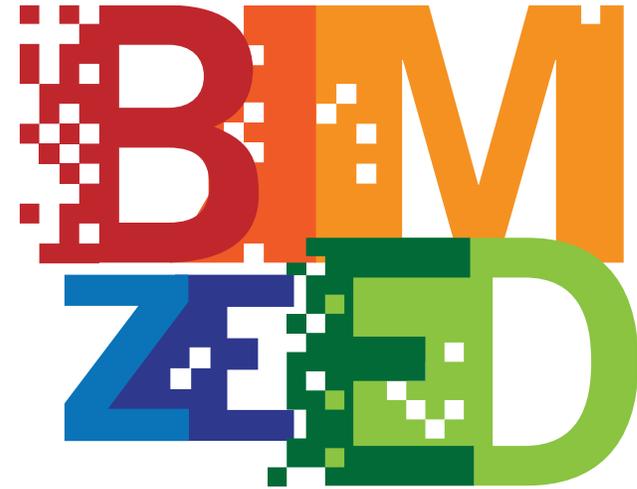


Welcome

BIMzeED – Introduction

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Development Unit

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education
for zero energy buildings
USING BUILDING INFORMATION MODELLING



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BIMzeED Introduction

- Overview
- The Learning Units (LUs)
- Train the Trainer
- BIMzeED Impacts



Overview of BIMzeED



Overview of BIMzeED

The BIMzeED project is co-funded by the Erasmus+ Programme.

Focus

- is on the training needs of the construction industry

Challenge

- overcome skills gaps and mismatching
- improve employability
- by upskilling the Educators, Trainers, SMEs, professionals, site managers, craft workers and other experienced operatives

Who are we?



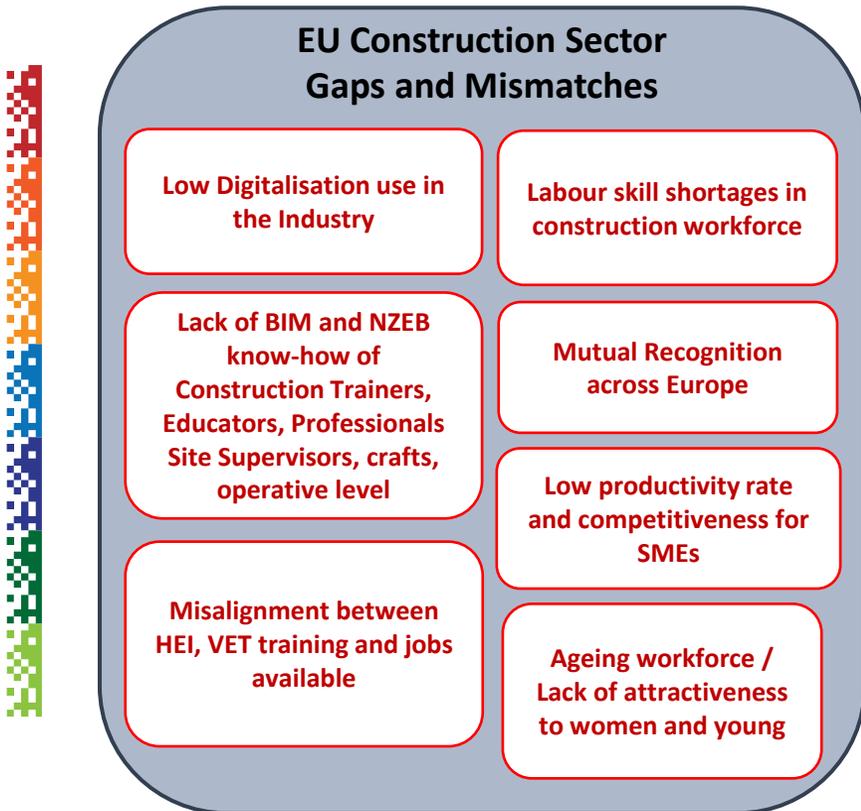
REGIONALNA ENERGETSKA AGENCIJA
NORTH-WEST CROATIA
SJEVEROZAPADNE HRVATSKE
REGIONAL ENERGY AGENCY



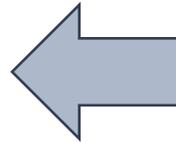
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Overview of BIMzeED

Challenges



BIMzeED Project



Objectives

Identify the knowledge and skills gap in BIM and NZEB within the HEI, VET and construction sector

