

13th BUILD UP Skills European exchange meeting



Reducing the energy footprint in construction

*Connected learning for
the built environment*

- **Andrew Hamilton**
- **Belfast Met**

BIM ENERGY PERFORMANCE ALLIANCE



- Digitalisation - a vital enabler of Net Zero Construction
- Alliance of 100 partners across 24 EU countries
- Shared resources
- Digital library of tools, modules and blended materials
- Supporting digital transformation in the built environment.
- Stimulating the demand for sustainable energy skills
- Providing clear upskilling transactions and recognition of upskilling performed



OUR CHALLENGE



Transforming the EU Construction Sector to be greener, consume less energy and to reduce the carbon footprint of the sector, will be driven as much by the growing market for digitalisation and data, as by legislated carbon reduction targets.

Digitalisation and 'tools' such as Building information modelling (BIM) are the backbone of the new 'informed' way of working triggered and targeted by the digitalisation process. But embedding it within the construction sector is a challenge.

DIGITALISATION

- Digitalisation is a game-changing strategy that will empower the construction sector to thrive and deliver the expertise for sustainable energy skills.
- Digitalization enables buildings' integration in sustainable and smart energy systems foreseen for horizon 2030.
- Digital skills will enable and empower the construction sector, delivering significant societal benefits in line with the EU strategy. Through enablement, the construction sector can now 'translate' data into easily handled information and as a result has empowered the entire construction chain to embark on a digital transformational journey and focus on energy efficiency across the entire supply chain.
- Achieving green construction is inextricably linked with digitalization of processes and methods of work and collaboration

ENERGY SKILLS



Digitalisation is synonymous with energy skills, it;

- Reduces the environmental impact of construction.
- Increases the effectiveness of energy skills
- Provides confirmable energy installation effects
- Enables full technical and industry connectivity
- Empowers the move to digital way of learning

COURSE MAPPING



BREAKDOWN

46 ONLINE BIM MODULES
FROM 7 PROJECTS

BIMZEED – 12 MODULES

BIMCERT – 8 MODULES

BIMEET – 1 MODULE

BIMPLEMENT – 13 MODULES

BUILDING SMART – 5 MODULES

NETUBIEP – 6 MODULES

ZEBRA – 1 MODULE

88% using assessments only
12% with assessment and
exams.

Target groups - 60% White Collar, 40% Blue Collar

These cover the following:

Professionals (60%), Technicians (20%), Specialists (30%),
Site Supervisors (20%), Trades and Workers (30%)

Delivery Mode and Duration:

Blended and online - where 80% are 1-2 days contact and
20% are micro units of 1-2hrs. All in English and also other
languages.

Types of tools used for assessment- quizzes and
gamification, BIM/digital tutorials and practicals, written
work, poster presentations, group work, group
discussions.

