

## **DELIVERABLE: D34-D6.1**

### **Dissemination, Exploitation and Capitalization Strategy**

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**WP Leader: CSA – CENTRO SERVIZI AZIENDALE**

**Author: CSA – CENTRO SERVIZI AZIENDALE – Rosso Claudio**

**Contributions: All partners**

**Network for Using BIM to Increase the Energy Performance**

**Grant Agreement Number: 754016**

**Net-UBIEP H2020**



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This deliverable reflects only the author's view. The Agency is not responsible for any use that may be made of the information it contains.

The present deliverable will be update during the project in order to align the outcome to the market needs as well as to other BIM related projects realized within Horizon 2020 program.

The updated version of the deliverable will be only available in the website of the project [www.net-ubiep.eu](http://www.net-ubiep.eu).

Some deliverables could also be translated in partners national languages and could be find in the respective national web pages. Click on the flags to open the correspondence pages:



International web page



Italian web page



Croatian web page



Slovak web page



Spanish web page



Dutch web page



Estonian web page



Lithuanian web page



## Summary

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A. Deliverable Details	
<b>Document Reference #:</b>	D34 – D6.1
<b>Title:</b>	Dissemination, Exploitation and Capitalization Strategy
<b>Version Number:</b>	14
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<b>Author(s):</b>	CSA – CENTRO SERVIZI AZIENDALE
<b>Contributors:</b>	All partners
<b>Work Package</b>	6 – DISSEMINATION, EXPLOITATION AND CAPITALIZATION OF BIM QUALIFICATION MODEL
<b>Type of deliverable</b>	Document/Report
<b>Format</b>	Printed and Electronic
<b>Dissemination Level:</b>	CO – Confidential, restricted under conditions set out in Model Grant Agreement

## 1. Brief Description

The energy agency network and the BIM network has been mobilized to spread the learning materials and the guidelines to ensure that more and more professionals and workers have been qualified as energy performances BIM professionals and workers.

Besides the partners who officially sign the consortium agreement, other “associated partners” representing key stakeholders, have been involved. The aim has been to enlarge the sphere of influence of the partnership.

Networking among partners have been done through Social Networks, Project Web Portal, Project Partner Web Sites, Support and Associated Net-UBIEP Partners Network.

Stakeholders play a crucial role to move professional and technicians to improve their competencies in building and refurbishment processes facilitated using BIM. For that reasons, round tables and discussion groups have been organized during Net-UBIEP Open Day to allow actors of the building sector to meet and share ideas and reflect together on the role of BIM in the energy performance.

Well-targeted events, combined with a strong message, are one of the major vehicles to maximize the visibility and the impact of the project, to disseminate information about the project results and outputs, to transfer information to organizations and other interested stakeholders. For this reason, beside the already planned activities, the partners have identified, in each country, the decision makers at national and regional level to present the



results of the project to promote the use of BIM in all the construction industry. All the stakeholders are collected in a database per each country, in which the analysis have been done for Public Administration, Professional, Supplier-Technician, Financial Institution, Owner. For more details of these databases examine the Dropbox folder “H2020 NET-UBIEP Project” (Stakeholders database).

Particular attention has been devoted to dissemination among decision makers in public administrations and among owner/tenant associations as these targets, can “impose” the employment of qualified professionals and workers or provides incentives to use qualified BIM experts.

Each country has developed its own strategy to continue to promote BIM Qualification Model for Energy Performance in nZEB among target groups after the end of the project by developing agreement with professional associations.

Dissemination of the project results have been done at 4 levels:



Impact of Net-Ubiep project are expected to be primarily on country partner thanks to the involvement as Support Partner such as National Confederation of Constructor, National Industry Trade Union, Building Companies, Energy Agencies, National Association of Engineers and Architects. Furthermore, a direct impact is expected in other country thanks to the presence of Support Partners from Czech Republic, Macedonia, Cyprus, Romania and Slovenia.

CSA has been the head partner for this Work Package and has overseen the implementation of the relative plan. It has played a role of control over partner activities helping them to respect the timing and supporting them when it is needed. CSA has produced and provided partners periodic indications on activities to run within the Dissemination and Exploitation Strategy. In each partner country, the share of activities is realized in according to partner resources: Both national partners will collaborate and work together to implement the activities.



## 2 Measures adopted

### 2.1 Standardization on BIM training and BIM qualification and certification scheme

7

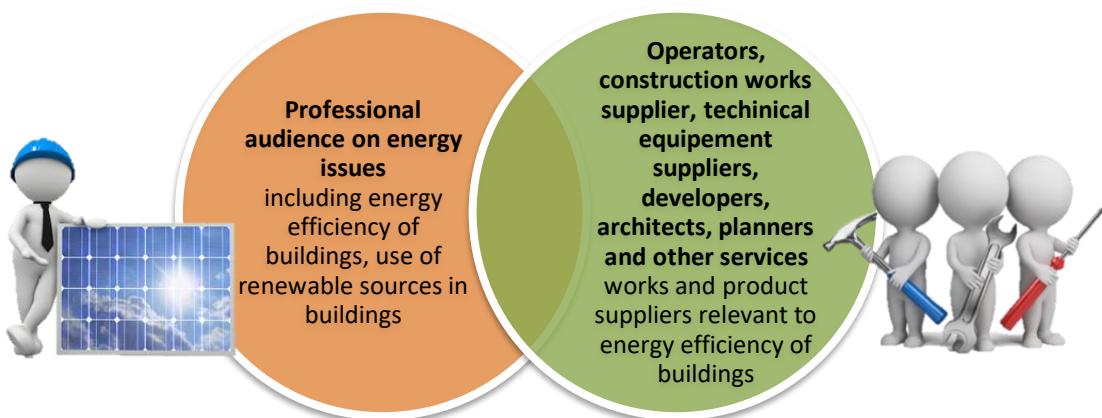
#### ► Activity

The standardization proposal includes the standardized BIM training, the standardized BIM qualification scheme and the standardized BIM certification scheme. if accepted, it could ensure the recognition and repeatability of the BIM model throughout the EU.

BIM Qualification Models schemes will be presented to regulation body (EN) with the scheme for the recognition of BIM professional profiles to CEN/BT/WG/215 "Building Information Modelling (BIM)".

The delivery 5.4 give evidences about this measure.

#### ► Target Users



#### ► How the measure has supported the achieved results?

The standardization process will ensure the possibility for the BIM Qualification Models to be repeated within across the EU (D5.3 – D31, D5.4 – D32).

## 2.2 Best practices Database

### ► Activity

The database is a table. Each row contains information on the partner who entered it, the topic and the description of the good practice. The topic can be one of the following: partnership management, training activities planning, standardization processes, communication strategy, and dissemination and exploitation strategy.

Partners had to insert new good practices during the project. These good practices will be promoted during public events and could be used for the creation of new projects. The database must be accessible from the month 23rd (in May 2019).

Nowadays (31/10/2019), the partners have inserted 35 records as you can see from the following tables (Tab.1 and Tab.2).

Tab. 1: Repartition of records, based on topics	
Topics	Nº of Records
Training activities planning	20
Partnership management	5
Dissemination and exploitation strategy	4
Standardization	4
Communication strategy	2
Total	35

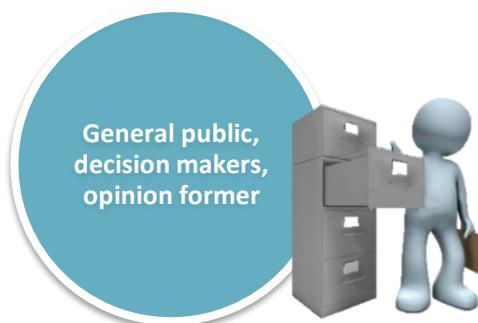


Tab. 2: Best practices inserted (table updated until 08/01/2020)

Countries	Partners	N° of insertions
Italy	CSA	2
	ENEA	11
Spain	FLC	2
	CSIC	0
Slovak	UVS	1
	ViaEU	1
Croatia	CSA HR	0
	FCE	5
Estonia	EGLC	2
	TUT	5
Lithuania	DIG.CON.	4
	VGTU	2
Netherlands	BeR	1
	ISSO	2
Total		38

The delivery D6.6 shows evidences about the best practices database, here is available the link on the project web site: [BEST PRACTICES DATABASE](#)

## ► Target Users



## ► How the measure has supported the achieved results?

Best Practices disseminate:

- identification of requirements (D2.2 – D11);
- development of BIM Qualification Models (WP3);
- validation of BIM Qualification Models (WP4).
- standardization of BIM Training & BIM Qualification and Certification Schemes (D5.3 – D31 / D5.4 – D32);

10



## 2.3 Publications

### ► Activity

Publications are articles reported on company magazines, company websites and specialized press. These articles provide information on the project results such as the 3D matrix with target groups, professional profiles and competences.

Partners committed themselves to making 99 publications during the project (see Tab. 3). In following pages (13, 14, 15, 16, 17, 18, 19), we enclose the publications evidences.

