



# BIM EPD

ADAPTED SENIOR TRAINING PROGRAM ON BIM METHODOLOGIES  
FOR THE INTEGRATION OF EPD IN SUSTAINABLE CONSTRUCTION  
STRATEGIES

2020-1-ES01-KA204-083128

## *International Seminar in Murcia (Spain)*



19<sup>th</sup> October 2022. Seminar place: COAMU



Institute of  
Entrepreneurship  
Development



Centro Tecnológico  
del mármol, piedra y materiales

Warsaw University  
of Technology



BULGARIAN  
GREEN  
BUILDING  
COUNCIL



Co-funded by the  
Erasmus+ Programme  
of the European Union



A 3D architectural rendering of a city with various buildings, streets, and trees. The buildings are in shades of beige and brown, and the trees are green. The text 'GENERAL INFORMATION OF THE PROJECT' is overlaid on the image in a dark teal color.

## GENERAL INFORMATION OF THE PROJECT

### SUMMARY

- Project title:** Adapted senior training program on BIM methodologies for the integration of EDP in sustainable construction strategies
- Coordinator:** Colegio Oficial de Arquitectos de la Región de Murcia (COAMU)
- Call:** Erasmus+ 2020. Strategic Partnerships for adult education. Innovation. (KA204)
- Key Action:** Cooperation for innovation and the exchange of good practices
- Reference:** 2020-1-ES01-KA204-083128
- Start date:** 31-12-2020  
**End date:** 31-12-2022
- Funding by** European Union



## GENERAL INFORMATION OF THE PROJECT CONSORTIUM

COAMU



COLEGIO OFICIAL DE  
ARQUITECTOS  
REGIÓN DE MURCIA

P01. Colegio Oficial de Arquitectos de la Región de Murcia (COAMU). SPAIN

<http://coamu.es/>



Institute of  
Entrepreneurship  
Development

P02. Institute of Entrepreneurship Development. (IED). GREECE <http://ied.eu/>



Centro Tecnológico  
del mármol, piedra y materiales

P03. Asociación Empresarial Centro Tecnológico del Mármol y la Piedra. (CTM). SPAIN

[www.ctmarmol.es](http://www.ctmarmol.es)

**Warsaw University  
of Technology**

P04. Politechnika Warszawska. (WUT). POLAND <http://www.pw.edu.pl>



BULGARIAN  
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P05. Bulgarian Green Building Council. (BGBC). BULGARIA <http://bgbc.bg/>



P06. Cype France. FRANCE [www.cype.fr](http://www.cype.fr)



## GENERAL INFORMATION OF THE PROJECT

### CONTEXT

The implementation of the BIM in Europe is already a reality. In Northern Europe, the buildings of the BIM are already conceptualized, constructed, managed and economically exploited. In Spain, their widespread use is currently low, but it is a growing resource, as the obligation to use BIM in infrastructure projects by 2019 has been established. In Germany, there are technological implementations within the public sector such as open e-government and there are several organizations working to promote and accelerate the adoption of BIM in the German construction industry.

On the other hand, the European Commission is focusing in the short term on the construction sector for 2020, based on the criteria of smart growth (development and economy based on knowledge and innovation), sustainable growth (with an efficient, competitive and sustainable economy) and inclusive growth (ensuring social and territorial cohesion through employment).



## GENERAL INFORMATION OF THE PROJECT

### OBJECTIVES

The general objective of our project is to increase the skills of professionals over 45 years old in the architectural sector, particularly in the use of BIM technologies, in order to increase the quality of the final work, the permanence of the work and environmental sustainability, using methods without non-recyclable and/or non-harmful materials, to improve their employability.

The specific objectives assigned to the project are:

- To collect and analyse the most common learning methodologies applied to adult education for the use of new technologies for the definition of the learning objectives and learning outcomes of the curriculum.

- To define the competences and skills of architects in the current training systems and of professionals over 45 years old in the labour market, in relation to BIM technologies and EPDs.

- Determine the most appropriate teaching methods and the system/process of assessment for adult learning on BIM and EPD.



## GENERAL INFORMATION OF THE PROJECT

### OBJECTIVES

- To design a qualification curriculum adapted to adults for BIMEPD continuing education courses for architects that includes the latest technologies and environmental challenges, which fit perfectly with the current IT-based information methodology.
- The developed OER, which is freely accessible, will support the implementation of the BIMEPD pilot course.
- Studying national and European regulations concerning the standardisation and sustainable development modelling of the construction materials, methods and measures, in order to contribute to the unity of common market and the mobility of workers, to achieve a better utilisation of resources, respecting the environment and minimising the environmental impact in construction processes, as well as in heritage conservation ones.
- Providing professionals with innovative and interactive resources, in order to digitise the content required in their training in BIM technologies and EPDs to achieve a much more complete qualification based on excellence.