Update the knowledge and skills of Educators and Trainers and SMEs in the field of BIM and NZEB

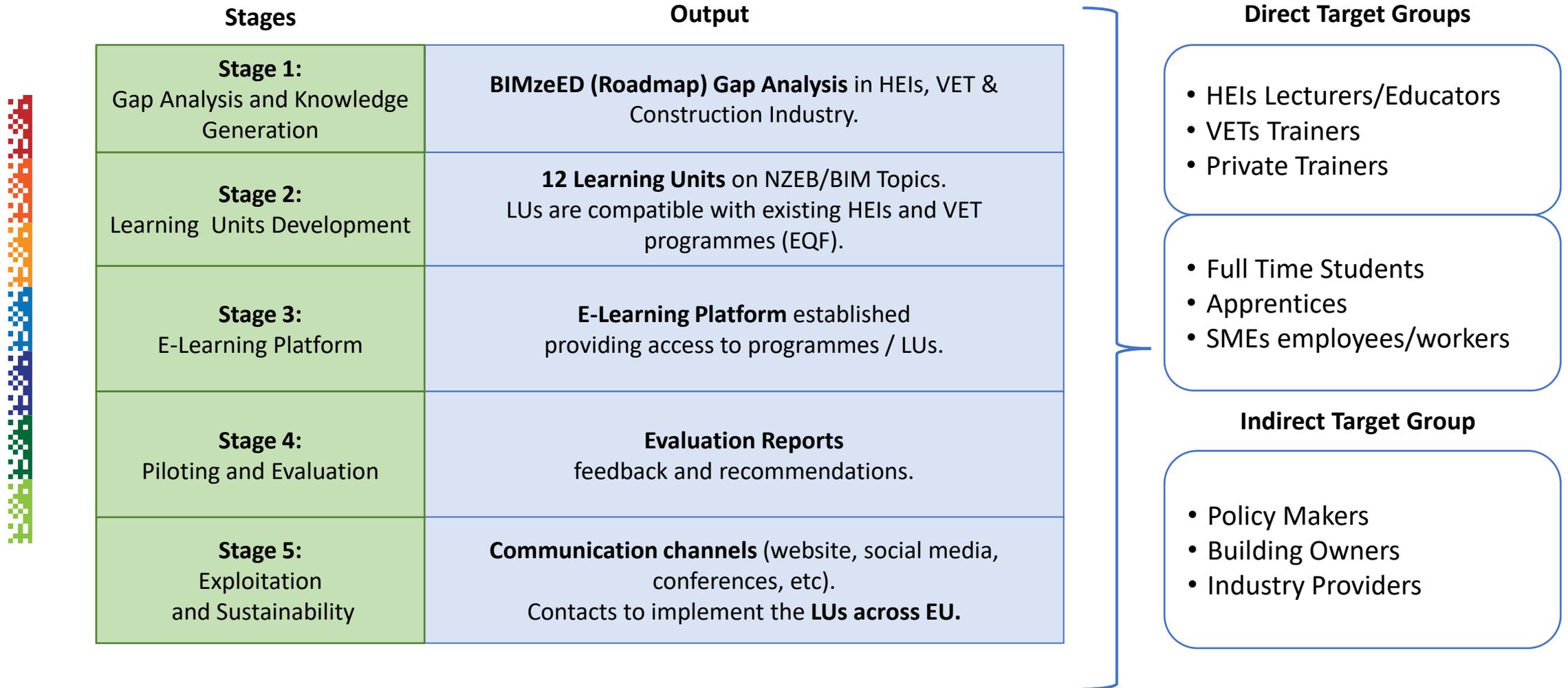
Stimulate development of new training and education programmes/modules in the fields of BIM/NZEB which can be integrated into existing HEI programme delivery

Transfer knowledge of BIM and NZEB to and from other countries.

