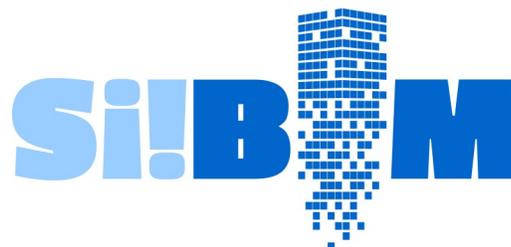




Step into BIM – digitising VET



Si! BIM project is one of the many projects in the Erasmus+ programme dealing with BIM. 48 construction projects related to BIM have been awarded under Erasmus+ in the period 2016-2020.

The aim of the Step into BIM (Si! BIM) project is to provide demonstrable innovation and added value to vocational education and training. It focuses on improving digital skills and awareness with a particular focus on the use and relevance of BIM in the construction sector in the EU. Good digital skills are essential in today's workplace and are the area where most workers are critically lacking.

This project will help employers and employees address the challenges of BIM by creating an accessible learning portal. It will enable the improvement of digital skills knowledge and awareness for both existing and new employees in the industry. Innovative and modern technologies will be used to support digital training and provide participants with greater career opportunities and improved professional mobility in the construction industry VET.

The results from the testing will evaluate the effectiveness of the training material and learning taking place as well as how best to utilise the training material in order for learning to take place by the apprentice in their current or future employment. The initial impact will concentrate on the apprentices who take part in the testing process to ensure that the final material are improved through an iterative process. Post testing impact and sustainability will be achieved once the final training material is made available through the project website for all construction apprentices in the partner countries to use.

The results of the testing will assess the effectiveness of the training materials and the learning that is taking place, and will indicate how best to use the training materials to enable trainees to learn in their current or future employment. Initial impact will focus on trainees participating in the testing process to ensure that the final material is improved through an iterative process. Impact and sustainability will be achieved once the final training material is made available to all construction trainees in the partner countries through the project website.

Multiplier events

As part of the Si! BIM project, we organized a multiplier event in each of the project partner countries, where we presented the final results of the project.

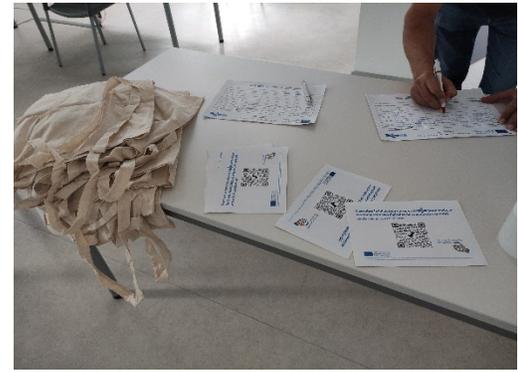
Spain

The multiplier event was held on September 23 and was a face-to-face meeting attended by ten participants. We had prepared a short presentation with information about the project, the partners, the objectives and the main outcomes. Afterwards, we

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presented the training content on the website and explained each unit in detail, and we even did a self-assessment with the participants!



Germany

The meeting took place in a hybrid mode with 8 German participants having attended in person and 16 national and international participants having been connected online.

The German SIBIM multiplier event took place in the morning of Thursday, 9th of September 2021 in Cologne / Germany. This Multiplier Event has been moderated by Bildungszentren des Baugewerbes (BZB). Stakeholders stem from vocational education and training centres, universities, branch associations, institutes dealing with sustainability aspects, human resource management, private companies and chambers.

Mr. Frank Bertelmann-Angenendt (BZB) provided the stakeholders with a comprehensive introduction of the SIBIM aim, its measures and eventually the expected results. He explained the more theoretical aspects from the work packages (intellectual outputs) as well as insight into how to use the learning modules in practice.

He demonstrated an entire cycle of entering the website and selecting the appropriate language version to starting the learning module and go through it. The different elements of the learning material – particularly how to move within chapters and going from chapter to the menu and so on – were extensively shown leaving the participants to test it by themselves in parallel.

The additional sections of FAQs and the quizzes were presented too and it was suggested that once the participant completes the learning material they should be able to the quizzes with ease.

The reactions by attendees were positive and they rate the easy access in favourably. Navigation through the learning materials was well received too. The level of contents was agreed on being appropriate for the target groups.