EQF vs CPD/Credits

BIMzeED - EQF 5-7 - contact 8-10hrs, online self study 24-
10hrs

BIMCert - CPD/Credits - contact 1-2 hrs online

BIMEET - CPD/Credits - contact 1hr online, 2 days in class

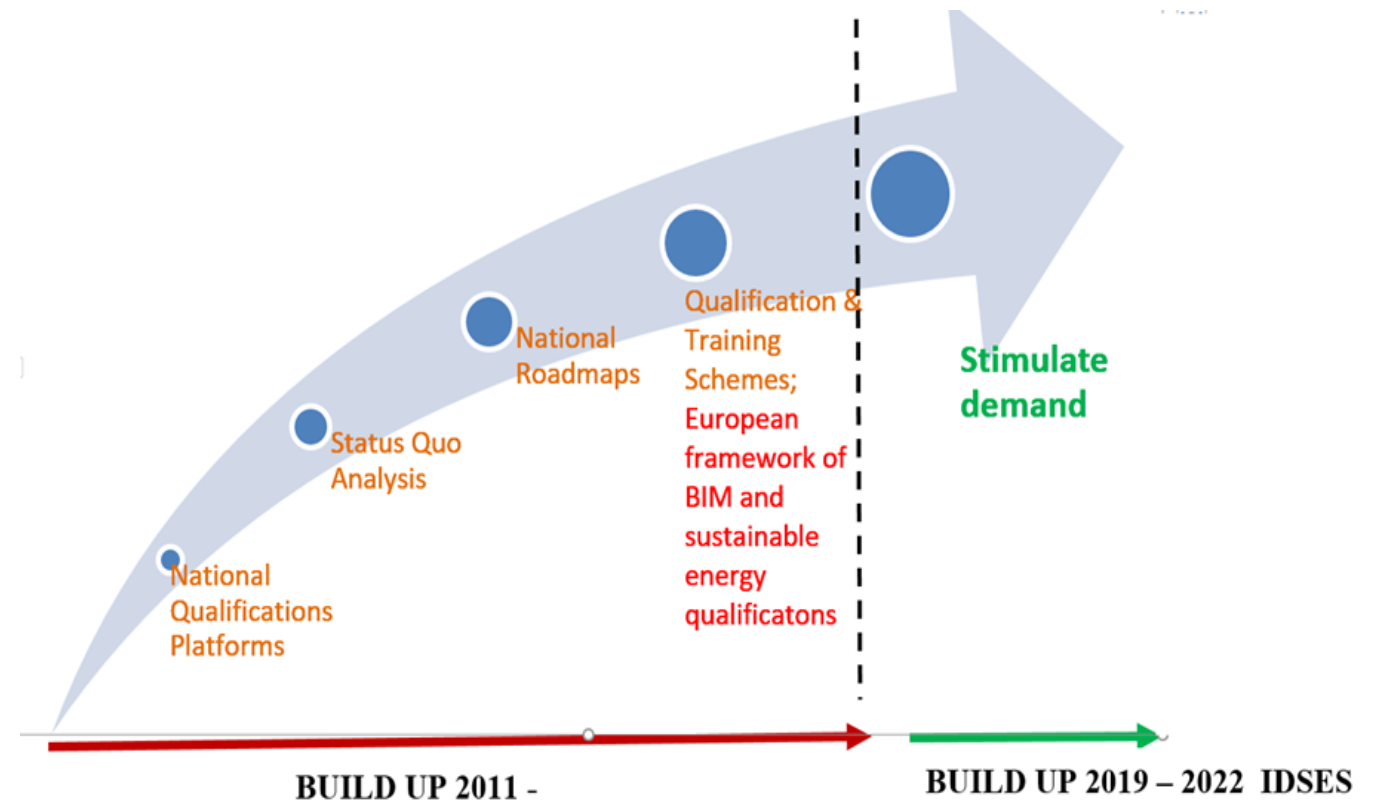
BIMplement - CPD/Credits - contact 1hr on-site

Building Smart - CPD/Credits - contacts 6-14hrs online

NetUBIEP - CPD/Credits - contact 16-24hrs blended

BIM-EPA UNIFIED JOURNEY

- Construction techniques, policy formulation and policy implementation into a balanced and coherent system towards sustainability of the building sector.
- Program for qualifications for sustainable energy construction skills needs to be developed in order to enhance wider market recognition, more intensive demand and more stimulating support provided by policy and regulatory framework, for construction sector workforce skilled and qualified to execute works connected to achievement of sustainable energy performance of buildings.



THE CONNECTIVITY IMPERATIVE

- Skills connectivity is key, ensuring workers are equipped, informed and skilled to deliver energy efficiency across the building sector. Connectivity will stimulate and inspire the demand for sustainable energy skills, augment access to appropriate upskilling transactions, recognition of upskilling, enhance smarter work practices and develop transformational competences.



SKILLS PATHWAY – *delivering the internal and external connectivity*

- The skills exchange
- Skills quantification
- Skills energy quantum
- Energy algorithm
- *digi*CONEX



SKILLS INNOVATION

Through a highly innovative approach BIM-*EPA* will deploy a system coupling methodology and approach encompassing;

- 1) Skills delivery method;
- 2) Learning accounts transaction and recognition;
- 3) Matrix of skills maturity, leading to new qualifications and jobs,
- 4) Profession –based learning content,
- 5) Impacts of skills on buildings' energy performance,
- 6) New market and regulatory models of skills demand and
- 7) Stimulation of investments in high energy performance buildings.



CHANGING THE FACE OF LEARNING

- In order ensure that we translate the learning into upskilling and action we must deliver a new skills interface,
- BIM-*EPA* methodology utilizes a structured blended accreditation and digital delivery/certification model for vocationally excluded building professionals with a specific focus on the engagement of those caught in the skills/qualifications void.
- Using segmented course content, ease of access, innovative delivery and micro-accreditation/recognition is a genuinely innovative circular approach to delivering training and raising the skill levels for those beyond traditional learning access routes.