Strengthen links between lecturers, industry and SMEs with innovative technologies

Strengthen employability in teaching and SMEs

Overview of BIMzeED



Overview of BIMzeED

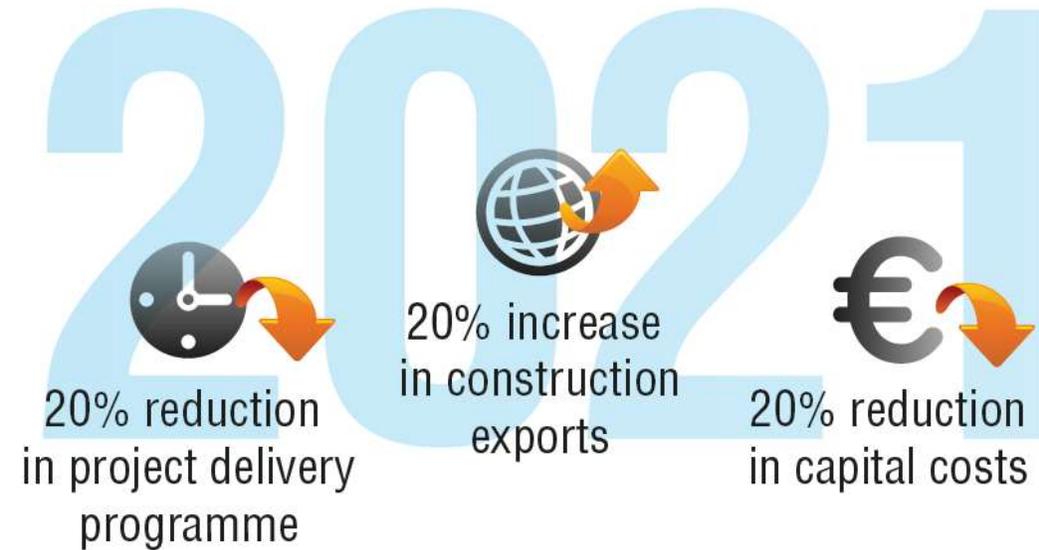
Gap and Skills Analysis

Reviewed the training gaps and needs for:

- Construction Industry – (general operatives, apprentices, craft workers, site managers, managers, professionals and current students)
- Educators and Trainers – (determine their level of skill and knowledge for BIM in NZEB trainings).

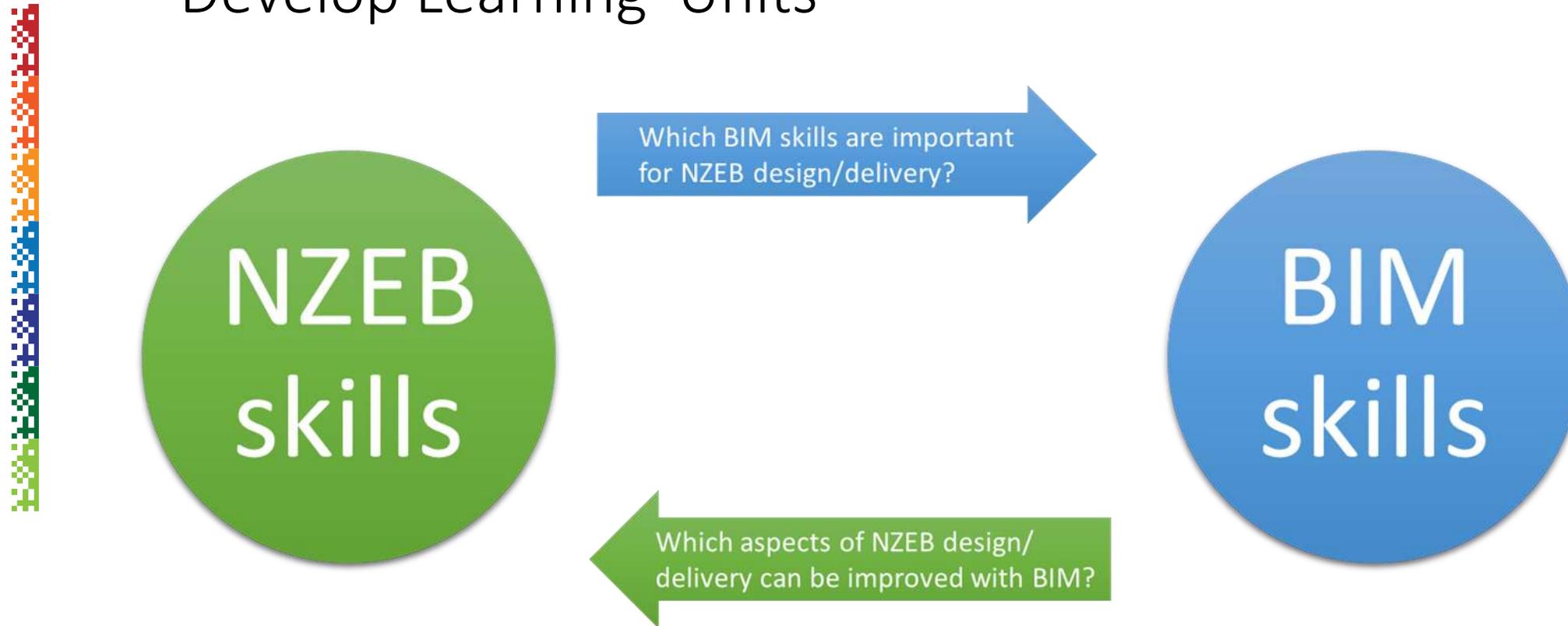
Desktop research, surveys and reporting:

