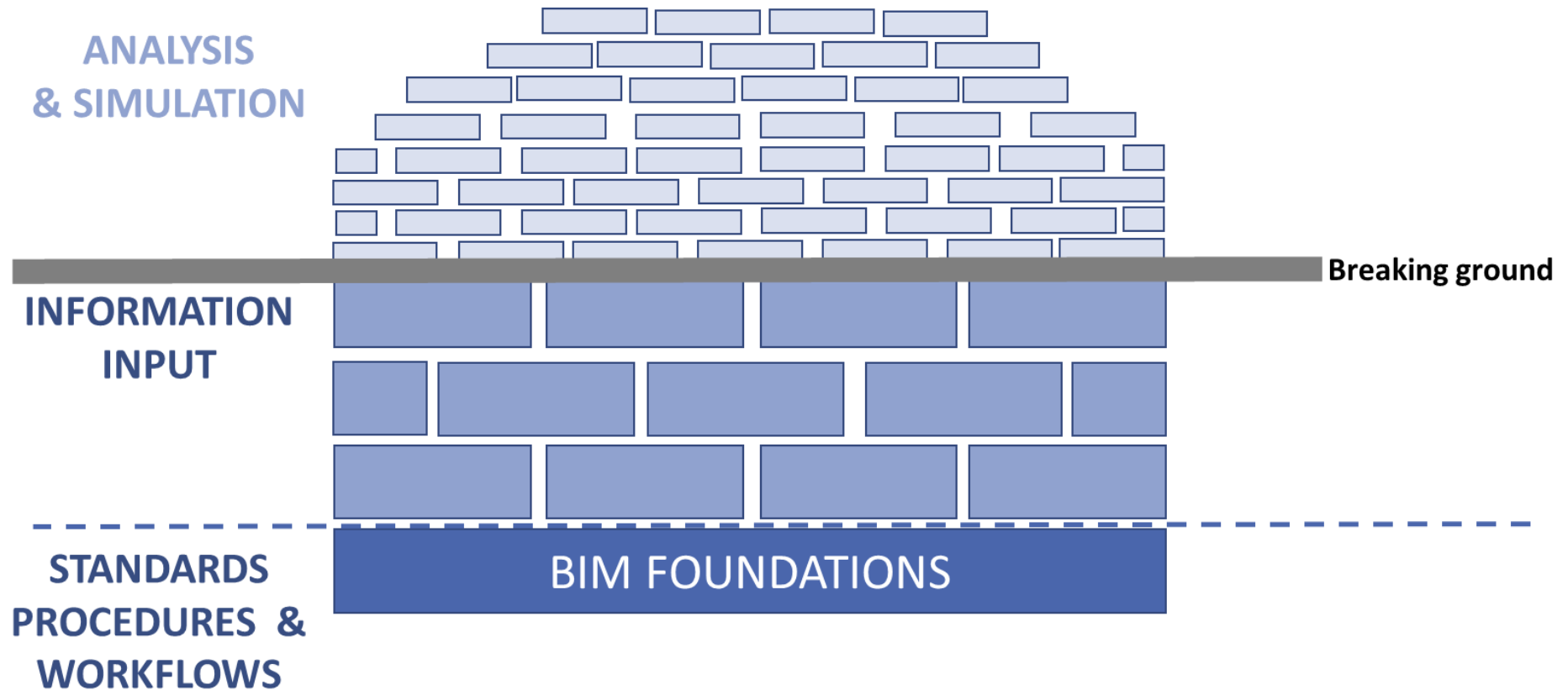
1. **Improve** sustainability of the built environment through training, education, etc.
2. **Engage** with the entire construction sector supply chain via BIM.
3. **Encourage** greater workforce mobility, continuous upskilling and better employability for all levels of employee in the construction sector.
4. **Create** clear pathways of development for individuals and SMEs to upskill.
5. **Develop** a pan-European framework for recognition and accreditation of BIMCERT “bite-sized” learning modules, which constitute what we call “micro-accreditation” of knowledge.



