

## OERCO2

### ONLINE EDUCATIONAL RESOURCE FOR INNOVATIVE STUDY OF CONSTRUCTION MATERIALS LIFE CYCLE

#### INTELLECTUAL OUTPUT 2. OER (ONLINE EDUCATIONAL RESOURCE)

##### TASK IO 2.2 TESTING OF THE OER



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## TABLE OF CONTENT

<b>1. INTRODUCTION .....</b>	<b>3</b>
<b>2. CONCEPT .....</b>	<b>4</b>
<b>3. QUALITY OF THE INFORMATION AND EDUCATIONAL SCOPE .....</b>	<b>7</b>
<b>4. DEVELOPMENT OF THE OER .....</b>	<b>9</b>
4.1 Draft .....	9
4.2 First version of OER .....	22
4.3 Evaluation mechanisms .....	23
4.4 Final version .....	33
<b>5. CONCLUSIONS AND IMPROVEMENTS .....</b>	<b>34</b>

## 1. INTRODUCTION

This report will summarise the activities carried out for the implementation of the task O2/A2. *Testing of the OER* included in the *Intellectual Output 2 "OER (Open Educational Resource)"* of the OERCO2 Project.

One of the main lines of action on which the OERCO2 project is based is the development of the Online Educational Resource, conceived as a platform for free access on the Internet to be used as a base material for calculating the ecological or carbon footprint in the execution of buildings. Through the OER, all the information gathered in the project is accessible, providing more didactic information for the self-learning of the object methodologies.

Intellectual Output 2 is composed of three main tasks consisting of *A1. Production of the OER*, *A.2 Testing of the OER* and *A3. Implementation of courses on specialization based on the OERCO2 project*.

This report focuses on testing the information contained in the platform and verifying that access is possible for everyone who has the Internet. To do this, the evaluation is based on criteria of quality, pedagogical scope and location and correction of possible errors in the development of the same.

In the following sections, it will detail the process followed until reaching the latest version of the OER, that is available on the OERCO2 project website:

<http://oerco2.eu/>



## 2. CONCEPT

OERCO2 intends not just to raise awareness, but also to make all entities involved in the construction sector conscious about CO2 emission, from the extraction of raw materials to manufacture materials of construction to the demolition works or deconstruction of buildings, that is, taking into account the life cycle of materials and construction processes.

To achieve the objectives of the project, the online educational resource for innovative study of construction materials life cycle OERCO2 has been developed as a means of information support.

The first step in the development of the OER was the completion of a first version to the task *O2/A1. Production of the OER*, which during its execution, has coexisted with tasks A2 and A3, which have been feedback to implement the appropriate improvements.

In order to achieve an OER platform of the required quality is necessary, the task that is the subject of this report, *O2/A2. Testing of the OER*, based on the testing and validation of the online platform.

All the information gathered in the OER has been collected by the partners, based on an exhaustive study of the environmental regulations in all the sectors involved in construction in Europe and for each of the member countries of the consortium, as well as the study of the Environmental Product Declarations (EPDs) of the participating countries.

All the work of study and information gathering was carried out in IO1, and all the material collected is the material basis of the OER to be tested in this task.



## OER Direct Access

Name and description	Uploaded by	Language available	Date	REGULATIONS
<a href="#">Report 1.1.1. SPANISH regulations_EN-ES</a>	USE	 	2017/06/01	SURVEYS
Compilation of regulations about environmental aspects in construction sector in Spain				EPD
<a href="#">Report 1.1.1. ITALIAN regulations_EN-IT</a>	CERTIMAC	 	2017/06/01	TECHNICAL DOCUMENTS
Compilation of regulations about environmental aspects in construction sector in Italy				DISSEMINATION
<a href="#">Report 1.1.1. PORTUGUESE regulations_EN-PT</a>	CTCV	 	2017/06/01	
Compilation of regulations about environmental aspects in construction sector in Portugal				

Figure 1. Compilation of regulations in the OER





## OER Direct Access

Name and description	Uploaded by	Language available	Date
1.2.1. Report Construction materials in Spain_ES ESTUDIO DE LOS MATERIALES UTILIZADOS EN LA CONSTRUCCIÓN EN ESPAÑA	USE		2017/06/23
1.2.1. Report Construction materials in Italy_EN STUDY OF MOST USED MATERIALS IN ITALIAN CONSTRUCTION SECTOR	CERTIMAC		2017/06/23
1.2.1. Report Construction materials in Portugal_PT ESTUDO DOS MATERIAIS UTILIZADOS NO SETOR DA CONSTRUÇÃO EM PORTUGAL	CTCV		2017/06/23

REGULATIONS

SURVEYS

EPD

TECHNICAL DOCUMENTS

DISSEMINATION

Figure 2. Report on EPD (Environmental Product Declarations)

### 3. QUALITY OF THE INFORMATION AND EDUCATIONAL SCOPE

OER has emerged as a concept with great potential to support educational transformation. Its educational value lies in the idea of using resources as a comprehensive method of communicating curricula in educational courses (i.e., resource-based learning), its transformative power lies in the ease with which these resources, once digitized, can be shared over the Internet<sup>1</sup>.