Tab. 3: Publications for each partner				
Countries	Partners	Numbers	Month/Year	
Italy	CSA IT	6	<a href="#">12/2017</a>	
			<a href="#">06/2018</a>	
			<a href="#">12/2018</a>	
			<a href="#">02/2019</a>	
			<a href="#">04/2019</a>	
			<a href="#">12/2019</a>	
	ENEA		<a href="#">07/2017</a>	
			<a href="#">01/2019</a>	
			<a href="#">02/2019</a>	
			<a href="#">09/2019</a>	
			<a href="#">10/2019</a>	
Spain	FLC	45	<a href="#">06/2017</a>	
			<a href="#">06/2017</a>	
			<a href="#">06/2017</a>	
			<a href="#">07/2017</a>	
			<a href="#">10/2017</a>	
			<a href="#">11/2017</a>	
			<a href="#">02/2018</a>	
			<a href="#">07/2018</a>	
			<a href="#">07/2018</a>	
			<a href="#">10/2018</a>	
			<a href="#">10/2018</a>	
			<a href="#">01/2019</a>	
			<a href="#">01/2019</a>	
			<a href="#">01/2019</a>	



			<a href="#">01/2019</a>
			<a href="#">04/2019</a>
			<a href="#">04/2019</a>
			<a href="#">04/2019</a>
			<a href="#">05/2019</a>
			<a href="#">05/2019</a>
			<a href="#">05/2019</a>
			<a href="#">07/2019</a>
			<a href="#">07/2019</a>
			<a href="#">09/2019</a>
			<a href="#">10/2019</a>
			<a href="#">11/2019</a>
	CSIC	1	<a href="#">05/2019</a>
Slovak	UVS	2	<a href="#">04/2019</a>
	ViaEU		<a href="#">04/2019</a>
Croatia	FCE	8	<a href="#">05/2018</a>



			<a href="#">10/2018</a>
			<a href="#">11/2018</a>
			<a href="#">03/2019</a>
			<a href="#">04/2019</a>
			<a href="#">06/2019</a>
			<a href="#">09/2019</a>
			<a href="#">10/2019</a>
Estonia	EGLC	3	<a href="#">01/2019</a>
			<a href="#">05/2019</a>
			<a href="#">11/2019</a>
Lithuania	TUT	2	<a href="#">12/2018</a>
			<a href="#">01/2019</a>
DIG.COM.	18		<a href="#">09/2017</a>
			<a href="#">01/2018</a>
			<a href="#">03/2018</a>
			<a href="#">05/2018</a>
			<a href="#">12/2018</a>
			<a href="#">12/2018</a>
			<a href="#">12/2018</a>
			<a href="#">03/2019</a>
			<a href="#">06/2019</a>
			<a href="#">10/2019</a>
			<a href="#">11/2019</a>
			<a href="#">11/2019</a>
			<a href="#">12/2019</a>
			<a href="#">2019-1</a>
			<a href="#">2019-2</a>
			<a href="#">2019-3</a>
			<a href="#">2019-4</a>
			<a href="#">2019-5</a>
VGTU	8		<a href="#">09/2017</a>
			<a href="#">12/2017</a>
			<a href="#">06/2018</a>
			<a href="#">12/2018</a>
			<a href="#">04/2019</a>
			<a href="#">05/2019</a>



			<a href="#">07/2019</a>
			<a href="#">12/2019</a>
Netherlands	ISSO	1	<a href="#">11/2018</a>
		1	<a href="#">11/2018</a>
		1	<a href="#">(online)</a>
		1	<a href="#">11/2019</a>
<b>Total</b>		<b>102</b>	

## ► Publication Links:

CSA 12/2017



CSA 06/2018



CSA 12/2018



CSA 02/2019



CSA 04/2019



CSA 12/2019



NET-UBIEP | Network for Use BIM  
to Increase Energy Performance



ENEA 05/07/2017

ENEA 31/01/2019

<p>Web site: AGENZIA NAZIONALE EFFICIENZA ENERGETICA <a href="http://www.ane.istitutoenel.it">http://www.ane.istitutoenel.it</a></p> <p>Last publication: <a href="http://www.ane.istitutoenel.it">http://www.ane.istitutoenel.it</a> - inserire la parola chiave per la ricerca</p> <p>Date: 11 January 2009</p>  <p><a href="#">Home</a> <a href="#">News</a> <a href="#">Publications</a> <a href="#">Policy</a> <a href="#">Technical Studies</a> <a href="#">Research</a> <a href="#">Press</a></p> <p><b>Ricerca per le strategie per migliorare le prestazioni energetiche degli edifici:</b></p> <p>Autore: F. Antonelli, G. Cicali</p> <p>Abstract: L'articolo illustra le strategie per migliorare le prestazioni energetiche degli edifici, presentate nel progetto di ricerca "Ricerca per le strategie per migliorare le prestazioni energetiche degli edifici". Il progetto ha lo scopo di individuare e valutare le soluzioni più efficaci per ridurre il consumo energetico degli edifici esistenti, attraverso l'analisi delle loro caratteristiche strutturali e funzionali, e la progettazione di interventi di ottimizzazione.</p> <p>Keywords: edifici, risparmio energetico, strategie, ottimizzazione, analisi strutturale, analisi funzionale.</p> <p>Introduction: In questo articolo vengono presentate le strategie per migliorare le prestazioni energetiche degli edifici, individuate nel progetto di ricerca "Ricerca per le strategie per migliorare le prestazioni energetiche degli edifici". Il progetto ha lo scopo di individuare e valutare le soluzioni più efficaci per ridurre il consumo energetico degli edifici esistenti, attraverso l'analisi delle loro caratteristiche strutturali e funzionali, e la progettazione di interventi di ottimizzazione.</p> <p>Conclusion: Le strategie proposte nel progetto di ricerca "Ricerca per le strategie per migliorare le prestazioni energetiche degli edifici" sono rivolte a tutti coloro che sono responsabili della gestione e dell'ottimizzazione degli edifici, sia privati che pubblici. L'obiettivo principale è quello di contribuire alla riduzione del consumo energetico degli edifici, riducendo così l'impatto ambientale e la dipendenza da fonti di energia fossile.</p> <p>Per citare questo documento: Antonelli, F. e Cicali, G. (2009). Ricerca per le strategie per migliorare le prestazioni energetiche degli edifici.</p> <p>Per leggere questo documento cliccare qui.</p> <p>Autore(s): ANE (Agenzia Nazionale Efficienza Energetica)</p>	
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ENEA 26/02/2019

Ver der ATENNA VAN ENKE DIRETTA ALLEGATO: <http://www.attenzionanazionale.it/>  
Link pubblicazione: <http://www.attenzionanazionale.it/2013/07/01/la-attenzione-nazionale-e-la-pi-mostruosa/>

L.R. S.

**ATENNA NAZIONALE ATTENZIONE PATERNALE**

Attenzione Nazionale - Paternalità - Attualità - Politica - Giurisprudenza - Documenti - Forum - Contatti

**Publications**

**Attenzione Nazionale - Paternalità - Attualità - Politica - Giurisprudenza - Documenti - Forum - Contatti**

**Attenzione Nazionale - Paternalità - Attualità - Politica - Giurisprudenza - Documenti - Forum - Contatti**

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**Attenzione Nazionale - Paternalità - Attualità - Politica - Giurisprudenza - Documenti - Forum - Contatti**

ENEA 28/09/2019

ENEA 02/10/2019

Web site: <http://EPIPORTALE.it>

Last publication: Nuove competenze digitali per migliorare le performance energetiche durante il ciclo di vita di un edificio

Date: 02 October 2019



The screenshot shows the homepage of EPIportale. At the top, there's a search bar and a menu with options like Home, News, Technologies, Resources, and Tools. The main content area features a large image of a modern building with green energy icons. Below the image, the title of the news article is displayed: "Nuove competenze digitali per migliorare le performance energetiche durante il ciclo di vita di un edificio". The article includes a short summary and a link to the full text.