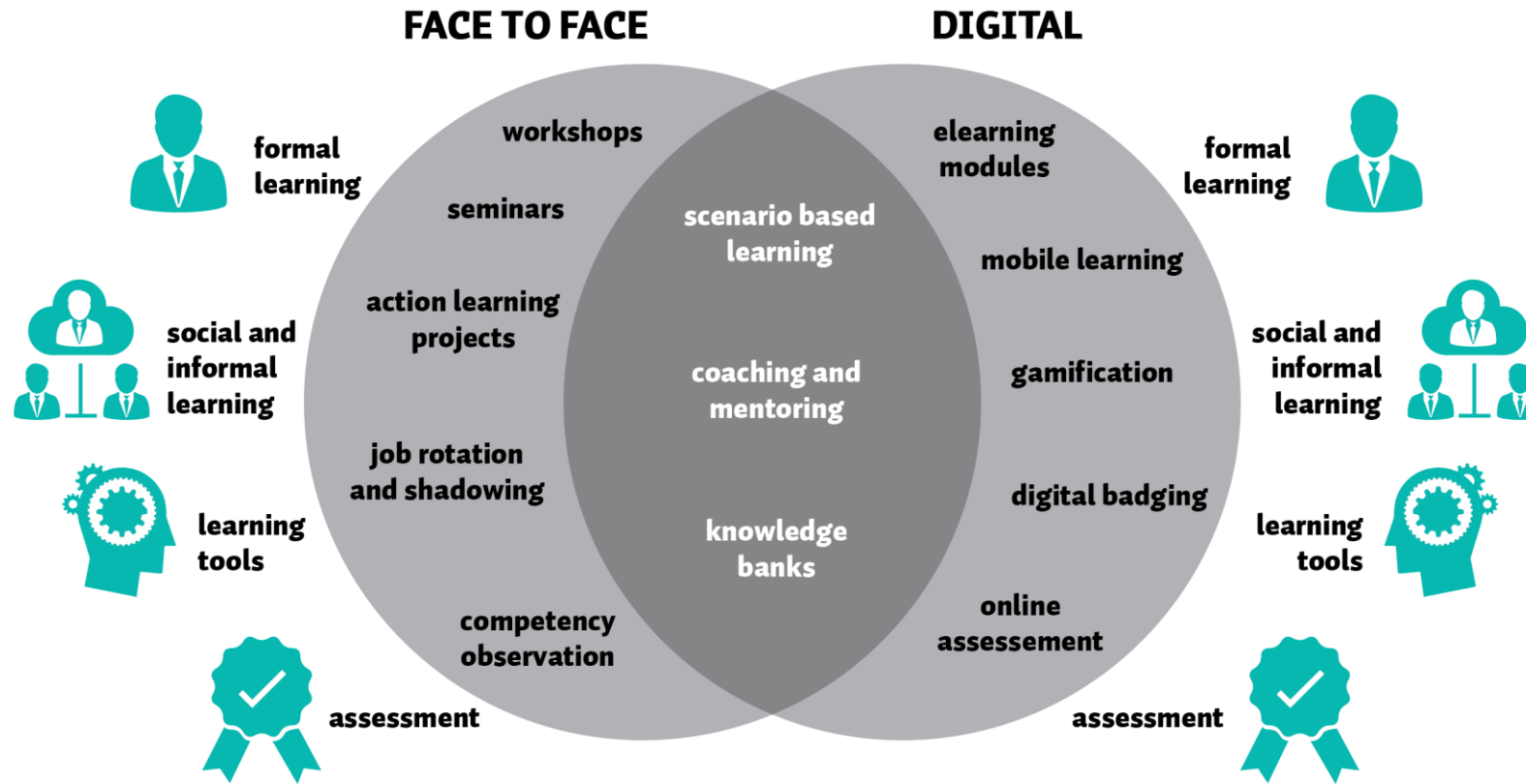
The **top 3 results** expected from BIMcert:

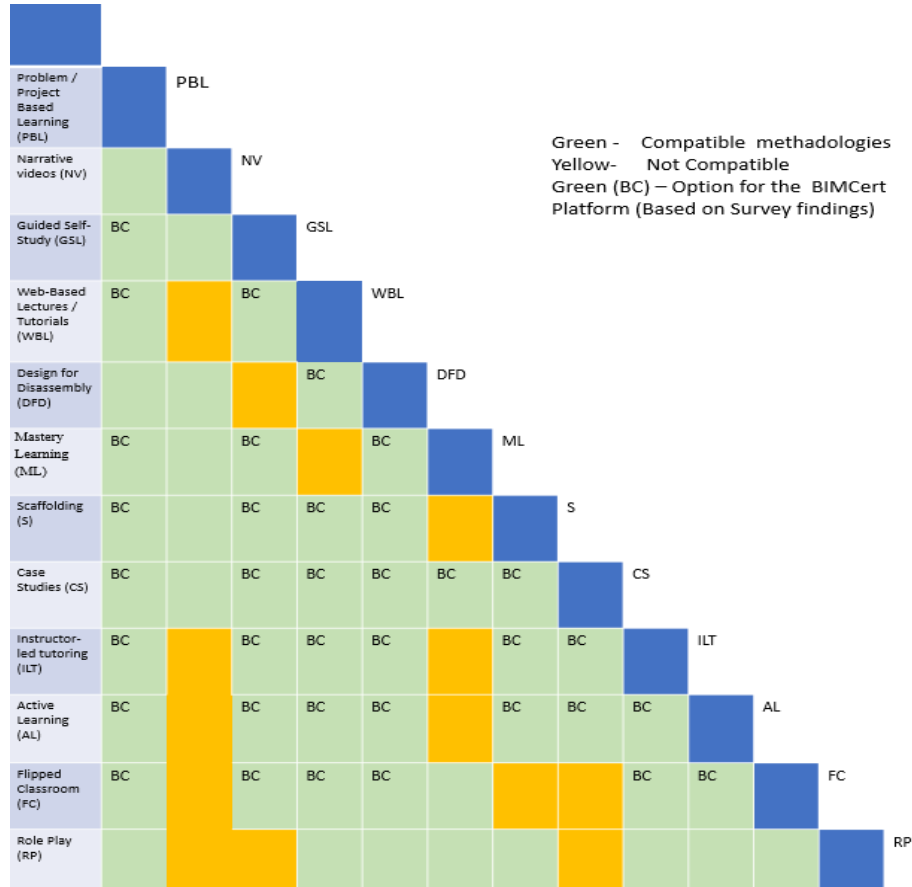
- Engage the entire construction sector supply chain via BIM within new build and retrofit.
- Create clear pathways of development for individuals and SMEs to upskill.
- BIM skills to manage overall project energy consumption.





BIMcert 'BEYOND BLENDED' TRAINING





A **SCAFFOLDED** learning environment guided by a series of **INSTRUCTOR LED LIVE LECTURES**. This could be complimented through **PBL, DFD** and self-guided learning which would create the **ACTIVE LEARNING** environment suggested in the results?

The inclusion of **NARRATIVE VIDEOS** and **LIVE LECTURES** with a focus on student doing **SELF-GUIDED LEARNING** through **PBL** before they advance ?