In order to evaluate the quality and didactic scope of the OER platform, the following elements, among others, have been considered for the selection of the evaluation criteria:

- The research resources that support the educational resources.
- The educational design of teaching.
- The scope and sequence.
- Precision and adaptability.
- The possibilities for student participation.
- The effectiveness in learning and the results demonstrated by the students.

The testing and validation of the Online Educational Resource has been carried out based on quality, educational character and accessibility. To this end, the opinions of industry professionals and students have been taken into account after having used the platform.

The methodology used for testing the OER is as follows:

- Report on the quality of the information and educational scope. The educational scope of the material included in the OER has been analysed by carrying out a study on construction professionals without any knowledge of the calculation of CO<sub>2</sub> emissions, in order to check whether the information provided is effective and if it is not, that the students indicate the weaknesses of the teaching that has been submitted. This task was carried out in the *IO 2.3 Implementation of courses on specialization based on the OERCO2 project*.
- Localization of possible errors and correction of them. Once the weak points of the information included in the OER were analysed, the improvements were reinforced and implemented, providing more information or changing the pedagogical methodology to ensure the desired effectiveness.

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<sup>1</sup> GLASSERMAN, L. D., RAMÍREZ, M. S. Uso de recursos educativos abiertos (REA) y objetos de aprendizaje (OA) en educación básica. Revista de teoría de la educación. Educación y Cultura en la Sociedad del Conocimiento, 15(2). 86-107.

- Report assessing the project OERCO2 online platform among professionals in the International Seminars of the project, mainly which was held in Romania by RoGBC.



*Figure 3. International Seminar in Bucharest (Romania, 9<sup>th</sup> October 2017).*



## 4. DEVELOPMENT OF THE OER

The Online Educational Resource (OER) is the result of a series of phases and processes that will be described in the following sections.

Once all the information had been collected, the initial draft of the OER was designed, and through the appropriate implementations and following a process of validation and testing in each of the phases, the final version was developed in compliance with the objectives of the project.

### 4.1 Draft

Firstly, it was worked a draft of the structure and analysed the possible interface of the OER, which was presented to the rest of partners in a conference call meeting:

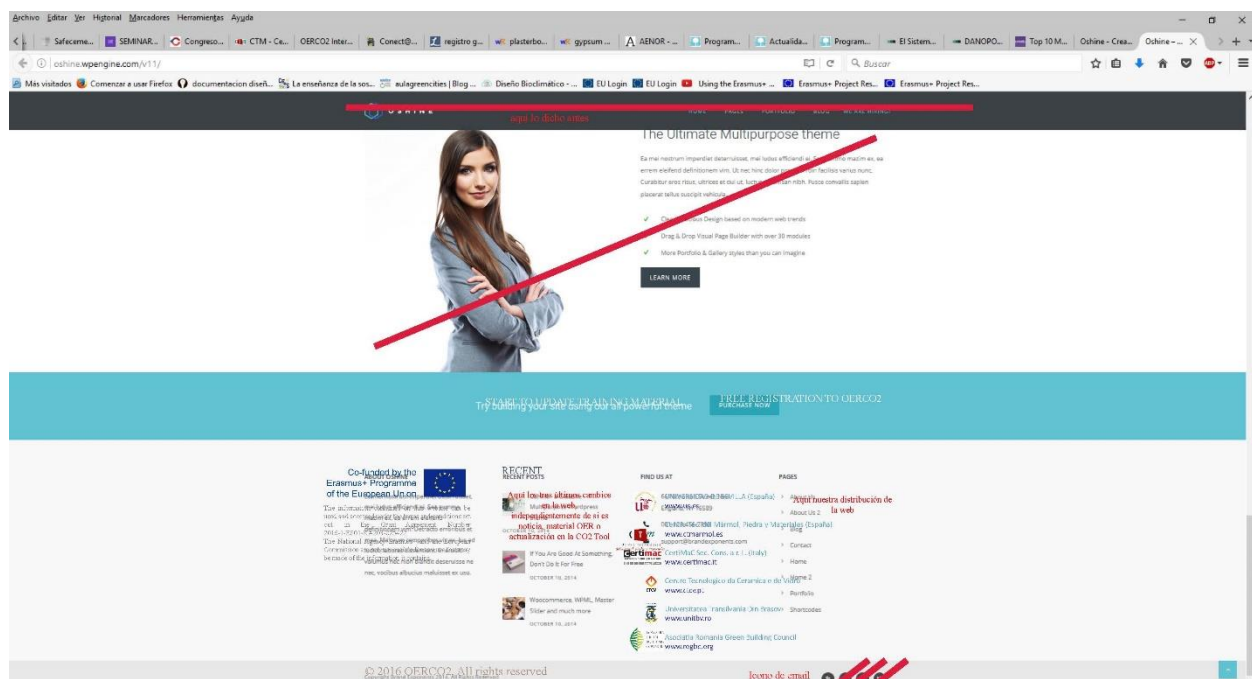


Figure 4

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Based on it, a draft version of web page was presented in a conference call meeting (it was under construction):