ViaEU, UVS 04/2019

ViaEU, UVS 04/2019

FCE iNDis 11/2018

CSIC 05/2019

<b>LAPICERAS</b> • P. M. C. • N. R. M. • N. R. M.	<b>BUILDING &amp; MANAGEMENT</b> • Presentación • La construcción de la Ciudad Universitaria de Madrid y el desarrollo de la actividad en la M2000 • El desarrollo de la actividad en la M2000	<b>B&amp;M</b> 
<b>BIM interoperability with Revit2015 and BPS with Designbuilder. A case study for an existing building</b> <b>Interoperabilidad entre BIM con Revit2015 y BPS con Designbuilder.</b> <b>Estudio de caso en una edificación existente</b>		
<b>EDUARDO FERNÁNDEZ GARCÍA</b> Licenciado en Arquitectura por la Universidad de Valencia. Trabaja en la consultora de ingeniería y arquitectura TECNOS. Es autor de numerosos artículos y ponencias en congresos nacionales e internacionales. Ha participado en numerosos proyectos de investigación y desarrollo tecnológico en el campo de la BIM y la interoperabilidad entre sistemas de diseño y gestión.		
<b>JOAQUÍN ARRIAGA</b> Licenciado en Arquitectura por la Universidad de Valencia. Trabaja en la consultora de ingeniería y arquitectura TECNOS. Ha participado en numerosos proyectos de investigación y desarrollo tecnológico en el campo de la BIM y la interoperabilidad entre sistemas de diseño.		
<b>EDUARDO OTIOL</b> Licenciado en Arquitectura por la Universidad de Valencia. Trabaja en la consultora de ingeniería y arquitectura TECNOS. Ha participado en numerosos proyectos de investigación y desarrollo tecnológico en el campo de la BIM y la interoperabilidad entre sistemas de diseño.		
<b>Resumen</b> Se analiza la interoperabilidad de BIM entre BIM y BPS. Se evalúan las posibilidades de integración entre BIM y BPS para la mejora de la eficiencia en la ejecución de la obra. Se muestra la necesidad de una mayor integración entre los sistemas de diseño y gestión para optimizar la ejecución de la obra.		
<b>Palabras clave:</b> Construcción sostenible, BIM, BPS, interoperabilidad, diseño y gestión.		
<i>* Los resúmenes presentados en la reunión técnica de BIM de InterBuild Valencia (2015) se incluyen en este número de la revista. Se agradece la colaboración de los autores y la difusión de su trabajo en la revista.         </i>		
<b>La Investigación en construcción y la interoperabilidad de BIM entre BIM y BPS</b> La investigación en construcción es un campo que ha crecido exponencialmente en los últimos años. Una de las principales tendencias es la integración entre los sistemas de diseño y gestión, conocida como interoperabilidad. La interoperabilidad entre BIM y BPS (Building Performance Simulation) es una área de investigación que ha ganado importancia recientemente. La interoperabilidad entre BIM y BPS permite la integración entre los sistemas de diseño y gestión, lo que resulta en una mejor eficiencia en la ejecución de la obra.		
<b>Modelos de información para la ejecución de BIM</b> Los modelos de información para la ejecución de BIM son fundamentales para garantizar la calidad y eficiencia en la ejecución de la obra. Los sistemas de diseño y gestión deben ser capaces de trabajar juntos para proporcionar información precisa y actualizada en tiempo real. La interoperabilidad entre BIM y BPS es clave para lograr esta integración.		
<b>Introducción</b> <b>E</b> n la actualidad, la construcción es un sector que demanda una mayor eficiencia y calidad en la ejecución de las obras. Una de las principales tendencias es la integración entre los sistemas de diseño y gestión, conocida como interoperabilidad. La interoperabilidad entre BIM y BPS (Building Performance Simulation) es una área de investigación que ha ganado importancia recientemente. La interoperabilidad entre BIM y BPS permite la integración entre los sistemas de diseño y gestión, lo que resulta en una mejor eficiencia en la ejecución de la obra.		
<b>1. Introducción</b> La construcción es un sector que demanda una mayor eficiencia y calidad en la ejecución de las obras. Una de las principales tendencias es la integración entre los sistemas de diseño y gestión, conocida como interoperabilidad. La interoperabilidad entre BIM y BPS (Building Performance Simulation) es una área de investigación que ha ganado importancia recientemente. La interoperabilidad entre BIM y BPS permite la integración entre los sistemas de diseño y gestión, lo que resulta en una mejor eficiencia en la ejecución de la obra.		
<b>2. BIM y BPS</b> BIM (Building Information Modeling) es un sistema de diseño y gestión que permite la integración entre los sistemas de diseño y gestión. BPS (Building Performance Simulation) es un sistema que permite la simulación y optimización del rendimiento energético de las edificaciones. La interoperabilidad entre BIM y BPS es clave para lograr una mejor eficiencia en la ejecución de la obra.		
<b>3. Interoperabilidad entre BIM y BPS</b> La interoperabilidad entre BIM y BPS es una área de investigación que ha ganado importancia recientemente. La interoperabilidad entre BIM y BPS permite la integración entre los sistemas de diseño y gestión, lo que resulta en una mejor eficiencia en la ejecución de la obra.		
<b>4. Conclusiones</b> En conclusión, la interoperabilidad entre BIM y BPS es una área de investigación que ha ganado importancia recientemente. La interoperabilidad entre BIM y BPS permite la integración entre los sistemas de diseño y gestión, lo que resulta en una mejor eficiencia en la ejecución de la obra.		



FCE SMSS C. 03/2019

International Conference on Sustainable Materials, Systems and Structures (SMSS 2019)  
Energy Efficient Building Design and Legislation  
29–22 March 2019, Rovinj, Croatia

City of Zagreb 16/05/2018

FCE Jutarnji list 13/10/2018

FCE BIMzeED 04/2019

**BIM  
ZEED**

**Education for zero energy  
Buildings using Building  
Information Modelling**

Grant Agreement 605946/EPP/1-2015-1-E/EPKA/KA

## O2.1 Literature review on BIM and NZEB needs in the construction industry

 Erasmus+

Issued by	University of Zagreb, Faculty of Civil Engineering
Date	2019-04-27
Version	0.001
Report number	OZ-1
Task number	Task 2.1
Status	Final
Dissemination level	PUBLIC

FCE OTMC C. 09/2019

FCE HKIG conference 06/2019

**Hrvatska komora inženjera građevinarstva**  
Dani Hrvatske komore inženjera građevinarstva – Opatija, 13.-15. lipnja 2018.

**Tematika:** **PRIMARNA ENERGIJA KOD PROJEKTIRANJA I CERTIFIKACIJA ZBEGADA**  
**Theme:** **PRIMARY ENERGY IN BUILDING DESIGN AND ENERGY PERFORMANCE CERTIFICATION**

**Predavač:** **ZRAKOPRENOPOSTNOST I INFRAFRUČNA TERMOGRAFIJA KAO VAŽNE MIJERE ZA POSTIZANJE KVALITETE**  
**Lecturer:** **AIR TIGHTNESS AND THERMAL IMAGING TESTING AS IMPORTANT QUALITY CONTROL MEASURES**

**Predavač:** *Ferhat i Adrijana / Lecturer: Ferhat and Adriana*  
*dr. sc. Bojan Mihalević, dipl. inž. prof. / Assist. Prof. Dr. Sc. Svetozar Šilović* / Zagreb, Građevinski fakultet / University of Zagreb, Faculty of Civil Engineering, Zagreb, Hrvatska / E-mail: bmihalevic@grf.hr

**Sažetak**  
Hiplivanje zrakopropusnosti i termografsko snimanje (ICT) mijere su za postizanje kvalitete pri izgradnji nove ili učvršćene energetičke obnovje zgrade. Pokazalo se je da zrakopropusnost grada imaju velik utjecaj na učinkovitost radova, a uzrok je najčešći projektne greške u novim radionicama. Uzroci su uključuju: nepravilno odabranje materijala, pogrešna konstrukcija i nepravilno ugrađivanje elemenata. Te infiltracije utječu na izgradnju zgrada, na učinkovitost rješenja energetičkih i vodootpornosti, te na kondenzaciju vodene pare i građevinske stope unutar građevinskih elemenata, učinkovitost sustava ventilačne i klimatske veze, te na sigurnost i dobitnost građevina. Uzroci i pravila za primjenu ICT-a, a općenito preporuke i očekivanja bez prethodne identifikacije i popravak problema, podnosi kaže da se smijejo poslijedje infiltracije. Uzimajući u obzir ZBEGB projektu odgovornog je izvođača da kvalitetno izvedi radove, pri čemu nadređeni trebaju imati adekvatne kompetencije Zemlje Želje, a posljednji koraci u projektovanju i izgradnji, tj. izraditi i primijeniti specifične mjerodavne za imajuće u nZEB-ovima, obuhvaća, tako što su fit-to-nZEB-i. **Nugget** radi na postizanju kvalitete gradnje razjedanjem kompetencija svih profesionalaca uključenih u nZEB.

Ključne riječi: zrakopropusnost, infrafračna termografija, nZEB, energetičko obnovljiva zgrada

**Summary**  
Air tightness testing and thermal imaging (IRT) are important quality measures in the construction of a new building or deep energy renovation of an existing building. Experience has shown that most buildings have a far higher rate of air infiltration than envisioned. The main cause is usually the most common project error in new buildings. Causes include: wrong choice of materials, wrong construction and wrong installation of elements. These leakages influence the quality of the building, more specifically comfort of the building's occupants, as well as energy losses, mass or water vapour condensation and construction damage to the building elements, efficiency of the ventilation and heating system, and safety and durability of the building. Causes and rules for applying ICT, as well as general recommendations without prior identification and repair of problems, presented by the responsible contractor for the quality of execution of work, indicate that they must be implemented after completion of the project. Considering the fact that the last steps in design and construction, i.e. to draw up and apply specific measurement criteria for existing nZEBs, are extremely difficult to visualize, IRT also allows the contractors to quickly identify and repair the problem areas to stop the energy loss and other consequences of infiltration. Throughout the duration of an nZEB project, it is the responsibility of the contractor, whose workers should be adequately trained, to ensure that the building is built according to the requirements of the EU regulations. The Nugget is focused on the quality of construction, which is based on raising the quality of construction by developing design and construction competencies of all professionals involved in nZEB through training schemes, such as fit-to-nZEB and **Not-GUESS**.

**Key words:** air tightness, infrared thermography, nZEB, energy renovation

FCE Promogradnja Journal 10/2019

TUT 12/2018



TUT 01/2019



EGLC 01/2019



EGLC 05/2019



EGLC 11/2019



VGTU 09/2017



VGTU 12/2017



VGTU 06/2018



NET-UBIEP | Network for Use BIM  
to Increase Energy Performance



VGTU 12/2018

VGTU 07/2019

ISSO 11/2018

VG TU 04/2019

VG TU 12/2019

The poster features a central graphic showing a city skyline with various buildings, some labeled with green icons like wind turbines and solar panels. The word 'NET' is prominently displayed above the buildings, and 'UEBIF' is written vertically along the right side. Above the city, the text 'Tutajne Wiedziane' is visible. Below the city, there's a line of text about the project's goals and partners. At the bottom, there's a section for 'Vilnius Gediminas Technical University' with contact information and a QR code.

VG TU 05/2019

16–17 May 2016, Vilnius, Lithuania  
Vilnius Gediminas Technical University

<https://doi.org/10.24320/978-9955-1017-1-1>

## Construction project stakeholders' perceptions and expectations of their roles in BIM-based collaboration

Arytynas Kulinskas<sup>1</sup>, Tajaž Šmita<sup>2</sup>, Vaidotas Šutis<sup>3</sup>, Edita Šarkūnė<sup>4</sup>

<sup>1</sup>Vilnius Gediminas Technical University, Vilnius, Lithuania  
<sup>2</sup>Private institution "Skammonet", "Digital construction", Vilnius, Lithuania  
<sup>3</sup>Edita Šarkūnė, Vilnius, Lithuania

**Abstract.** The article presents the results of the survey aimed at eliciting the attitudes and perceptions regarding the use of BIM for building and construction. Two target groups were researched, according to the role they play in building projects: construction industry professionals (construction managers, engineers, contractors, and construction managers – architects); the study conducted by the first NBSI DREP (BIM for Using BIM to Manage Construction Projects) research group. The results show that the majority of respondents (75%) believe that the use of BIM (DBB) as a tool adds a positive strong key stakeholder role to the enhanced control of project costs. DBB, building of which is currently being implemented in Lithuania, is considered to be the most effective way to implement BIM. The respondents also believe that the use of BIM in construction projects will increase the quality of the products and services provided and reduce the time required to complete them.