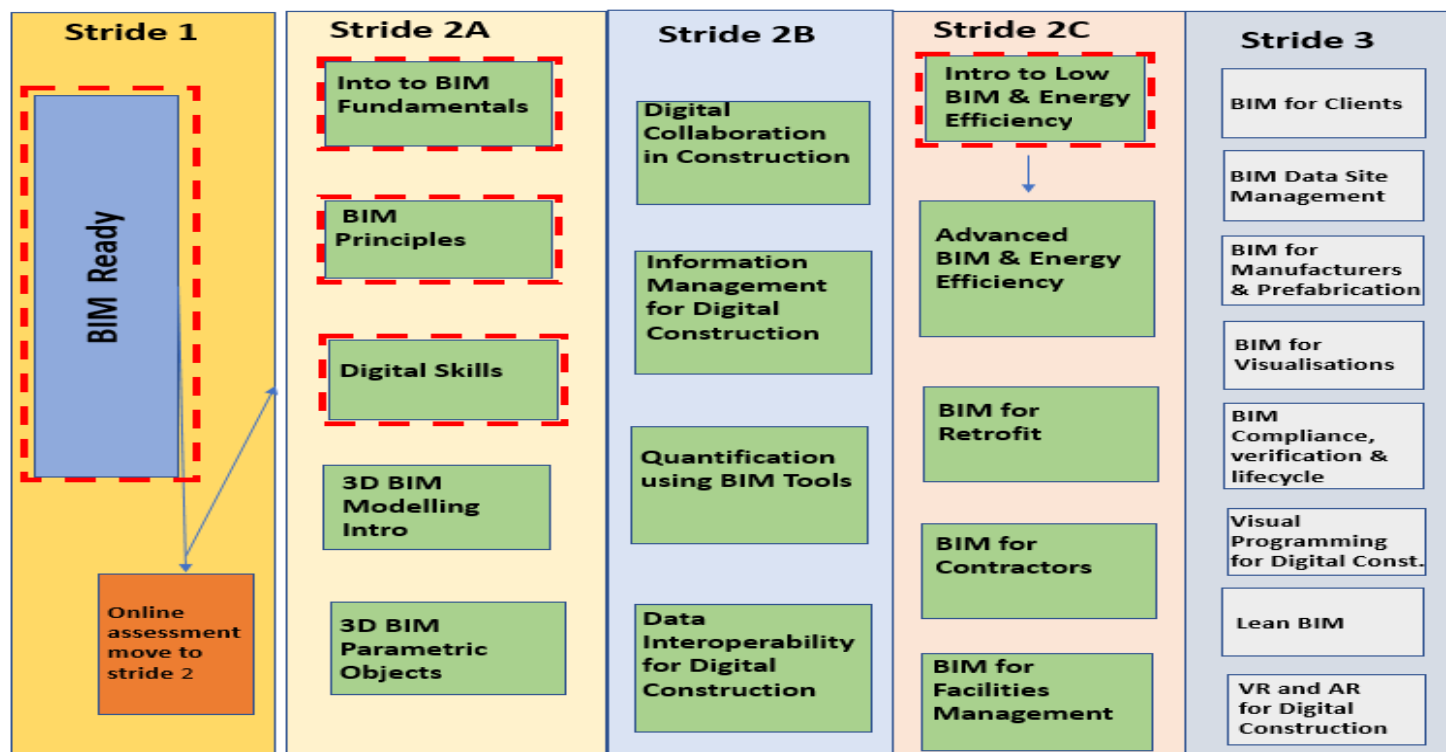
BIMcert Overview

- Learner accesses the BIMCert portal.
 - Stride 1: option A:** Learner takes BIM Ready plus online assessment; successful entry grants access to Stride 2.
 - Stride 1 Option B:** Learner directly takes online assessment; successful entry automatically grants entry to Stride 2.
- Final Unit of BIM Ready assists the learner in the selection of the next module. Appropriate to their needs / roles.



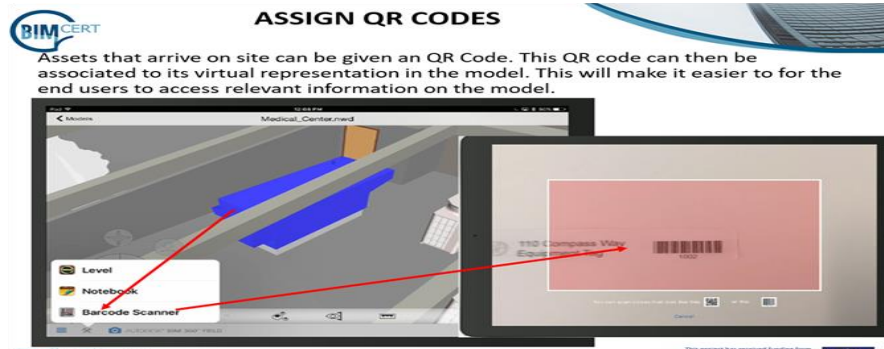
- Stride 2A:** Learner selects a stand alone Unit aimed at BIM novices.
- Stride 2B:** Learner selects a stand alone Unit aimed at those professionals with a deeper BIM knowledge.
- Stride 2C:** Learner selects a course (c) which contains a number of units. Successful completion of relevant units will enable learners access to advanced modules.
- Stride 3:** Specialist modules to be developed