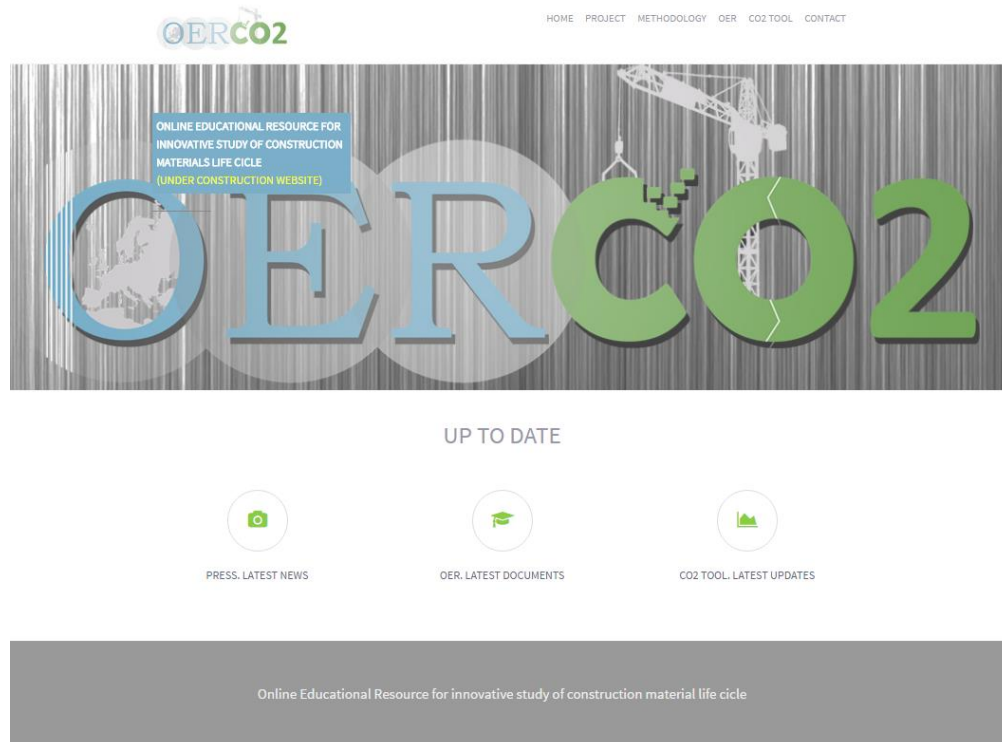


Figure 5

In the first instance, the OER presented the following header:

HOME PROJECT METHODOLOGY OER CO2 TOOL CONTACT

Figure 6

And the following shortcuts:

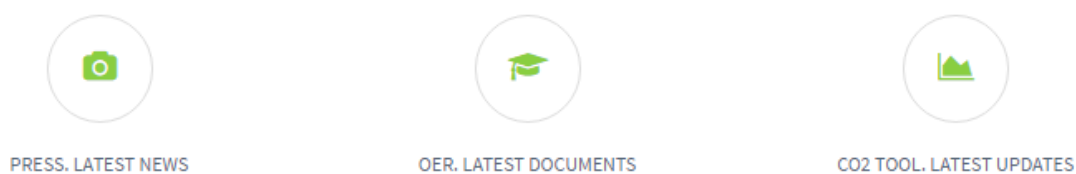


Figure 7

Consortium members: Universidad de Sevilla (US), Asociación Empresarial de Investigación Centro Tecnológico del Mármol, Piedra y Materiales (CTM), CertiMaC Soc. Cons. a r. L. (CertiMaC), Centro Tecnológico da Cerâmica e do Vidro (CTCV), Universitatea Transilvania din Braşov (UTBV), Asociația România Green Building Council (RoGBC).

The second transnational meeting held in Faenza was the setting for the presentation of the concept draft of the OER.

PhD. David Caparrós (CTM), was in charge of presenting the OER draft at the meeting. Mr. Caparrós showed the partners how will be implemented the interface and structure of future content that was under construction at the time.

In testing this first phase of development of the OER, the opinion and assessment of the partners in the field who attended the seminar was used. To this end, surveys were provided to the partners so that they could reflect both the opinion of the OER model and the improvements needed to develop a product with the required quality. It can be checked in the Minutes of that meeting.



ONLINE EDUCATIONAL RESOURCE FOR INNOVATIVE STUDY OF  
CONSTRUCTION MATERIALS LIFE CYCLE



PRESS

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OER

Online Resource  
Centre



CO2 TOOL

Tool for estimation  
of emissions of CO2



## WHAT IS OERCO2?

OERCO2 intends not just to raise awareness, but also to make all entities involved in the construction sector conscious about CO2 emission, from the extraction of raw materials to manufacture materials of construction to the demolition works or deconstruction of buildings, that is, taking into account the life cycle of materials and construction processes.



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The main idea of OERCO2 is to create an Open Educational Resource (OERCO2) where the calculations of CO2 emissions in each phase of the building are unified so that get an overall picture about footprint from the conception of it and decide on each variable of the construction.