**Keywords:** building information modelling, construction project, collaboration

### Introduction

Buiding information modelling (BIM) refers to a set of technologies and organizational solutions, that are required for the creation, management, and communication in the construction industry and to support the productivity of the design, construction, and maintenance of buildings (Bentley & Parveci, 2014). Although some critics regard BIM as a new technology that has not yet been fully understood and accepted, it is rapidly becoming more widespread. Therefore, the construction industry needs professionals who are not only skilled in the use of BIM, but also have the ability to work in a team and to manage the collaborative workflow among different stakeholders (Liu, 2006).

The identification of the competencies that need to be taught among the collaborative workers are essential for the successful implementation of BIM (Liu, 2006).

Technology alone does not lead to collaboration, communication and conflict resolution are equally important factors that influence the success of BIM implementation (Dutta, 2013). In addition, the authors of this article, Dr. Mihail, and Wilkinson (2011) have revealed that a better definition of the responsibilities of the participants in the construction process is needed to ensure the successful implementation of BIM in BIM-based collaborations. They form an important part of BIM rules applicable to projects implemented in the BIM environment.

The methodology of the mixed method, "case study", was used. This approach brings into express focus and provides a detailed analysis of the phenomenon under investigation. The case study is a research method that studies the "whole group" (the entire material for further analysis was gathered). Earlier was used to present the questionnaire and the interview, the main purpose of which was to collect the data from the respondents about their attitudes and beliefs about BIM. The answers presented the generalized picture of the survey. Although the survey was conducted on a small scale, the results can be generalized to the whole population of the respondents.

At the first stage, in a number of discussions, the experts selected the specific goals of social, personal and managerial roles of the participants in the construction process, which were later included in the questionnaire for the target groups. These projects were included in the survey and distributed to the representatives of target groups. The articles were written in a simple language, so that the respondents could easily understand them, answer them, and receive direct answers and professional (engineering) advice of the construction industry.

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ISSO 11/2018

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FLC 06/2017-1



FLC 06/2017-2



FLC 06/2017-3



FLC 07/2017



FLC 10/2017



FLC 11/2017



FLC 02/2018



FLC 07/2018-1



FLC 07/2018-2



FLC 10/2018-1

The Foundation Laboral de la Construcción is currently working on 10 European projects related to training and energy performance in the construction sector.

A new series of training courses has been developed by the Foundation Laboral de la Construcción and its partners in the field of energy efficiency and energy performance. These courses are aimed at professionals in the construction industry who want to improve their skills in this area. The Foundation Laboral de la Construcción is also involved in several other European projects related to training and energy performance in the construction sector.

The Foundation Laboral de la Construcción is currently working on 10 European projects related to training and energy performance in the construction sector.

FLC 10/2018-2

**Construyendo Europa**

La Fundación Laboral de la Construcción trabaja actualmente en 10 proyectos europeos, de los cuales 4 están dirigidos a la formación y la eficiencia energética.

La actividad permanece centrada en la formación y la eficiencia energética, así como en la promoción de las competencias profesionales y la mejora continua de la calidad en la construcción.

**NOTICIAS**

Más de 300 profesionales se han reunido en la Jornada de Innovación en la Construcción organizada por la Fundación Laboral de la Construcción y la Universidad Politécnica de Madrid (UPM) para debatir sobre la transformación de la industria constructiva en el contexto de la Agenda 2030.

El presidente de la Fundación Laboral de la Construcción, Enrique Corral, ha destacado la importancia de la innovación y la transformación digital en la construcción para lograr una construcción más sostenible y eficiente.

El evento ha contado con la participación de expertos internacionales y nacionales, así como de representantes de empresas y administraciones.

FLC 01/2019-1

**Building Europe**

Fundación Laboral de la Construcción es actualmente trabajando en 10 proyectos europeos en el campo de la formación y la eficiencia energética.

La actividad permanece centrada en la formación y la eficiencia energética, así como en la promoción de las competencias profesionales y la mejora continua de la calidad en la construcción.

**NEWS**

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FLC 01/2019-2

**Construyendo Europa**

Arranca el proyecto piloto para España que definirá la Estrategia europea para la formación profesional en la construcción.

La Fundación Laboral de la Construcción es la encargada de este proyecto, en el que participan 24 países europeos. El objetivo es establecer un marco común para la formación profesional en la construcción en toda Europa.

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FLC 01/2019-3

**Building Europe**

El proyecto piloto para España que definirá la Estrategia europea para la formación profesional en la construcción.

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FLC 04/2019-1

**smartlighting**

Taller formativo de BIM y nZEB, dirigido a ingenieros y arquitectos

El proyecto piloto para España que definirá la Estrategia europea para la formación profesional en la construcción.

La Fundación Laboral de la Construcción es la encargada de este proyecto, en el que participan 24 países europeos. El objetivo es establecer un marco común para la formación profesional en la construcción en toda Europa.

**research**

Actualidad del Sector

Serán más de 300 profesionales los que se reunirán en la Jornada de Innovación en la Construcción organizada por la Fundación Laboral de la Construcción y la Universidad Politécnica de Madrid (UPM) para debatir sobre la transformación de la industria constructiva en el contexto de la Agenda 2030.

FLC 04/2019-2

**Construyendo Europa**

La Fundación Laboral de la Construcción ha presentado la Estrategia Construcción 2020 en el "High Level Thematic Group Power".

El director general de la Fundación Laboral, Enrique Corral, intervino como ponente en la representación de las 24 instituciones de la industria de la construcción, procedentes de 12 países europeos que forman parte del proyecto.

**NOTICIAS**

Más de 300 profesionales se han reunido en la Jornada de Innovación en la Construcción organizada por la Fundación Laboral de la Construcción y la Universidad Politécnica de Madrid (UPM) para debatir sobre la transformación de la industria constructiva en el contexto de la Agenda 2030.

La Fundación Laboral ha presentado la Estrategia Construcción 2020 en el "High Level Thematic Group Power".

FLC 04/2019-3

**Building Europe**

The Managing Director of Foundation Laboral, Enrique Corral, spoke on behalf of the 24 institutions of the industry of construction, which are part of the Construction 2020 Strategy project.

**NEWS**

Foundation Laboral and partners presented the Construction 2020 Strategy at the "High Level Thematic Group Power".

The European Commission monitors the Construction 2020 Strategy at the "High Level Thematic Group Power".

More than 300 engineers and professionals from the industry of construction have participated in the "High Level Thematic Group Power".

The European Commission monitors the Construction 2020 Strategy at the "High Level Thematic Group Power".

FLC 05/2019-1

**BLOG**

Construye 2020 y Net-Ubiep demuestran el interés que BIM despide en los profesionales del sector

Este blog es una plataforma para el intercambio de conocimientos y experiencias entre profesionales del sector de la construcción y la innovación.

**Professional de la construcción**

Actualidad del Sector

Serán más de 300 profesionales los que se reunirán en la Jornada de Innovación en la Construcción organizada por la Fundación Laboral de la Construcción y la Universidad Politécnica de Madrid (UPM) para debatir sobre la transformación de la industria constructiva en el contexto de la Agenda 2030.



FLC 05/2019-2

**BLOG** para el nuevo profesional de la construcción

## El papel clave de la construcción en la 'Europa climáticamente neutra' del año 2050

La Unión Europea (UE) ha hecho que el desarrollo hacia una economía sostenible sea uno de los principales objetivos de las políticas europeas en materia de energía y medio ambiente. La construcción es un sector que contribuye significativamente al consumo energético y las emisiones de CO<sub>2</sub> en Europa. Es por ello que se ha establecido una estrategia para reducir las emisiones de CO<sub>2</sub> en el sector de la construcción en un 50% para el año 2030 y en un 90% para el año 2050.

En la Feria Construmat 2019, que se está celebrando en Alemania, se han presentado numerosas iniciativas para impulsar la transición hacia una construcción más sostenible. Una de ellas es la iniciativa 'Europa Climáticamente Neutra' (ECN), que busca promover la construcción de edificios más eficientes y sostenibles.

Este año, la ECN ha organizado una serie de actividades para impulsar la construcción sostenible en Europa. Una de ellas es la feria Construmat 2019, que se celebra en Alemania. La feria es una oportunidad para que los profesionales de la construcción se reúnan y trabajen juntos para impulsar la construcción sostenible en Europa.

En este artículo, queremos destacar la importancia de la construcción sostenible y cómo podemos contribuir a la construcción sostenible en Europa a través de la construcción de edificios más eficientes y sostenibles.

FLC 05/2019-3

**BLOG** para el nuevo profesional de la construcción

## El nuevo sector de la construcción innovador y sostenible saca pecho en Construmat

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FLC 07/2019-1

**Construyendo Europa**

## Fair transition to an environmentally sustainable and equal future of work, through official recognition of the International Labour Organization

The European Parliament has adopted a resolution calling for the European Commission to support the International Labour Organization's (ILO) proposal to include environmental sustainability in its core labour standards. This would help to ensure that workers in the construction sector have access to decent work and fair working conditions.

The resolution, which was adopted by a large majority, calls for the European Commission to support the ILO's proposal to include environmental sustainability in its core labour standards. This would help to ensure that workers in the construction sector have access to decent work and fair working conditions.

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FLC 07/2019-2

**Building Europe**

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FLC 09/2019-1

**BLOG** para el nuevo profesional de la construcción

## Competencias profesionales para la transición laboral

La construcción es un sector que contribuye significativamente al consumo energético y las emisiones de CO<sub>2</sub> en Europa. Es por ello que se ha establecido una estrategia para reducir las emisiones de CO<sub>2</sub> en el sector de la construcción en un 50% para el año 2030 y en un 90% para el año 2050.