- on-line research of training needs in the construction industry and educators at HEIs & VETs and Private Trainers in partner countries.
- questionnaires/surveys
 - of workers in SMEs and industry (10 SMEs and 25 Industry stakeholders per country – 140 in total)
 - and educators in HEIs and VETs (15 per country – 60 in total)



Overview of BIMzeED

Develop Learning Units



Overview of BIMzeED

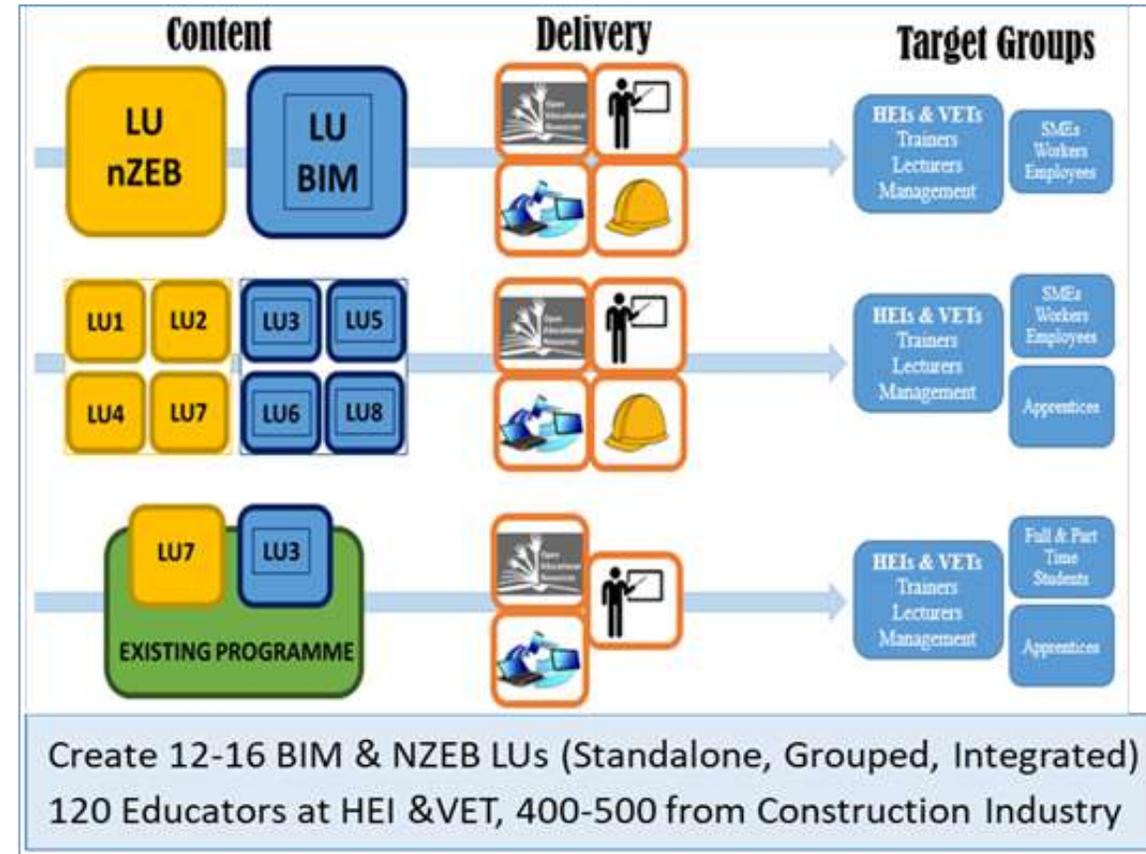
What we want to do



Overview of BIMzeED

- **Open Educational Resources (OERs)** – Available as blended, in-class, on-line and on-site trainings.
- **Flexibility of Learning Units** - Short flexible Learning Units to be used as Stand-alone units, Grouped together or integrated into existing curricular.
- **Constantly Changing Market** - The LUs are flexible to realise the skills needs in each country
- **Mutual Recognition** – The LUs are developed for target groups under EQF levels and across 4 countries.
- **Strengthen Links** - between HEI, VET, R&D, industry and SMEs using innovative digitalised approaches.