The first step to manage and reduce CO2 emissions is calculate it, in order to know the importance of this environmental aspect and implementing measures to improving it. To obtain a better understanding of the impact and work on it, it is important to measure CO2 emissions from the design and conception of the building, and according to these measures, knowing the different possibilities of reduce the footprint, doing a building more sustainable and lower-carbon.

It is indispensable to make aware of the emissions from the first phases of the project for taking early actions and choosing between the different materials, transports, constructive methods, use during the life of the building, deconstruction systems, reuse, etc., and examine how to contribute to increase or decrease the emissions of the building.

#### OBJECTIVES

In order to contribute to overcome the situation described above, the specific objectives of OERCO2 are:

- Introduce the calculation of the CO2 emissions at all phases of the construction processes as well as concepts related to recycling and reuse.
- Increase the awareness about the climate change.
- Provide information about emissions of each element.
- Free access to OERCO2 to agents involved in the construction sector (students, AEC professionals, etc.).

#### PROMOTOR

Universidad de Sevilla (Spain)

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

#### PARTNERS

Centro Tec. del Mármol, Piedra y Materiales (Spain)

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

CertiMaC Soc. Cons. a r. L. (Italy)

[www.certimac.it](http://www.certimac.it)

Centro Tecnológico da Cerâmica e do Vidro (Portugal)

[www.ctcv.pt](http://www.ctcv.pt)

Universitatea Transilvania din Brasov (Romania)

[www.unitbv.ro](http://www.unitbv.ro)

Asociația România Green Building Council (Romania)

[www.rogbgc.org](http://www.rogbgc.org)



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Here you will find all OERCO2 documents on reports of the project

SHORT BY  
DATE  
FILE NAME  
FILE TYPE  
LANGUAGE  
DATE

O1/A1: Study of environmental regulations in all of the sectors involved related to construction and level of implementation in participant countries of the project. *(now available!)*

O1/A2: Study of Environmental Product Declaration (EPD) of construction sector in participant countries. *(now available!)*

O1/A3: Study of methodologies applied in calculation of CO2 emissions in construction processes. *(now available!)*

O1/A4: Production of common European curricula on specialisation of methodology for calculation of CO2 emissions of construction works throughout the entire life cycle of buildings and techniques for its mitigation.

O2/A1: Production of the OER. *(now available!)*

O2/A2: Testing of the OER.

O2/A3: Implementation of a pilot course on specialisation based on the OERCO2 project.

O3/A1: Production of the Online Tool for calculation of CO2 emissions in construction works.

O3/A2: Testing of Interactive Tool.



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In this open-access platform, you can access to all the information collected during and beyond the end of the project, providing more information for self-learning educational field in the methodologies covered by the OERCO2 project. You can create your account and have access to your private area in order to update information, it is totally free!

DIRECT ACCESS

PRIVATE AREA



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## REGULATIONS

Name and description	Uploaded by	Language available	Date
<a href="#">REPORT 1.1.1. Compilation of Spanish regulations</a>	USE	 	yyyy/mm/dd
Compilation of regulations about environmental aspects in construction sector in Spain			
<a href="#">REPORT 1.1.1. Compilation of Italian regulations</a>	CERTIMAC	 	yyyy/mm/dd
Compilation of regulations about environmental aspects in construction sector in Italy			
<a href="#">REPORT 1.1.1. Compilation of Portuguese regulations</a>	CTCV	 	yyyy/mm/dd
Compilation of regulations about environmental aspects in construction sector in Portugal			
<a href="#">REPORT 1.1.1. Compilation of Romanian regulations</a>	RoGBC	 	yyyy/mm/dd
Compilation of regulations about environmental aspects in construction sector in Romania			
<a href="#">REPORT 1.1.1. Compilation of EU regulations</a>	CTM	    	yyyy/mm/dd
Compilation of regulations about environmental aspects in construction sector at EU level			

SHORT BY:

MAP

FILE NAME

FILE TYPE

LANGUAGE

DATE

REGULATIONS

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## PRESS and EVENTS

Name and description	Uploaded by	Language available	Date
<a href="#">PRESENTACIÓN DEL PROYECTO OERCO2 EN EL COAMU SOBRE EL ANÁLISIS DEL CICLO DE VIDA DE LOS MATERIALES DE CONSTRUCCIÓN</a>	CTM		yyyy/mm/dd
El CTM ha presentado en Murcia el Proyecto OERCO2 en el Colegio Oficial de Arquitectos...			
PICTURE			
PICTURE			

SHORT BY

FILE NAME  
FILE TYPE  
LANGUAGE  
DATE

### REGULATIONS

### SURVEYS

### EPD

### TECHNICAL DOCUMENTS

### PRESS AND EVENTS

### DISSEMINATION



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This tool can estimate the total emissions of the building due to their CO2 emissions and help in a didactic and intuitive understanding of calculation methodologies by the user.

## UNDER CONSTRUCTION



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Subject

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## 4.2 First version of OER

The first version of the OER is the result of the improvements implemented, both by the consortium and by the external contributions of experts, professionals and students.