## GENERAL INFORMATION OF THE PROJECT

### TARGET GROUPS

- Architects who are low or intermediate skilled in BIM and EPD, who need to improve their skills for professional growth and to get more chances to find a new job or keep their job.
- SMEs of the construction sector willing to improve their competitiveness.
- Employment centres dealing with updating of skills and active labour market policies.
- Universities and VET.
- Architecture and engineering companies.



A 3D architectural rendering of a city with various buildings, streets, and trees. The buildings are in shades of beige and white, and the trees are green. The text 'GENERAL INFORMATION OF THE PROJECT PRODUCTS' is overlaid on the image in a dark teal color.

## GENERAL INFORMATION OF THE PROJECT PRODUCTS

Main results of the project are:

- O1. Establishment of common learning outcomes adapted to adults on BIM technologies and Environmental Product Declarations (EPDs)
- O3. BIMEPD Open Educational Resource (OER)



A 3D architectural rendering of a modern building complex with multiple interconnected volumes, surrounded by trees and a street.

## PRODUCTS

### O1. Establishment of common learning outcomes adapted to adults on BIM technologies and Environmental Product Declarations (EPDs)

Training is the basis for success. The creation of an innovative qualification methodology adapted to adults that brings together the three main axes of the project, Architecture – BIM technologies - EPDs, will mean that the sector will be able to overcome the deficiencies that are currently latent. New technologies applicable to the building design (BIM) and environmental criteria (EPD) are emerging every day.

Therefore, the project will offer training in utilisation of design collaborative methodologies and incorporation of environmental criteria of building materials such as BIM technologies and EPD, which are related to a surprising increase in data control, which will allow the project's target groups to adapt to new management systems and new design processes, a change that will allow them to evolve and create synergies with which to become stronger and more competitive.



## PRODUCTS

### O1. Establishment of common learning outcomes adapted to adults on BIM technologies and Environmental Product Declarations (EPDs)

O1/A1. Definition of the learning objectives and learning outcomes of the curriculum.

O1/A2. Determine the most appropriate teaching methods and the system/process of assessment for adult learning on BIM and EPD.

O1/A3. BIMEPD Course Curriculum based on BIM technologies and ecological challenges for adult learning.

O1/A4. Interactive handbook adapted to adult learning on BIM technologies and ecological challenges.

O1/A5. Report on the results of First International Seminar in Sofia (Bulgaria).



## PRODUCTS

O1. Establishment of common learning outcomes adapted to adults on BIM technologies and Environmental Product Declarations (EPDs)

## CONTENTS OF THE HANDBOOK

1. Basic concepts and BIM (Building Information Modeling) technology applied to Life Cycle Analysis (LCA).
2. BIM and LCA regulation.
3. Search and interpretation of DAP databases.
4. Modeling of BIM objects with development level 600 (LOD600) for the integration of environmental impact data.
5. Modeling of sustainable buildings (new construction and renovation) based on Life Cycle Analysis.
6. Environmental management and documentation of a BIM project.
7. Initiation and development of a project with BIM technology through a strategy of environmental impact reduction.
8. Methodologies for calculating environmental impact from BIM objects with LOD600 development level.
9. Other methodologies of environmental impact calculation from open BIM formats.
10. The Construction Manager: BIM Environmental Manager.



## PRODUCTS

### O3. BIMEPD Open Educational Resource (OER)

The aim is to generate an educational resource that, in addition to being key to self-learning and to promoting interoperability between BIM methodologies and the inclusion of environmental criteria in the design of buildings, can be transferred to other sectors and that can also benefit from it.

To this end, an Open Educational Resource will be designed and produced to support the implementation of the BIMEPD curriculum and the BIMEPD Multimedia Materials produced.

This will be made available free of charge on the project website to be used as support material in the many architecture and construction courses. It will be free and accessible from the project's website.



## PRODUCTS

### O3. BIMEPD Open Educational Resource (OER)

O3/A1. IT production of BIMEPD Open Educational Resource.

O3/A2. Pilot BIMEPD Course implementation: environment test and technical improvements.

O3/A3. Report on the results of Final International Seminar in Murcia (Spain).

# HOME

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Pilot course in Murcia (COAMU).

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**THANK FOR YOUR  
ATTENTION!**

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