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FLC 10/2019-1

**Feria Construmat**

## II Jornada de Innovación en Formación de la Construcción

La II Jornada de Innovación en Formación de la Construcción, que se celebra en el Espacio Beretelmann de Madrid, es una oportunidad para que los profesionales de la construcción se reúnan y trabajen juntos para impulsar la construcción sostenible en Europa.

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FLC 10/2019-2

**Anales Sectoriales**

## ARQUITECTURA Y CONSTRUCCIÓN

### Cursos ONLINE vía WEBINAR INSCRÍBETE

Este año, la construcción es un sector que contribuye significativamente al consumo energético y las emisiones de CO<sub>2</sub> en Europa. Es por ello que se ha establecido una estrategia para reducir las emisiones de CO<sub>2</sub> en el sector de la construcción en un 50% para el año 2030 y en un 90% para el año 2050.

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FLC 10/2019-3

**BLOG** para el nuevo profesional de la construcción

## 10 razones por las que no debes perderte la II Jornada de Innovación en Formación de la industria de la Construcción

La construcción es un sector que contribuye significativamente al consumo energético y las emisiones de CO<sub>2</sub> en Europa. Es por ello que se ha establecido una estrategia para reducir las emisiones de CO<sub>2</sub> en el sector de la construcción en un 50% para el año 2030 y en un 90% para el año 2050.

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FLC 10/2019-4

**Feria Construmat**

## II Jornada de Innovación en Formación de la Construcción

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FLC 10/2019-5



FLC 10/2019-6



FLC 10/2019-7



FLC 10/2019-8



FLC 10/2019-9



FLC 10/2019-10



FLC 10/2019-11



FLC 10/2019-12



FLC 10/2019-13



FLC 10/2019-14

FLC 10/2019-15



**La transformación digital del sector de la construcción ya es una realidad**

El sector de la construcción ha comenzado su transformación digital. Los profesionales del sector ya tienen la posibilidad de acceder a una amplia gama de soluciones tecnológicas que les permiten optimizar sus procesos y mejorar la calidad de sus servicios. La tecnología es clave para la eficiencia y la sostenibilidad en el sector de la construcción.

En este artículo, exploraremos las principales tendencias y avances en la transformación digital del sector de la construcción, así como las mejores prácticas y casos de éxito que demuestran la importancia de la innovación tecnológica para el éxito en el sector.

Si estás interesado en saber más sobre la transformación digital del sector de la construcción, no te pierdas esta sección. ¡Te invitamos a seguir leyendo!

**CONTENIDOS**

- **Tendencias y avances en la transformación digital del sector de la construcción**
- **Los mejores casos de éxito en la transformación digital del sector de la construcción**
- **Las mejores prácticas para impulsar la transformación digital en el sector de la construcción**
- **El futuro de la transformación digital en el sector de la construcción**
- **Resumen y conclusiones**

FLC 11/2019-1

**La Fundación Laboral presenta resultados de siete proyectos europeos sobre innovación tecnológica y formativa**

El pasado 10 de junio se celebró en la sede de la Fundación Laboral de Huelva la presentación de los resultados de siete proyectos europeos que han sido ejecutados por la Fundación Laboral de Huelva en el marco del Programa Operativo de Desarrollo Social Europeo (PODE) para el periodo 2007-2013. Los resultados se presentaron en un acto que contó con la presencia de autoridades locales y representantes de las empresas y organizaciones que han participado en los proyectos.

Los proyectos presentados fueron:

- Proyecto "Aplicaciones de la Información y la Comunicación en la Gestión de la Actividad Productiva y la Formación Profesional".
- Proyecto "Innovación y Desarrollo de la Formación Profesional en la Red".
- Proyecto "Innovación y Desarrollo de la Formación Profesional en la Red".
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- Proyecto "Innovación y Desarrollo de la Formación Profesional en la Red".

Compartimos con vosotros los resultados de los proyectos:

- Proyecto "Innovación y Desarrollo de la Formación Profesional en la Red".
- Proyecto "Innovación y Desarrollo de la Formación Profesional en la Red".
- Proyecto "Innovación y Desarrollo de la Formación Profesional en la Red".
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- Proyecto "Innovación y Desarrollo de la Formación Profesional en la Red".

Sigamos en contacto para seguir informando de los resultados de los proyectos.

FLC 11/2019-2

FLC 11/2019-3

The screenshot shows the homepage of the 'Espacio Disponible' website. The header features the 'ECCOCONSTRUCCIÓN' logo and navigation links for 'Inicio', 'Noticias', 'Artículos', 'Proyectos', 'Resumen', 'Foro', 'Contacto', 'Síguenos', and 'Iniciar Sesión'. Below the header is a large green banner with the text 'ESPACIO DISPONIBLE' overlaid. The main content area has a green background with the title 'ESPACIO DISPONIBLE' in large white letters. To the left, there's a sidebar with sections for 'Actualidad', 'Noticias', 'Glosa de empresas', 'Revista ECCOCONSTRUCCIÓN', and 'Revista digital'. The central content area includes a 'Revista digital' section with a thumbnail of a magazine cover titled 'Frente' and a 'Noticia' section showing a large audience at a presentation. On the right side, there's a 'Revista digital' section with a thumbnail of a magazine cover titled 'Revista digital' and a 'Revista digital' section with a thumbnail of a magazine cover titled 'Revista digital'.

FLC 11/2019-4

FLC 11/2019-5

FLC 11/2019-6

FLC 11/2019-7



DIG.CON. 09/2017



DIG.CON. 01/2018



DIG.CON. 03/2018



DIG.CON. 05/2018



DIG.CON. 11/12/2018



DIG.CON. 12/12/2018



DIG.CON. 12/11/2018



DIG.CON. 03/2019



DIG.CON. 05/06/2019



DIG.CON. 30/10/2019



DIG.CON. 05/11/2019



DIG.CON. 14/11/2019



DIG.CON. 14/12/2019



DIG.CON. PORTAL 1



DIG.CON. PORTAL 2



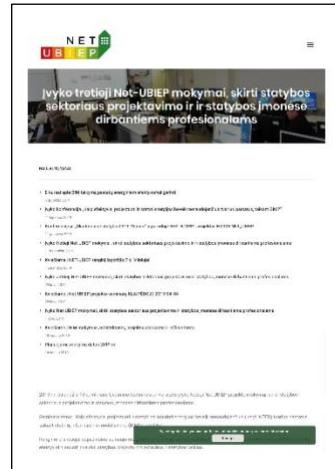
DIG.CON. PORTAL 3



DIG.CON. PORTAL 4



DIG.CON. PORTAL 5



► Target Users



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► How the measure has supported the achieved results?

Scientific Articles have disseminated a list of competences on energy performance needed for each Professional Profiles (D2.4 – D13) and a three-dimensional matrix for the implementation of roles and competences about energy performances for each target group when implementing BIM for energy performance (D3.1 – D14).

## 2.4 Open Days

### ► Activity

The open day has been the moment to explore the value of BIM through speeches from national actors involved in the project. It was composed by:

- A conference in the morning;
- A thematic group discussion held in the afternoon in which representatives from target groups have been invited to participate and express their personal experience in BIM Qualification Model.

Partners have organized at least a Net-UBIEP Open Day per country to disseminate project results among stakeholders. The following tables list, for each country, the Open Days dates and, when it is available, the number of participants:

Tab. 4: List of 1 <sup>st</sup> Open Days (Planned for Jul 2019)			
Country	City	Dates	Participants
Italy	Frascati	03/07/2019	50
	Napoli	23/07/2019	30
Spain	Madrid	25/04/2019	52
Slovak *	Bratislava	28/03/2019	35
Croatia	Rijeka	01/07/2019	37
Estonia	Tallinn	05/11/2018	100
	Tallinn	22/02/2019	
Lithuania	Vilnius	26/04/2019	350
Netherlands	Delft	23/01/2018	11
		Total	665

\* The practical demonstration for technicians has been followed by 35 participants (signed list) but the stand at the exhibition was visited by 875 people (no signed lists possible).



Tab. 1: List of 2<sup>nd</sup> Open Days (Planned for Nov 2019)

Country	City	Dates	Participants
Italy	Roma	24/09/2019	20
	Pescara	27/11/2019	40
Spain	Madrid	30/10/2019	374
Slovak	Bratislava	19/09/2019	129
Croatia	Rijeka	29/10/2019	22
Estonia	Tallinn	08/11/2019	151
Lithuania	Vilnius	07/11/2019	47
The Netherlands	Woerden	24/06/2019	17
Total			800

The deliveries D6.3 and D6.4 report the evidences of Open Days.

## ► Target Users



## ► How the measure has supported the achieved results?

Net-UBIEP Open Day disseminate:

- ✓ BIM Qualification Models (WP4);
- ✓ BIM Qualification and Certification Schemes (D5.3 – D31 / D5.4 – D32).

## 2.5 Events

### ► Activity

Well-targeted events, combined with a strong message are one of the major vehicles to maximise the visibility and the impact of the project, to disseminate information about the project results and outputs, to transfer information to organizations and other interested stakeholders. They include industrial events, fairs or thematic workshops.