Presentation of the first version of the OER was carried out at the International Meeting in Bucharest:



Figure 8. "Home" of the website (1/2)



## WHAT IS OERCO2?

OERCO2 intends not just to raise awareness, but also to make all entities involved in the construction sector conscious about CO2 emission, from the extraction of raw materials to manufacture materials of construction to the demolition works or deconstruction of buildings, that is, taking into account the life cycle of materials and construction processes.



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Figure 9. "Home" of the website (2/2)

## 4.3 Evaluation mechanisms

The OER suffered several types of tests and evaluation methods:

- **Internal tests.** The project partners checked the correct operation of the OER, its content and structure, and detected a series of errors, that were corrected by the task coordinator with the validation of the other partners during conference call or transnational meetings of the project. At this point, also experts were consulted.
- **External tests:** During the project, numerous meetings were held between the project partners and international seminars were attended by professionals and teachers from the construction and environmental sectors. Also, courses was implemented in which the OER has been used as a support for teaching materials, which it can be checked in the report IO 2.3 Implementation of specific courses.

In order to know the opinions of those attending these events, different types of surveys were delivered depending on the type of event being held. These surveys and their results



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are posted on the OERCO2 project website (<http://oerco2.eu>) (result of the seminars and other reports). The main aim of these surveys was to get feedback for the project and its products to improve them and making them more accessible to users.



*Figure 10. Round table in International Seminar in Bucharest (Romania). 9th October 2018*

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<b>PLEASE, HELP US TO IMPROVE!</b>				
Project: OERCO2. ONLINE EDUCATIONAL RESOURCE FOR INNOVATIVE STUDY OF CONSTRUCTION MATERIALS LIFE CICLE 2016-1-ES01-KA203-025422				
<b>EVALUATION FORM</b>				
<b>INTERNATIONAL SEMINAR OF ONLINE EDUCATIONAL RESOURCE ORECO2 FOR REDUCTION OF CO2 IN THE CONSTRUCTION OF BUILDINGS. Bucharest (Romania). 9th October, 2017.</b>				
Please fill in the following questionnaire with the answers you consider most appropriate				
1. The main purpose of the training day was achieved				
Strongly disagree	Disagree	Partially agree	Agree	Strongly agree
2. Your expectations regarding this training day were satisfied				
Strongly disagree	Disagree	Partially agree	Agree	Strongly agree

3. How do you appreciate the project theme and purpose?				
Completely inadequate	Inadequate	Partially adequate	Adequate	Perfectly adequate
4. How do you appreciate the quality and utility of the study of regulations and methodologies that has been developed in OERCO2?				
Completely inadequate	Inadequate	Partially adequate	Adequate	Perfectly adequate
5. How do you appreciate the easyness of usage of the Online Educational Resource?				
Very difficult	Difficult	Acceptable	Easy	Very easy
6. Is the layout of the Online Educational Resource attractive to users?				
Strongly disagree	Disagree	Partially agree	Agree	Strongly agree
7. Is the content of Online Educational Resource suitable for the construction sector professionals?				
Strongly disagree	Disagree	Partially agree	Agree	Strongly agree
8. Is the content of Online Educational Resource enough?				
Strongly disagree	Disagree	Partially agree	Agree	Strongly agree
9. How do you appreciate the future integration of the CO2 Tool in the Online Educational Resource?				
Completely inadequate	Inadequate	Partially adequate	Adequate	Perfectly adequate
10. What level of use do you think the Online Educational Resource can have at the university?				
Very weak	Weak	Moderate	Strong	Very strong
11. How would you rate the influence of the project products in the construction sector?				
Very weak	Weak	Moderate	Strong	Very strong
12. How would you rate the attractiveness of the products for the future users?				
	Less attractive	Attractive	Very attractive	

Please present your opinion regarding the following issues
13. What do you particularly like about the OERCO2 project?
14. What improvements would you implement in the Online Educational Resource?
15. Which are in your opinion the positive and negative aspects of the project and its products?
PROFESSION*:
NAME (Optional information):

Figure 11. Example of survey in the International Seminar in Romania.

**¡POR FAVOR, AYÚDANOS A MEJORAR! / PLEASE, HELP US IMPROVE!**

**Project: OERCO2. CENTRO DE RECURSOS ONLINE PARA EL ESTUDIO INNOVADOR DEL CICLO DE VIDA DE LOS MATERIALES DE CONSTRUCCIÓN / ONLINE EDUCATIONAL RESOURCE FOR INNOVATIVE STUDY OF CONSTRUCTION MATERIALS LIFE CYCLE**  
2016-1-ES01-KA203-025422

<b>FORMULARIO DE EVALUACIÓN / EVALUATION FORM</b>
<b>Seminario Internacional Final en Sevilla (España). 16 de mayo 2018 / Final International Seminar in Seville (Spain). 16th of May 2018</b>
Por favor, rellene el siguiente cuestionario marcando las respuestas que considere más adecuadas / Please fill in the following questionnaire with the answers you consider most appropriate

Consortium members: Universidad de Sevilla (US), Asociación Empresarial de Investigación Centro Tecnológico del Mármol, Piedra y Materiales (CTM), CertiMaC Soc. Cons. a r. L. (CertiMaC), Centro Tecnológico da Cerâmica e do Vidro (CTCV), Universitatea Transilvania din Brasov (UTBV), Asociatia Romania Green Building Council (RoGBC).