BIMzeED Innovative Approach



Who are the actors?

- Project Manager
- Designer/Engineer
- Engineer/Site supervisor
- Site Engineer
- Technician/Craft worker
- Apprentice
- Contractor – Construction Manager
- Construction Workers
- Educator/Trainer
- Student
- Building Owner
- Developer
- Facility Manager
- Consultant
- Public Administration
- Policy Maker



The Learning Units (LUs)

12 learning units covering a variety of topics that are at the heart of effective development and growth of training in the construction sector.

Emphasis on the NZEB and green construction sector with the inclusion of BIM (digitalisation) looking at the design, implementation and value chain management.



The Learning Units (LUs)



The Learning Units (LUs)



A storyboard is set out for each LU covering –

- Target Group and EQF level
- Descriptors
- Objectives
- Competence
- Learning methodology
- Assessment Matrix
- Course Approach and Delivery
- Software and Resources

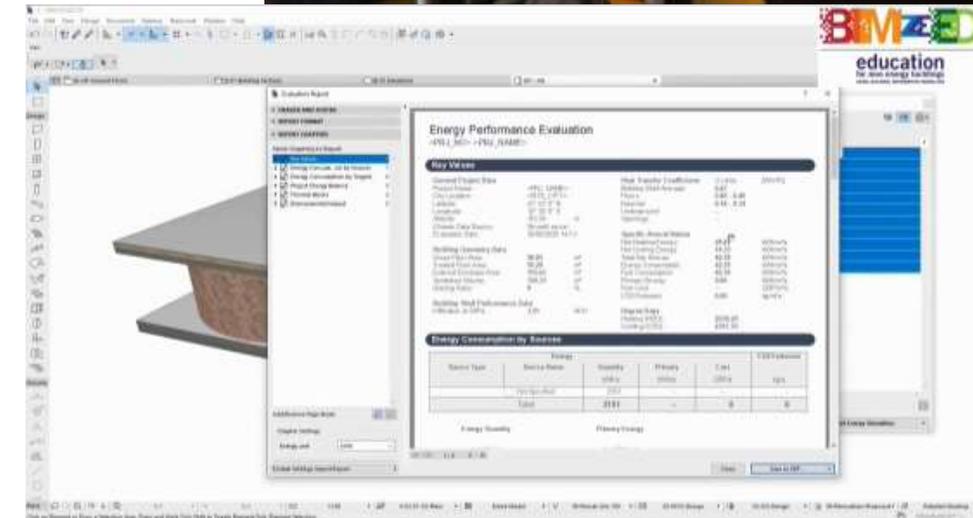
EQF levels (5-7)

- Each Learning Unit (LU) is divided into a number of Topics which are between 1-3 hours in duration.
- Flexibility is provided on how the course is delivered, as full time or part time LUs.

Type of delivery	Delivery of units	Timeframe
Full time (blended or online)	In 2-3 sessions	2-3 weeks
Part time (blended or online)	In 3-6 sessions	3-6 weeks
Part Time (online)	In 6 sessions	unlimited

What to expect from the LUs

- Theoretical - NZEB and BIM understanding
- Practical - Perform Digital activities and test competences
 - BIM and other Digital software tools
 - Group Activities and Discussion Forum
- Self directed reading activities
- Gamification for assessment.



Group Discussion:

1. How much thermal insulation is needed to construct NZEB?
2. Why airtightness is needed?
3. What are the issues with internal insulation?