BIMcert Curriculum

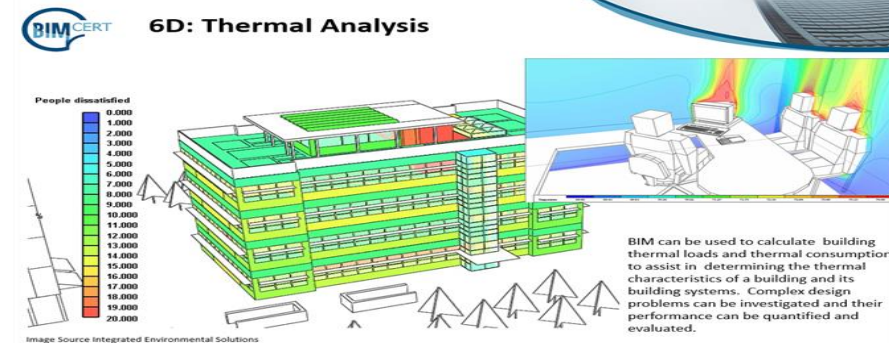




BIM Principle: 1.3 Explain impact of BIM maturity Level 2 requirements for project delivery



Digital Skills: 2.1 Demonstrate Information and Communication Technologies (ICT) file management/ **2.2** Explain the use of cloud based storage and portable devices to access and exchange information



BIM Principle: 1.4. Illustrate the benefits of BIM to the construction sector



<https://a360.co/2S512ic>

Digital Skills: 4.1. Demonstrate the use of digital design review tools to access and evaluate a BIM model



4th CitA BIM Gathering
26th September 2019, Galway, Ireland.

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- Contractors still reported being reluctant.
- The attendees requested better use of case studies to be included in models and tools to exemplify real-life applications of BIM.
- Stage 1 results found that there was a reluctance to engage with IT as a medium for learning which remained.
- BIM supply chain is still congested, which is a significant factor in preventing uptake and upskilling.
- In overall BIMcert is seen as a positive and viable enabler/facilitator of BIM upskilling if mapped to certification and standards clearly.



TRAINEE



TRAINER



BIMCERT TRAINING

BIMCERT provides an easily accessible portal for training the vast middle tier of construction industry supply chain professionals of all profiles. The framework and materials supporting the portal will improve workers' BIM, sustainable construction

and energy efficiency skills, thus leading to better collaborative working that guarantees energy efficient, sustainable buildings and increased quality throughout the entire construction supply chain.



BIM ready

Free self-study and knowledge diagnosis tool to introduce you to BIM and/or provide assessment and recognition of prior knowledge, while getting on track to be ready for BIMCert upskilling and using BIM within your professional role



Module 1

Free self-study and knowledge diagnosis tool to introduce you to BIM and/or provide assessment and recognition of prior knowledge, while getting on track to be ready for BIMCert upskilling and using BIM within your professional role



Module 2

Free self-study and knowledge diagnosis tool to introduce you to BIM and/or provide assessment and recognition of prior knowledge, while getting on track to be ready for BIMCert upskilling and using BIM within your professional role



Free self-study and knowledge diagnosis tool to introduce you to BIM and/or provide assessment and recognition of prior knowledge, while getting on track to be ready for BIMCert upskilling and using BIM within your professional role