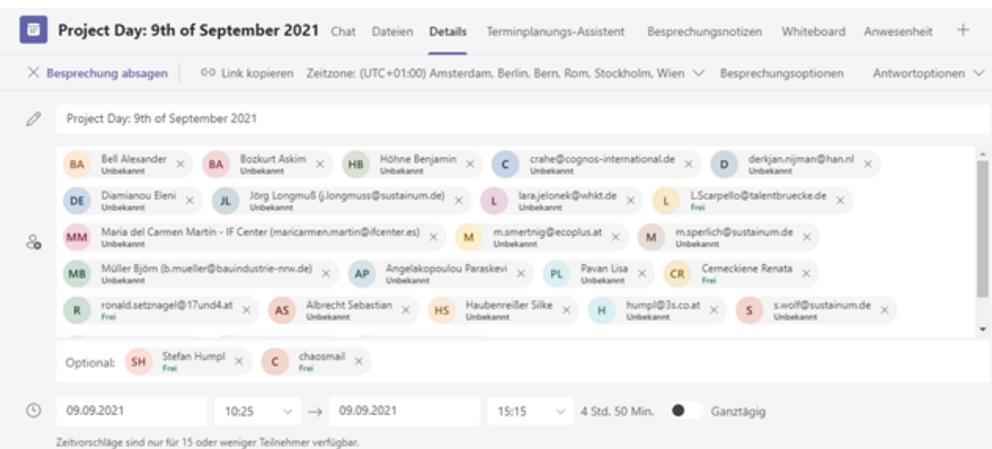
Mr. Bertelmann-Angenendt mentioned that SIBIM results were recommended as best practice example to be added to the Construction Blueprint1 project in order to be further spread in Europe.



EVENT: Multiplier Event **Step into BIM (SIBIM)**
 project-no.: 2019-1-UK01-KA202-061938
DATE/TIME: 9th of September 2021, morning session
ORGANIZATION/PLACE: Cologne / Germany (and online) – hybrid meeting

SIBIM

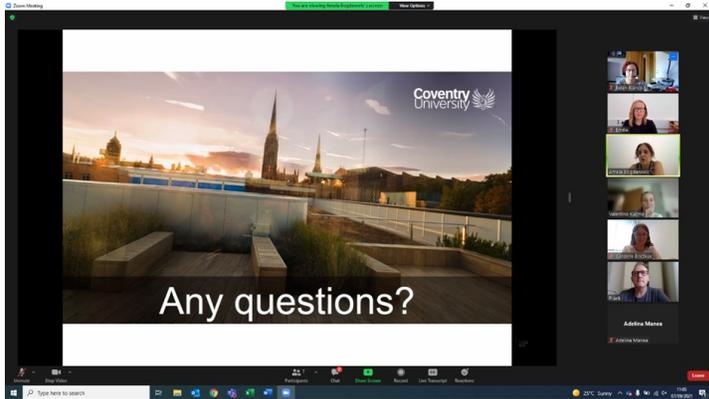
- Main target
- Achieved results
- Content demonstration
- Considerations
- Discussion



Last project meeting, 7 September 2021

Despite our hopes that the final meeting would take place face-to-face in Madrid we had to have a virtual meeting on 7 September 2021 due to different travel permissions by the partners. The meeting focused on the few outstanding tasks including minor corrections to the online learning materials detected during testing and Multiplier events. Partnership agreed that despite challenging circumstances for the best part of the project the resulting output is valuable sources to teaching and learning about BIM in construction industry.

The next step is to ensure further dissemination of the project results.



Results

The Si!BIM course aims to give a simplified, easy to understand overview of BIM (Building Information Management).

The course covers the following:

An introduction to the overall framework of the BIM process, the standards used and specific terminology relating to BIM to help the learner understand how BIM integrates into the construction industry and all the advantages and issues are identified.

The practical aspects of where BIM is used within various stages of a construction project with an overview of the various collaboration tools and modelling platforms as well as the advantages of digital technology in construction processes.

The strategic management value of BIM in the construction industry and a comparison to traditional processes. The learner will also understand the overall operation of BIM in terms of information workflows, protocols and data sharing.

The material is divided into 3 learning units consisting of 3 topics each.

Unit 1: Introduction to BIM

Topic 1A - Why BIM?