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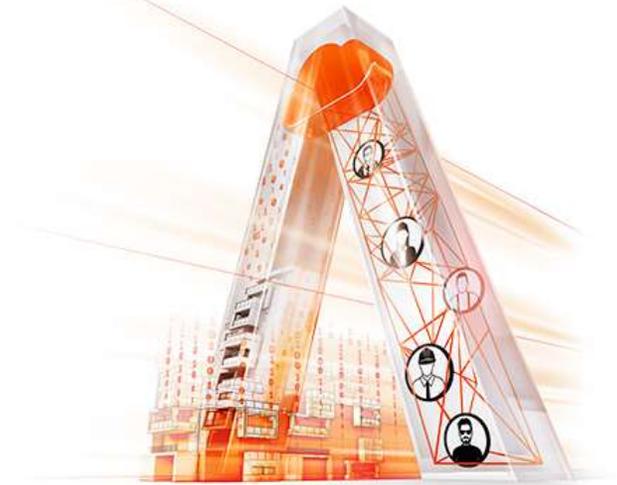
Think Pair Share (TPS)

BIM video lessons

ALL THE BIM RELATED EXERCISES CAN ALSO BE PERFORMED IN OTHER BIM TOOLS -

- Revit <https://www.autodesk.eu/free-trials>
- Allplan <https://www.allplan.com/en/products/allplan-architecture/>
- Navisworks <https://www.autodesk.com/education/free-software/navisworks-manage>

It's all about the principles, and the principles remain unchanged regardless of the tools used.



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LU Delivery

The LUs are delivered over:

- 8-10 hours of structured learning and
- 24 -30 hours of self-directed learning
 - (much of which can be drawn from case studies, BIM activities and reading)
- as a blended or online delivery.

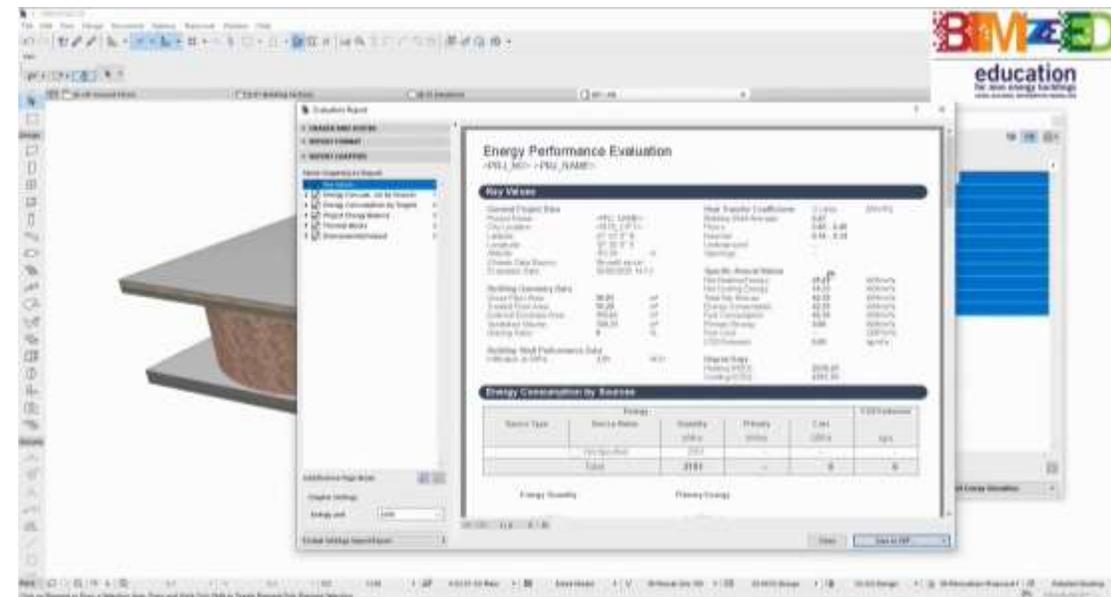
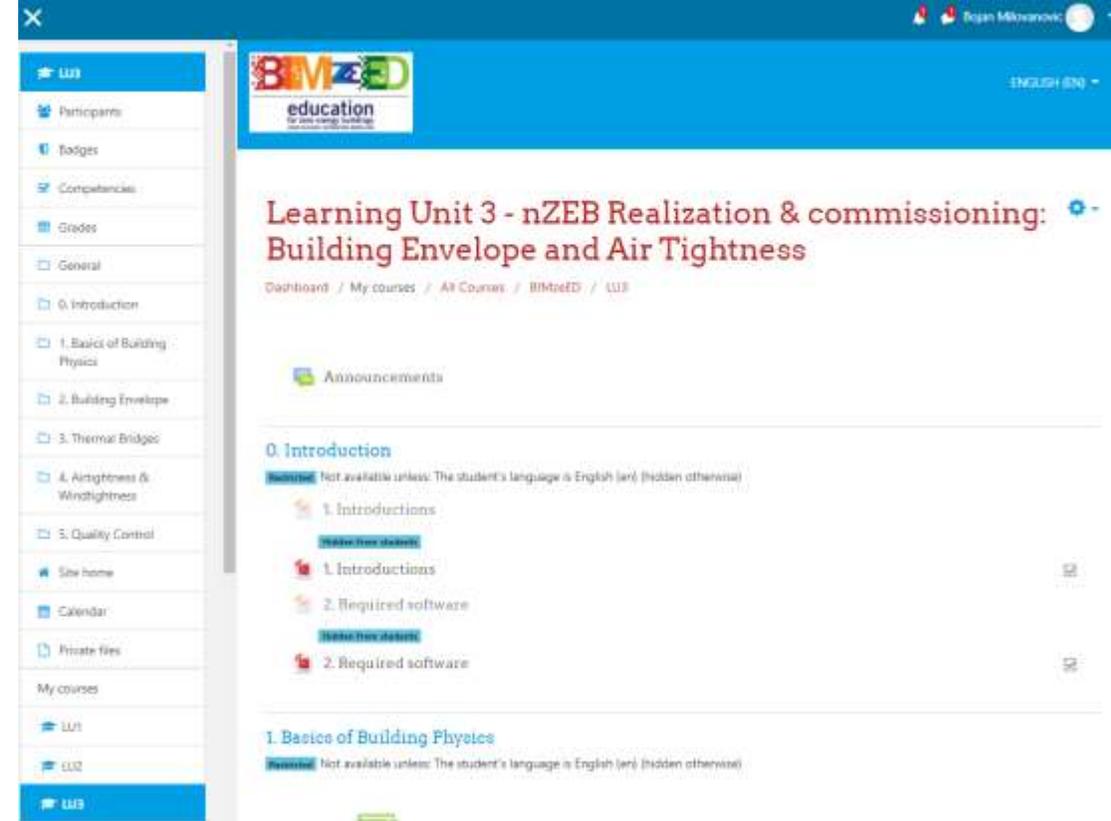