1. Se ha logrado el principal objetivo del Seminario Internacional / <i>The main purpose of the International Seminar was achieved</i>				
Totalmente en desacuerdo / <i>Strongly disagree</i>	En desacuerdo / <i>Disagree</i>	Parcialmente de acuerdo / <i>Partially agree</i>	De acuerdo / <i>Agree</i>	Totalmente de acuerdo / <i>Strongly agree</i>
2. Sus expectativas relacionadas con este Seminario fueron cumplidas / <i>Your expectations regarding this Seminar were satisfied</i>				
Totalmente en desacuerdo / <i>Strongly disagree</i>	En desacuerdo / <i>Disagree</i>	Parcialmente de acuerdo / <i>Partially agree</i>	De acuerdo / <i>Agree</i>	Totalmente de acuerdo / <i>Strongly agree</i>
3. ¿Cuál es tu valoración del proyecto y su propósito? / <i>How do you appreciate the project theme and purpose?</i>				
Completamente inapropiado / <i>Completely inadequate</i>	Inapropiado / <i>Inadequate</i>	Parcialmente apropiado / <i>Partially adequate</i>	Apropiado / <i>Adequate</i>	Perfectamente apropiado / <i>Perfectly adequate</i>
4. ¿Cuál es tu valoración sobre la calidad y utilidad del estudio de las normativas y metodologías desarrollado en OERCO2? / <i>How do you appreciate the quality and utility of the study of regulations and methodologies that has been developed in OERCO2?</i>				
Completamente inapropiado / <i>Completely inadequate</i>	Inapropiado / <i>Inadequate</i>	Parcialmente apropiado / <i>Partially adequate</i>	Apropiado / <i>Adequate</i>	Perfectamente apropiado / <i>Perfectly adequate</i>
5. ¿Cómo valoraría la facilidad de manejo del Centro de Recursos Online? / <i>How do you appreciate the easyness of usage of the Online Educational Resource?</i>				
Muy difícil / <i>Very difficult</i>	Difícil / <i>Difficult</i>	Aceptable / <i>Acceptable</i>	Fácil / <i>Easy</i>	Muy fácil / <i>Very easy</i>
6. ¿Considera el diseño del Centro de Recursos Online atractivo para el usuario? / <i>Is the layout of the Online Educational Resource attractive to users?</i>				
Totalmente en desacuerdo / <i>Strongly disagree</i>	En desacuerdo / <i>Disagree</i>	Parcialmente de acuerdo / <i>Partially agree</i>	De acuerdo / <i>Agree</i>	Totalmente de acuerdo / <i>Strongly agree</i>
7. ¿Es adecuado, para los profesionales relacionados con el sector de la construcción, el contenido del Centro de Recursos Online? / <i>Is the content of Online Educational Resource suitable for the construction sector professionals?</i>				



Totalmente en desacuerdo / <i>Strongly disagree</i>	En desacuerdo / <i>Disagree</i>	Parcialmente de acuerdo / <i>Partially agree</i>	De acuerdo / <i>Agree</i>	Totalmente de acuerdo / <i>Strongly agree</i>
8. ¿Es suficiente el contenido en el Centro de Recursos Online? / <i>Is the content of Online Educational Resource enough?</i>				
Totalmente en desacuerdo / <i>Strongly disagree</i>	En desacuerdo / <i>Disagree</i>	Parcialmente de acuerdo / <i>Partially agree</i>	De acuerdo / <i>Agree</i>	Totalmente de acuerdo / <i>Strongly agree</i>
9. ¿Cómo valora la herramienta de cálculo de emisiones de CO2 (CO2 Tool)? / <i>How do you appreciate the Tool for calculation of CO2 emissions (CO2 Tool)?</i>				
Muy débil / <i>Very weak</i>	Débil / <i>Weak</i>	Normal / <i>Moderate</i>	Fuerte / <i>Strong</i>	Muy fuerte / <i>Very strong</i>
10. ¿Te resulta sencillo el uso de la herramienta CO2 Tool? / <i>Is it easy to use the CO2 Tool?</i>				
Totalmente en desacuerdo / <i>Strongly disagree</i>	En desacuerdo / <i>Disagree</i>	Parcialmente de acuerdo / <i>Partially agree</i>	De acuerdo / <i>Agree</i>	Totalmente de acuerdo / <i>Strongly agree</i>
11. ¿Es la herramienta CO2 Tool realmente útil para el sector de la construcción? / <i>Is the CO2 Tool really useful for the construction sector?</i>				
Totalmente en desacuerdo / <i>Strongly disagree</i>	En desacuerdo / <i>Disagree</i>	Parcialmente de acuerdo / <i>Partially agree</i>	De acuerdo / <i>Agree</i>	Totalmente de acuerdo / <i>Strongly agree</i>
12. ¿Cómo valoraría la influencia de los productos del proyecto en el sector de la construcción? / <i>How would you rate the influence of the project products in the construction sector?</i>				
Muy débil / <i>Very weak</i>	Débil / <i>Weak</i>	Moderada / <i>Moderate</i>	Fuerte / <i>Strong</i>	Muy fuerte / <i>Very strong</i>
13. ¿Considera los productos atractivos para el futuro usuario? / <i>How would you rate the attractiveness of the products for the future users?</i>				
	Poco atractivos / <i>Less attractive</i>	Atractivos / <i>Attractive</i>	Muy atractivos / <i>Very attractive</i>	
Por favor, exprese su opinión sobre los siguientes temas / <i>Please present your opinion regarding the following issues</i>				