Topic 1B - Language of BIM

Topic 1C - BIM collaboration

Unit 2: BIM Modelling (Practice)

Topic 2A - BIM collaboration tools

Topic 2B - BIM modelling platforms

Topic 2C - BIM's role in digitalisation of construction industry

Unit 3: BIM Management

Topic 3A - BIM as project management tool

Topic 3B - BIM Information Delivery Cycle

Topic 3C - BIM Documentation



Each topic includes interactive learning materials that will give the basic understanding of the topic, frequently asked question (FAQ) – to further expand understanding of the most relevant points and a multiple choice quiz to reinforce understanding of the

BIM: sustainable aspects

Growing aspect of BIM:
 Examples: green buildings
 - optimisation of green areas
 - improved ventilation systems
 - sustainability assessment of building materials

Centuries of sustainability could be taken directly from BIM in the future. The pre-requisite for this is a standard link of BIM with related sustainability objectives. Your current options:

LEED: Leadership in Energy and Environmental Design is a green building certification program used worldwide

BREEAM: Building Research Establishment Environmental Assessment Method is the world's longest established method of assessing, rating and certifying the sustainability of buildings.

Topic B - Language of BIM

Language: ENGLISH

ISO

OUT

1. What is a virtual model?

- Image of reality that only incorporates technical drawings
- Complete setting of installations in the design phase
- Image of the architectural design concept
- Relevant data of a construction project that is modelled, combined and recorded

2. Big BIM is...

- Only implemented by large companies
- Collaborative designing of BIM
- Interdisciplinary application of BIM throughout the project
- Uses only one software

3. With clash detection control you can... (select 2 answers)

- Avoid risks existing on the building site
- Coordinate models from different construction disciplines
- Avoid all potential design mistakes
- Check whether different disciplines designs are compatible

4. What does IFC stand for?

- Inclusive Facilitated Concept
- Industry Financial Collaboration
- Industry Federated Coordination
- Industry Foundation Classes

5. Cost ratios in buildings are roughly as follows

- 95 % construction / 0.5 % construction design / 3.5 % building in use / 1 % administration
- 60 % building in use / 35 % construction / 2.5 % construction design / 1.5 % administration

Topic B - Language of BIM

LEARNING MATERIAL

ISO

OUT

Coventry University B2B refma Construction Research Centre Geopolitics Building Skills for the Future

Funded by the Erasmus Programme of the European Union

HOW TO DEMONSTRATE USE OF Si!BIM COURSE, OUR HINT FOR EXPLOITATION

The European Vocational Skills Week Team proposal for teachers, OCT 2021: SELFIE

“Building a School Digital Strategy with the SELFIE Tool” will be launched on the School Education Gateway Teacher Academy on 25 October 2021. The course is free, online and open to teachers and other school stakeholders from any country. SELFIE (Self-reflection on Effective Learning by Fostering the use of Innovative Educational technologies) is a free tool designed to help schools embed digital technologies into teaching, learning and assessment. SELFIE has a strong basis in research and was developed based on the European Commission framework on promoting digital-age learning in educational organisations. SELFIE anonymously gathers the views of students, teachers and school leaders on how technology is used in their school. This is done using short statements and questions and a simple 1-5 answer scale. The questions and statements take around 20 minutes to complete. Based on this input, the tool generates a report – a snapshot (‘SELFIE’ :-)) of a school’s strengths and weaknesses in their use of technology. SELFIE is available for any primary, secondary and vocational schools in Europe and beyond, and in over 30 languages. It can be used by any school – not just those with advanced levels of infrastructure, equipment and technology use. Designed by and for schools SELFIE is an initiative of the European Commission and is funded through the Erasmus programme. It is free of charge for every school.



School Education Gateway Teacher Academy



THE STEPS WE HAVE MADE

1. Si!BIM course specification – **FINALISED**
2. Si!BIM Vocational Open Online Course (VOOC):
 UNIT1 Introduction to BIM - **FINALISED**
 UNIT 2 BIM Modelling - **FINALISED**
 UNIT 3 BIM Management - **FINALISED**
3. Pilot training workshop - **FINALISED**
4. Pilot testing and workshop - **FINALISED**
5. Si!BIM Info Days (UK, DE, SI, ESP, BEL) - **FINALISED**



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