Train the Trainer

- Trainers complete a Train the Trainers online programme – using videos as the method of delivery
- Programme:
 - BIMzeED Introduction
 - Pedagogical Approaches
 - LUs Content and Delivery
 - Monitoring and Feedback

➤ If you are a trainer contact us at:

<https://bimzeed.eu/>



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BIMzeED Impact

Short term impact

Updated vision on the **skills needs** of the construction sector and **database of existing trainings**

Roadmap used by HEIs, VETs and SMEs to develop other supports, beyond the framework of BIMzeED

Flexible Learning Units compatible with HEIs / VET programmes, plus creation of two toolkits to enable adaptation onsite for SMEs.

Open access to an E-Learning Platform for all interested stakeholders (HEI/VET trainers, students, SMEs, industry related organisations)

Medium term impact

Structuring of training material and content using **common LUs with standardised delivery** (in class, on-line, on-site) suitable for HEI and VET training.

Increased capacity of the HEI and VET sectors to develop and implement new education and training programmes in the field of BIM and NZEB.

Improved training opportunities for students and SMEs with sequential transfer of new skills in the construction market. Improvement of capacity building of the construction sector by increasing the human capital basis of its workforce

Long term impact

LUs to be rolled out across EU as standalone training information, grouped together as new accredited modules or integrate into existing EQF programmes.

Better collaborative opportunities for HEIs and VETs to establish **mutually recognised LUs and programmes** across Europe, enabling the mobility of a mutually recognised skilled workforce

General improvement of the construction sector image with increased attractiveness and competitiveness. Working with other EU funded projects and initiatives.

INDICATORS

160 educators from HEI/VET per country

60 private construction products providers surveyed per country

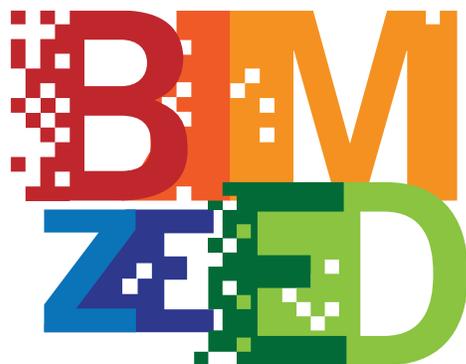
All training material downloaded

240 industry representatives surveyed per country

120 of HEIs, VET participating in BIMzeED training approach

12 LUs available

Thank You



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