14. ¿Qué es lo que más te gusta del proyecto OERCO2? / <i>What do you particularly like about the OERCO2 project?</i>
15. ¿Qué aspectos considera positivos y cuales negativos del proyecto y sus productos? / <i>Which are in your opinion the positive and negative aspects of the project and its products?</i>
PROFESION / <i>PROFESSION</i> *:
NOMBRE (Dato no obligatorio) / <i>NAME (Optional information)</i> :

Figure 12. Example of survey in the International Seminar in Sevilla.

	Co-funded by the Erasmus+ Programme of the European Union	
¡POR FAVOR, AYÚDANOS A MEJORAR! / <i>PLEASE, HELP US TO IMPROVE!</i>		
Project: OERCO2. CENTRO DE RECURSOS ONLINE PARA EL ESTUDIO INNOVADOR DEL CICLO DE VIDA DE LOS MATERIALES DE CONSTRUCCIÓN / ONLINE EDUCATIONAL RESOURCE FOR INNOVATIVE STUDY OF CONSTRUCTION MATERIALS LIFE CICLE 2016-1-ES01-KA203-025422		
FORMULARIO DE EVALUACIÓN / <i>EVALUATION FORM</i>		
JORNADA FORMATIVA GRATUITA DE CÁLCULO DE EMISIONES DE CO2 Y ANÁLISIS DEL CICLO DE VIDA APLICADO AL SECTOR DE LA CONSTRUCCIÓN. Colegio Oficial de Arquitectos de la Región de Murcia (COAMU). 6 de junio de 2018.		

Por favor, rellene el siguiente cuestionario marcando las respuestas que considere más adecuadas / <i>Please fill in the following questionnaire with the answers you consider most appropriate</i>				
1. Se ha logrado el principal objetivo de la jornada formativa / <i>The main purpose of the training day was achieved</i>				
Totalmente en desacuerdo / <i>Strongly disagree</i>	En desacuerdo / <i>Disagree</i>	Parcialmente de acuerdo / <i>Partially agree</i>	De acuerdo / <i>Agree</i>	Totalmente de acuerdo / <i>Strongly agree</i>
2. Sus expectativas relacionadas con esta jornada formativa fueron cumplidas / <i>Your expectations regarding this training day were satisfied</i>				
Totalmente en desacuerdo / <i>Strongly disagree</i>	En desacuerdo / <i>Disagree</i>	Parcialmente de acuerdo / <i>Partially agree</i>	De acuerdo / <i>Agree</i>	Totalmente de acuerdo / <i>Strongly agree</i>
3. ¿Cuál es tu valoración del proyecto y su propósito? / <i>How do you appreciate the project theme and purpose?</i>				
Completamente apropiado / <i>Completely inadequate</i>	Inapropiado / <i>Inadequate</i>	Parcialmente apropiado / <i>Partially adequate</i>	Apropiado / <i>Adequate</i>	Perfectamente apropiado / <i>Perfectly adequate</i>
4. ¿Cuál es tu valoración sobre la calidad y utilidad del estudio de las normativas y metodologías desarrollado en OERCO2? / <i>How do you appreciate the quality and utility of the study of regulations and methodologies that has been developed in OERCO2?</i>				
Completamente apropiado / <i>Completely inadequate</i>	Inapropiado / <i>Inadequate</i>	Parcialmente apropiado / <i>Partially adequate</i>	Apropiado / <i>Adequate</i>	Perfectamente apropiado / <i>Perfectly adequate</i>
5. ¿Cómo valoraría la facilidad de manejo del Centro de Recursos Online? / <i>How do you appreciate the easyness of usage of the Online Educational Resource?</i>				
Muy difícil / <i>Very difficult</i>	Difícil / <i>Difficult</i>	Aceptable / <i>Acceptable</i>	Fácil / <i>Easy</i>	Muy fácil / <i>Very easy</i>
6. ¿Considera el diseño del Centro de Recursos Online atractivo para el usuario? / <i>Is the layout of the Online Educational Resource attractive to users?</i>				
Totalmente en desacuerdo / <i>Strongly disagree</i>	En desacuerdo / <i>Disagree</i>	Parcialmente de acuerdo / <i>Partially agree</i>	De acuerdo / <i>Agree</i>	Totalmente de acuerdo / <i>Strongly agree</i>
7. ¿Es adecuado, para los profesionales relacionados con el sector de la construcción, el contenido del Centro de Recursos Online? / <i>Is the content of Online Educational Resource suitable for the construction sector professionals?</i>				