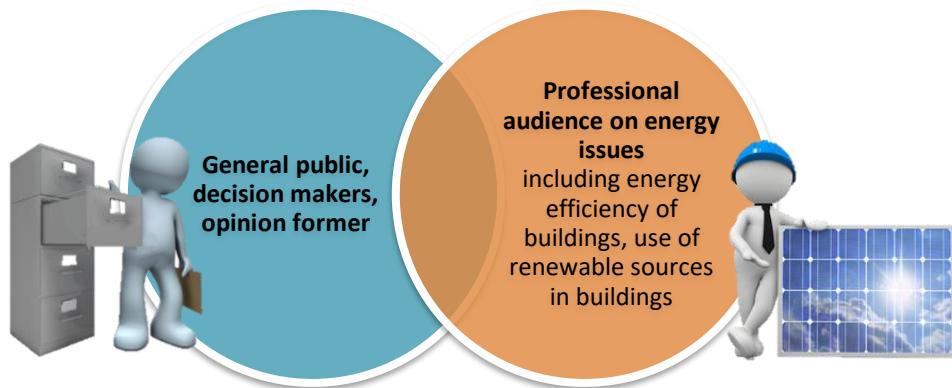
Partners have committed themselves to participate in 42 events. Among these we remember the event during the sustainable Energy Week in Brussels which have brought Net-UBIEP closer to a wide expert public, but above all in the research and development area.

Tab. 6: Repartition of the events, based on the country	
Countries	Number of events
Italy	15
Spain	15
Slovak	6
Croatia	24
Estonia	9
Lithuania	10
Netherlands	3
Total	82

See page 25 and 26 for Events Details.



► Target Users



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► How the measure has supported the achieved results?

Participations in national and international events have disseminated and exploited:

- Validation of BIM Qualification Models (WP4).
- Standardization of BIM Training & BIM Qualification and Certification Schemes (D5.3 – D31 / D5.4 – D32);



Partners	Events	Participants	Dates		
			2017	2018	2019
CSA (IT)	AICQ Annual conference by Environment & Energy Committee	200		2nd February 2018	
	Restructura. 2017	12.000	16 <sup>th</sup> /19 <sup>th</sup> of November -Turin		
	Financial Energy Renovation in Building in IT-HR-SL		16 <sup>th</sup> of November – Milan		
	Digital &BIM Italia		19 <sup>th</sup> /20 <sup>th</sup> of October – Bologna		
	Chinese Delegation Visit in AICQ		29 <sup>th</sup> of November - Milan		
	EcoBuild 2018			6 <sup>th</sup> /8 <sup>th</sup> of March – London	
	Steering Committee CBEET			11 <sup>th</sup> /12 <sup>th</sup> of April – Nice	
CSA (HR)	Annual Conference by Croatian Chamber of Civil Engineers			2 <sup>nd</sup> week of June – Opatija	
	Second BIM Conference – Croatian Chamber of Architects	100	December – Zagreb		
	Interreg Italia – Croazia Info Day			April 2018	
	Financial Energy Renovation of Building in IT-HR-SL		16 <sup>th</sup> of November – Milan		
	Med Info Day April-2018			April 2018	
	Rilem Spring Convention and Conference				18 <sup>th</sup> /22 <sup>nd</sup> of March - Rovigli
ENEA (IT)	Forum for the Public Administrations	15.000	23 <sup>th</sup> /25 <sup>th</sup> of May - Rome		
	DigitalBIM				21 <sup>st</sup> of November 2019
	BuildingSMART international summit 2019, Pechino				28 <sup>th</sup> of October 2019
	Condominio in fiera 2019				05 <sup>th</sup> of October 2019
VG TU (LT)	The 13 <sup>th</sup> International Conference “Modern Building Materials, Structures and Techniques”	200			16 – 17 <sup>th</sup> of May - Vilnius
	EURO 2018, 29 <sup>th</sup> European Conference on Operational Research	3.000		8 <sup>th</sup> /11 <sup>th</sup> of July - Valencia	
	Seminar at Vilnius Municipality	42		11 <sup>th</sup> of December – Vilnius	
	Seminar at Klaipeda municipality	37			4 <sup>th</sup> of April – Klaipeda
	The 13th International Multi-Conference on Society, Cybernetics and Informatics: IMSCI 2019	230+			6 <sup>th</sup> / 9 <sup>th</sup> of July - Orlando, Florida, USA
	Second Open Day	47			7 <sup>th</sup> of November, Vilnius
ISSO (NL)	EURO 2018, 29 <sup>th</sup> European Conference on Operational Research	3.000		8 <sup>th</sup> /11 <sup>th</sup> of July - Valencia	
	Annual Conference	150			
	BuildUpSkills (NL)	100	7 <sup>th</sup> of September – Arnhem		
Installation Sector (NL)	Meeting organized by branch organizations OTIB and Uneto-VNI	8.000			
	Annual Conference by Croatian Chamber of Civil Engineers	1.000		14 <sup>th</sup> / 16 <sup>th</sup> of June – Opatija	13 <sup>th</sup> / 15 <sup>th</sup> June – Opatija
FCE (HR)	OTMC 2017 Conference	100	27 <sup>th</sup> /30 <sup>th</sup> of September – Porec		4 <sup>th</sup> / 7 <sup>th</sup> Sempptember - Zagreb
	H2020 info day	50	2 <sup>nd</sup> October Zagreb		
	Second BIM Conference – Croatian Chamber of Architects	100	December - Zagreb		
	Rilem Spring Convention and Conference				18 <sup>th</sup> /22 <sup>nd</sup> of March - Rovigli
	Zagreb Energy Week – BIM and Energy Efficiency			10 <sup>th</sup> of May – Zagreb	16 <sup>th</sup> Mary 2019
	Passive house days in Croatia	50	10 <sup>th</sup> / 12 <sup>th</sup> November - Zagreb	9 <sup>th</sup> / 11 <sup>th</sup> November - Zagreb	8 <sup>th</sup> / 10 <sup>th</sup> November - Zagreb
	Buildings 2020+	300			21 <sup>st</sup> February - Zagreb
	Nearly Zero Energy Buildings	250			22 <sup>nd</sup> February - Zagreb
	Croatian association of roofers conference	80			1 <sup>st</sup> March - Vodice
	BUS Supeus conference (The future of sustainable housing)	150			18 <sup>th</sup> May 2019 - Zagreb
	NZEB & BIM the new reality	150			19 <sup>th</sup> March 2019 - Zagreb
	BIM workflow workshop	70			31 <sup>st</sup> May 2019 - Zagreb
	INDIS conference	100		21 <sup>st</sup> – 23 <sup>rd</sup> November – Novi Sad	
	Bheneft meeting	50		11 <sup>th</sup> September – Karlovac	
	EN-eff workshop Croatian Chamber of commerce Varazdin	35		22 <sup>nd</sup> May - Varaždin	



	19th Croatian conference on quality and 10th international science convention of Croatian society for quality.	50			15 <sup>th</sup> – 18 <sup>th</sup> May 2019 - Vodice
TUT/EGLC (EE)	Annual National Conference BIM Summit	100		19 <sup>th</sup> of April	11 <sup>th</sup> of April
	Annual National Conference Knowledge-based Construction	250		26 <sup>th</sup> of April	23 <sup>rd</sup> of April
	Ehituse Technoloogia Konverents	200			22 <sup>nd</sup> of February
	Modern Construction Methods Conference	150	14 <sup>th</sup> of November – virtual	5-6 <sup>th</sup> of November	7-8 <sup>th</sup> of November
	Eesti 3D kaksiku uuringu tulemused				15 <sup>th</sup> of May
	EKVÜ seminar			14 <sup>th</sup> of November	
	RKAS seminar	200			14 <sup>th</sup> of February
	Modern Construction Design Management Conference	85	26 <sup>th</sup> of October – virtual		
	BIM Qualification Certification Discussion	10	9 <sup>th</sup> of October – virtual		
FLC/CSIC (SP)	REFORME Conference	30	24 <sup>th</sup> of March - Dusseldorf		
	Foro técnico ANDECE 2018. Consumo de energía casi nulo. Soluciones constructivas industrializadas en hormigón	60		14 <sup>th</sup> of June - Madrid	
	Conference presentation of the project of the Working Group Housing Industrialisation Project (PIV): university institutions, architecture and engineering firms, developers, construction companies, manufacturers and installers, etc.	21		12 <sup>nd</sup> of July - Madrid	
	1 <sup>st</sup> Net-UBIEP seminar with Owners	23		16 <sup>th</sup> of October - Madrid	
	1 <sup>st</sup> Net-UBIEP seminar with PA	23		17 <sup>th</sup> of October - Madrid	
	ePower&Building the Summit, I Congreso Europeo de Construcción, Habitabilidad, Economía y Liderazgo, Construtec'18: presentation of the projects of Fundación Laboral, between Net-Ubiep was referenced. 100 Spanish triptychs distributed.	+80		13 <sup>rd</sup> -17 <sup>th</sup> of November – Madrid	
	Training Workshop in BIM and nZEB for engineers and architects	52			25 <sup>th</sup> of April - Madrid
	Retos de la descarbonización del sector de la edificación. La transición energética	50			8 <sup>th</sup> of May - Barcelona
	Dissemination of Net-Ubiep in the "Digital construction skills: enabling the energy transition in Europe's building stock" workshop, organized by Build Up Easme from European Commission, at Construmat'19 fair. 100 English triptychs distributed.	+80			16 <sup>th</sup> of May - Barcelona
	Debate sobre la reinvençòn del proceso de edificación de industrializacion de vivienda. SimaPro	+10			29th of May – Madrid
	Ciclo de Conferencias. Valdebernardo 2019. Eficiencia energética de los edificios. La energía en Casa	+50			18th of June - Madrid
	Presentation of Net-Ubiep to representatives of the Chilean Chamber of Construction	5			30 <sup>th</sup> of August - Madrid
	Presentation of Net-Ubiep in ReBuild'19	50			17 <sup>th</sup> of September - Madrid
	Edificios de Vivienda industrializada. La transformaciòn Digital. CONPAT MEXICO 2019	75			10 <sup>th</sup> of October – Chiapas- Mexico
	Impacto del Cambio Climático en edificaciòn. Estrategias internacionales, europeas y nacionales	+90			12nd of November - Badajoz
Skaitmeninè Statyba (LT)	Annual Conference Digital Construction	350	26 <sup>th</sup> of April – Vilnius		
	Seminar at Vilnius Municipality	42		11 <sup>th</sup> of December – Vilnius	
	Seminar at Klaipeda municipality	37			4 <sup>th</sup> of April – Klaipeda
	Annual Conference Digital Construction (First Open Day)	350			26 <sup>th</sup> of April – Vilnius
	Stakeholders meeting	10			16 <sup>th</sup> of October – Vilnius
	BIMLink conference	200			14 <sup>th</sup> of November – Vilnius
	Seminar for estimators	18			20 <sup>th</sup> of November – Vilnius
ViaEU/UVS (SK)	Conference of the Association of Construction Entrepreneurs	150			28 <sup>th</sup> of March 2019 - Bratislava
	International BIM Conference	68		5-6 <sup>th</sup> of June 2018 – Prague	
	Annual BIM Conference	200		18 <sup>th</sup> of October 2018	
	CZ-SK-HU-AT Regional Meeting of Construction Industry with promoting Net-Ubiep qualification framework	56		04 <sup>th</sup> December 2018	
	Annual BIM Conference 2019 with promoting Slovak Net-Ubiep BIM Academy	250			19 <sup>th</sup> of September 2019 - Bratislava
ViaEU (SK)	Workshop on digitalization in the construction sector with promoting Slovak Net-Ubiep BIM Academy	65			16 <sup>th</sup> of May 2019 - Barcelona