PARTICIPATE

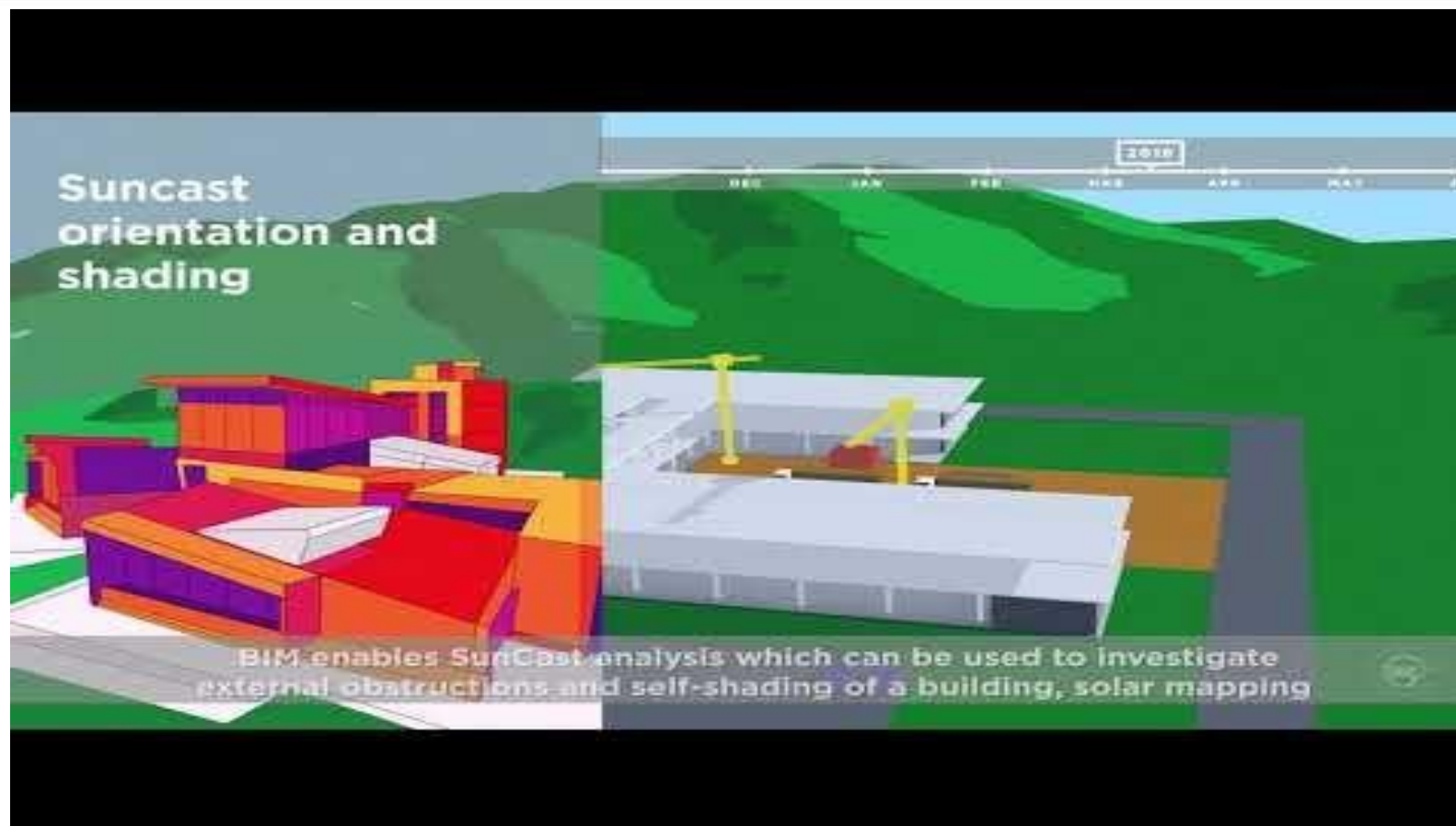
To avail updates and news on BIMcert, but more importantly
to be granted access sample training materials:

Please visit:

<https://energybimcert.eu>
and register.

Gain access to Project contents and gives us feedback for us to improve.

Contact us to discuss possibilities of possible
funded training during development stage BIMcert.





Thank you