Totalmente en desacuerdo / <i>Strongly disagree</i>	En desacuerdo / <i>Disagree</i>	Parcialmente de acuerdo / <i>Partially agree</i>	De acuerdo / <i>Agree</i>	Totalmente de acuerdo / <i>Strongly agree</i>
8. ¿Es suficiente el contenido en el Centro de Recursos Online? / <i>Is the content of Online Educational Resource enough?</i>				
Totalmente en desacuerdo / <i>Strongly disagree</i>	En desacuerdo / <i>Disagree</i>	Parcialmente de acuerdo / <i>Partially agree</i>	De acuerdo / <i>Agree</i>	Totalmente de acuerdo / <i>Strongly agree</i>
9. ¿Cómo valora la herramienta de cálculo de emisiones de CO2 (CO2 Tool)? / <i>How do you appreciate the tool for calculation of CO2 emissions (CO2 Tool)?</i>				
Muy débil / <i>Very weak</i>	Débil / <i>Weak</i>	Normal / <i>Moderate</i>	Fuerte / <i>Strong</i>	Muy fuerte / <i>Very strong</i>
10. ¿Te resulta sencillo el uso de la herramienta CO2 Tool? / <i>Is it easy to use the CO2 Tool?</i>				
Totalmente en desacuerdo / <i>Strongly disagree</i>	En desacuerdo / <i>Disagree</i>	Parcialmente de acuerdo / <i>Partially agree</i>	De acuerdo / <i>Agree</i>	Totalmente de acuerdo / <i>Strongly agree</i>
11. ¿Es la herramienta CO2 Tool realmente útil para el sector de la construcción? / <i>Is the CO2 Tool really useful for the construction sector?</i>				
Totalmente en desacuerdo / <i>Strongly disagree</i>	En desacuerdo / <i>Disagree</i>	Parcialmente de acuerdo / <i>Partially agree</i>	De acuerdo / <i>Agree</i>	Totalmente de acuerdo / <i>Strongly agree</i>
12. ¿Cómo valoraría la influencia de los productos del proyecto en el sector de la construcción? / <i>How would you rate the influence of the project products in the construction sector?</i>				
Muy débil / <i>Very weak</i>	Débil / <i>Weak</i>	Moderada / <i>Moderate</i>	Fuerte / <i>Strong</i>	Muy fuerte / <i>Very strong</i>
13. ¿Considera los productos atractivos para el futuro usuario? / <i>How would you rate the attractiveness of the products for the future users?</i>				
	Poco atractivos / <i>Less attractive</i>	Atractivos / <i>Attractive</i>	Muy atractivos / <i>Very attractive</i>	
Por favor, exprese su opinión sobre los siguientes temas / <i>Please present your opinion regarding the following issues</i>				

14. ¿Qué es lo que más te gusta del proyecto OERCO2? / <i>What do you particularly like about the OERCO2 project?</i>
15. ¿Qué aspectos considera positivos y cuales negativos del proyecto y sus productos? / <i>Which are in your opinion the positive and negative aspects of the project and its products?</i>
PROFESION / <i>PROFESSION*</i> :
NOMBRE (Dato no obligatorio) / <i>NAME (Optional information):</i>

Figure 13. Example of survey in specific courses.

#### 4.4 Final version

Thanks to those feedbacks, the platform OER of OERCO2 project was deeply developed, where were implemented the recommendation, that improved the OER.

As it can be checked, the OER and website is available in all languages of the participant countries and English:



Figure 14. Languages available.

Consortium members: Universidad de Sevilla (US), Asociación Empresarial de Investigación Centro Tecnológico del Mármol, Piedra y Materiales (CTM), CertiMaC Soc. Cons. a r. L. (CertiMaC), Centro Tecnológico da Cerâmica e do Vidro (CTCV), Universitatea Transilvania din Brasov (UTBV), Asociația România Green Building Council (RoGBC).



## 5. CONCLUSIONS AND IMPROVEMENTS

In general, the evaluations of the project by experts and students were positive. The opinions of responders will be taken into account to improve the quality of platform OER in this Intellectual Output 2, as it is say above. Similarly, the evaluations during the international seminars (specially, in Bucharest) was be also taken into account in this Intellectual Output.

The implementation of improvements from beta versions to final versions has been shown in this document.

As it is said in the IO2, the final versions of OER can be found in the following link:

Final version of the OER

<http://oerco2.eu/es/oer/>

In future, the feedback of scheduled courses (which it can be checked in the *IO 2.3 Implementation of courses on specialization based on the OERCO2 project*) will be used to improved the OER.

### YOUTUBE

The seminars and technical training days of the project was also uploaded to YouTube, because it is a powerful media to disseminate them. A playlist was created to visualize those events. On the other hand, the videos will be uploaded in the OER platform.

Channel of Youtube: OERCO2 Consortium

[https://www.youtube.com/channel/UCp79CB0q\\_vizmZUq4RosHbw](https://www.youtube.com/channel/UCp79CB0q_vizmZUq4RosHbw)