## 2.6 Awareness raising activities

### ► Activity

Awareness raising activities are organized to reach owners and facility managers, one conference per country will presents the benefits that derive from the application of BIM in the management of energy performance in buildings.

Awareness campaign realized for tenants about BIM advantages is likely to prepare the ground for investments. Indeed, owners which have participated in dissemination activities on BIM will be induced in asking for BIM solutions next time they have to unroll building works.

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Tab. 7: Conferences (From June 2019 to November 2019)

Country	City	Dates	Participants
Italy	Roma	14/09/2018	95
	Roma	19/09/2019	25
	Oristano	29/03/2019	107
	Roma	05/10/2019	60
	Bologna	22/11/2019	20
Spain	Madrid	17/09/2019	50
Slovak	Bratislava	19/09/2019	250
Croatia	Zagreb	16/05/2019	120
	Zagreb	12/11/2019	350
Estonia	Tallinn	08/11/2019	150
Lithuania	Klaipėda	04/04/2019	37
	Vilnius	26/04/2019	350
	Vilnius	16/05/2019	147
	Orlando	06/07/2019	230
	Vilnius	16/10/2019	10
	Vilnius	14/11/2019	200



	Vilnius	20/11/2019	18
Netherlands	Utrecht	03/10/2018	30
	Amsterdam	04/10/2019	20
Total		2.269	

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► Target Users



► How the measure has supported the achieved results?

Net-UBIEP Open Day has disseminated:

- BIM Qualification Models (WP4);
- BIM Qualification and Certification Schemes (D5.3 – D31 / D5.4 – D32).

## 2.7 Teaching activities

### ► Activity

The training activities are summarized in the WP 4. Shortly, they have taken place in each country partner in two different periods. In the first period they are realized to validate training materials elaborated in WP3. Therefore, Professionals (architects and engineers) have taken part in classroom courses and training has been focused on “how to work with BIM implementing the energy performance requirements”. Instead Technicians have been trained through a e-learning course on “how to read a BIM Model and correctly interpret the data”.

In the second period, training activities restart, both for professionals and technicians, with e-contents uploaded on e-learning platforms of each partner.

By the end of the project we expected to train 2.100 operators: 1.000 professionals (500 Architects + 500 Engineers) and 1.100 technicians. Overall, the ratio between the effective number and the expected number of operators trained, is  $3.545/2.100=1,64$ .

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Tab.11: Overview of the number of training participants surveyed

Countries	Course type	Participants	T. Eff.	T. Plan.		
Croatia	1 <sup>st</sup> classroom course for professionals	21	692	330		
	2 <sup>nd</sup> classroom course for professionals	34				
	3 <sup>rd</sup> classroom course for professionals	37				
	E-learning for professionals	544				
	E-learning for technicians					
	1 <sup>st</sup> classroom course for PA Owner Tenant BA	42				
	2 <sup>nd</sup> classroom course for PA Owner Tenant BA	14				
Estonia	1 <sup>st</sup> classroom course for professionals	51	507	320		
	2 <sup>nd</sup> classroom course for professionals	-				
	3 <sup>rd</sup> classroom course for professionals	-				
	E-learning for professionals	123				
	E-learning for technicians	164				
	1 <sup>st</sup> classroom course for PA Owner Tenant BA	95				
	2 <sup>nd</sup> classroom course for PA Owner Tenant BA	74				

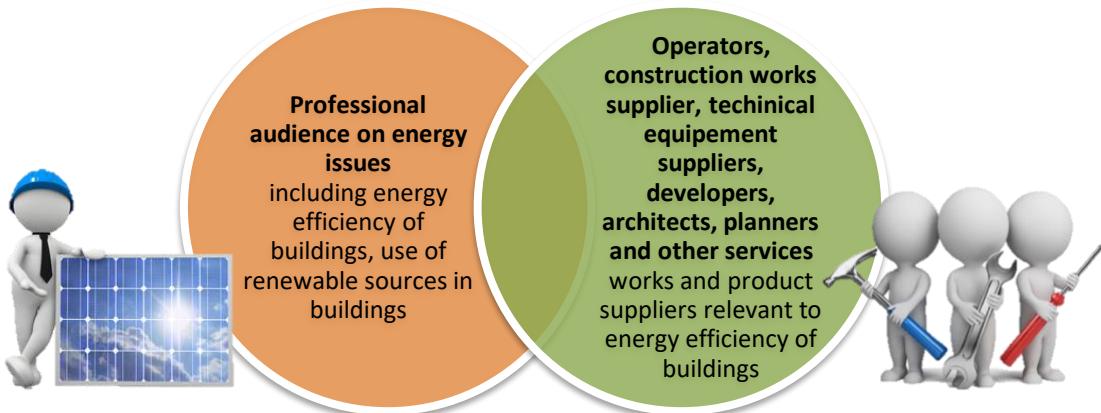
Italy	1 <sup>st</sup> classroom course for professionals	41	1098	560		
	2 <sup>nd</sup> classroom course for professionals	19				
	3 <sup>rd</sup> classroom course for professionals	42				
	E-learning for professionals	58				
	E-learning for technicians	177				
	1 <sup>st</sup> classroom course for PA Owner Tenant BA	107				
	2 <sup>nd</sup> classroom course for PA Owner Tenant BA	38				
	Other teaching activities	616				
Lithuania	1 <sup>st</sup> classroom course for professionals	24	306	240		
	2 <sup>nd</sup> classroom course for professionals	19				
	3 <sup>rd</sup> classroom course for professionals	17				
	E-learning for professionals	39				
	E-learning for technicians	135				
	1 <sup>st</sup> classroom course for PA Owner Tenant BA	34				
	2 <sup>nd</sup> classroom course for PA Owner Tenant BA	38				
Slovakia	1 <sup>st</sup> classroom course for professionals	15	218	120		
	2 <sup>nd</sup> classroom course for professionals	13				
	3 <sup>rd</sup> classroom course for professionals	12				
	E-learning for professionals	60				
	E-learning for technicians	66				
	1 <sup>st</sup> classroom course for PA Owner Tenant BA	39				
	2 <sup>nd</sup> classroom course for PA Owner Tenant BA	13				
Spain	1 <sup>st</sup> classroom course for professionals	54	366	290		
	2 <sup>nd</sup> classroom course for professionals	-				
	3 <sup>rd</sup> classroom course for professionals	-				
	E-learning for professionals	265				
	E-learning for technicians					
	1 <sup>st</sup> classroom course for PA Owner Tenant BA	23				
	2 <sup>nd</sup> classroom course for PA Owner Tenant BA	24				
The Netherlands	1 <sup>st</sup> classroom course for professionals	11	267	240		
	2 <sup>nd</sup> classroom course for professionals	9				
	3 <sup>rd</sup> classroom course for professionals	15				
	E-learning for professionals	Ongoing				
	E-learning for technicians	1				
	1 <sup>st</sup> classroom course for PA Owner Tenant BA	200				
	2 <sup>nd</sup> classroom course for PA Owner Tenant BA	11				
	3 <sup>rd</sup> classroom course for PA Owner Tenant BA	20				
			IN TOTAL	3.454		
				2.100		

Tab. 12: Ratio between total effective and total planned

Countries	Tot. Eff./Tot. Plan.
Croatia	2,10
Slovakia	1,82
Estonia	1,58
Italia	1,96
Lithuania	1,28
Spain	1,26
The Netherlands	1,11
All together	1,64

In the Work Package 4 we have evidences about the training activities.

### ► Target Users



### ► How the measure has supported the achieved results?

For three years after the end of the project Net-UBIEP will provide tools to Public Administrations, Professionals, Technicians and Owners, tenant, building administrator to increase their competences on BIM related to Energy Efficiency.

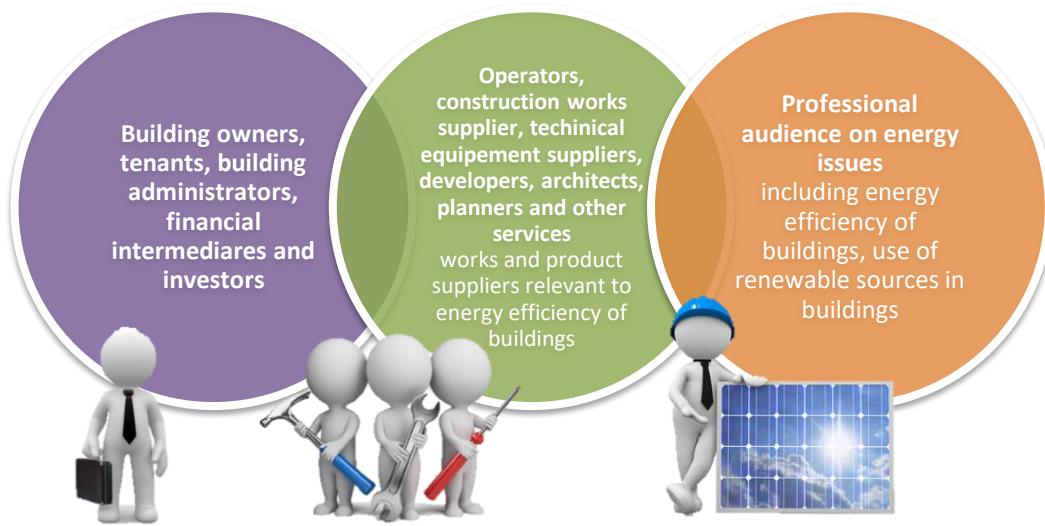
## 2.8 E-contents freely available on Net-UBIEP platforms

### ► Activity

E-contents are training materials used by architects, engineers and technicians during the training courses (validation process). They are available on Net-UBIEP platforms and now they can be used to spread information and results about the project, in addition to increase competences of professionals and technicians who will use them.

ENEA will realize a general overview to ensure the continuity and functioning of the Platform. This will be possible thanks to the sponsorship of RES material produced, technician associations and professional association who join the Net-UBIEP Support and Association Partners Network. Furthermore, every year ENEA, will realize a report with information about the diffusion of BIM Qualification Model and its implementation and will diffuse it to project partners, support partners and stakeholders.

### ► Target Users



### ► How the measure has supported the achieved results?

For three years after the end of the project Net-UBIEP will provide tools to Public Administrations, Professionals, Technicians and Owners, tenant, building administrator to increase their competences on BIM related to Energy Efficiency.

## ► Other E-content tool

**"BIM for training"** it's a tool created to:

- demonstrate the potential deriving from operating in an OpenBIM environment and innovative associated functions;
- facilitate learning processes and make various levels of detail possible in relation to the basic skills possessed by the user.

The tool allows you to browse the 3D model of the ENEA School of Energy and query the various parametric objects (walls, roofs, floors, fixtures and installations) populated with information regarding the school building-plant system, technical sheets associated with the components opaque and transparent casing containing good practices for the correct energy efficiency.



This screenshot displays a web-based BIM application. On the left, there's a navigation sidebar with categories like "Corsi", "Utenti Connessi", and "Messaggi". The main area shows a 3D model of a building and a document viewer for a report titled "Caratterizzazione di tipologie di sistemi vegetali per migliorare l'efficienza energetica degli edifici nella città metropolitana". The document includes sections like "Informazioni Generali", "Edificio", and "Report scientifico". A sidebar on the right provides additional context about the report's purpose and target audience.



## 2.9 People contacted by the Project Partners

### 1) Contacts taken by the social network Facebook Outside the Partner Member States

Facebook Pages	Ref. Partners	Countries	Fans
HR	FCE	Austria	2
HR	FCE	Belgium	1
HR	FCE	Bosnia & Herzegovina	1
HR	FCE	Bulgaria	1
HR	FCE	China	1
HR	FCE	Croatia	142
HR	FCE	Estonia	1
HR	FCE	Germany	6
HR	FCE	India	1
HR	FCE	Iran	1
HR	FCE	Italy	4
HR	FCE	Luxembourg	1
HR	FCE	Macedonia	1
HR	FCE	Poland	1
HR	FCE	Romania	2
HR	FCE	Serbia	2
HR	FCE	Slovakia	3
HR	FCE	Sweden	2
HR	FCE	UK	2
HR	FCE	USA	1
IT	CSA	Australia	1
IT	CSA	Austria	2
IT	CSA	Belgium	1
IT	CSA	Bulgaria	1
IT	CSA	Croatia	62
IT	CSA	Estonia	3
IT	CSA	Finland	1
IT	CSA	Germany	2
IT	CSA	Iran	1
IT	CSA	Italy	72
IT	CSA	Lithuania	7
IT	CSA	Macedonia	1
IT	CSA	Netherlands	2
IT	CSA	Perù	1
IT	CSA	Slovakia	10
IT	CSA	Spain	6
IT	CSA	Sweden	2
IT	CSA	Ukraine	3



IT	CSA	UK	1
IT	CSA	USA	1
EE	TUT	Australia	1
EE	TUT	Canada	1
EE	TUT	Croatia	1
EE	TUT	Denmark	1
EE	TUT	Estonia	132
EE	TUT	Finland	2
EE	TUT	Israel	1
EE	TUT	Jordan	1
EE	TUT	UK	2
EE	TUT	USA	1

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## 2) Contacts taken with the registration to the Net-UBIEP Portal

Countries	References	Targets of the References
Albania	Altin Maraj	engineers and architects
Albania	Orges Deraj	engineers and architects
Andorra	Relreola	owner of buildings
Australia	Woodrowgluché	Financial institutes
Austria	Apeksha Shandilya	engineers and architects
Costa Rica	Paolo Di Biase	engineers and architects
Estonia	Jevgeni Turin	engineers and architects
Estonia	Toomas Rähmonen	engineers and architects
Estonia	Tõnis Teppand	engineers and architects
Finland	Tarja Häkkinen	other
Greece	Dimitrios Ioannis Dimopoulos	engineers and architects
Ireland	Ruy Camacho	other
Isle of Man	Yufaggsardili	owner of buildings
Italy	Marco Pietrobon	public administration
Italy	Liliana Bonfiglio	other
Italy	Alberto Sozza	engineers and architects
Italy	Alessandro Gasparetto	engineers and architects
Italy	Antonio Molinelli	engineers and architects
Italy	Guido Leali	owner of buildings
Italy	Matteo Vesco	engineers and architects
Italy	Enrico Giordano	public administration
Italy	Salvatore Frezza	ESCos
Italy	Michele Laurino	constructor
Italy	Martina Cufari	engineers and architects
Italy	Fausto Boccabella	public administration
Italy	Marcozzi Alfonso	engineers and architects
Italy	Luigi D'Alessandro	engineers and architects



Italy	Giuseppe Sgroi	engineers and architects
Italy	Giuseppe Sgroi	engineers and architects
Italy	Massimo La Spada	engineers and architects
Italy	Salvatore Saglimbeni	engineers and architects
Italy	Salvatore Saglimbeni	engineers and architects
Italy	Silvana Mondello	public administration
Italy	Giacomo Villari	public administration
Italy	Francesca Sanna	ESCos
Italy	Alessandro Trovato	other
Japan	Lisqituqqdili	owner of buildings
Lithuania	Audronė Kučinskienė	professionals associations
Lithuania	Laurynas Dvareckas	engineers and architects
Macedonia	Dijana Likar	engineers and architects
Madagascar	Effimi	ESCos
Mongolia	Checkvilheili	constructor
Portugal	Pedro Lucas Martins	engineers and architects
Portugal	Jason Stockdale	engineers and architects
Romania	Constantin Vinau	non government organizations
Slovakia	Slovadam	professionals associations
Slovenia	Terwixonse	constructor
Spain	María Del Mar Martínez Cerro	engineers and architects
Swaziland	Matthewhot	engineers and architects
UK	John Hyde	professionals associations
Venezuela	Maria Rosell	other

### 3) Contacts taken from the BIM Alliance initiative

Projects	Countries	Organizations
BIMPLEMENT	Belgium	Conseil des Architectes d'Europe
BIMPLEMENT	France	Alliances Villes Emploi
BIMPLEMENT	France	Astus-Construction
BIMPLEMENT	Lithuania	Regioninis Inovaciju Vadybos Centras
BIMPLEMENT	Poland	Mostotal Warszawa
BIMPLEMENT	Spain	Instituto Valenciano De La Edificacion
BIMPLEMENT	The Netherlands	Huygen Installatie Adviseurs
BIMEET	Finland	Technical Research Centre of Finland
BIMEET	Finland	Metropolia University of Applied Sciences
BIMEET	France	Centre Scientifique et Technique du Bâtiment
BIMEET	France	La plateforme Formazion & Evaluation de L'INES
BIMEET	Greece	Center for Renewable Energy Sources
BIMEET	Luxembourg	Luxembourg Institute of Science and Technology
BIMEET	Luxembourg	House of Training
BIMEET	United Kingdom	Building Research Establishment

BIMEET	United Kingdom	Cardiff University
BIMCERT	Croatia	Energy Intitute Hrvoje Požar
BIMCERT	Ireland	Technological University Dublin
BIMCERT	Ireland	Future Analytics Consulting
BIMCERT	Macedonia	Inst. for research in environment, Civil Eng. and Energy
BIMCERT	Portugal	Instituto Superior Tecnico
BIMCERT	United Kingdom	Belfast Metropolitan College
BIMCERT	United Kingdom	Construction Industry Training board

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#### 4) Contacts taken from EUBIM project

Countries	Organizations	Contact reference
Estonia	Estonia's Ministry of Economic Affairs and Communications	Virgo Sulakatko
France	CSTB on behalf of France's PTNB	Souheil Soubra
Italy	Italian BIM Commission and Ministry of Infrastructure and Transport	Pietro Baratono
Italy	Italian BIM Commission and Ministry of Infrastructure and Transport	Angelo Ciribini
Norway	Norway Statsbygg, Special Adviser to the EU BIM Task Group	Diderik Haug
Spain	Ineco on behalf of the Spanish Ministerio de Fomento	Jorge Torrico
Spain	Ineco on behalf of the Spanish Ministerio de Fomento	Elena Puente Sanchez
Sweden	Trafikverket, Swedish Transport Administration	Ingemar Lewen
Sweden	Trafikverket, Swedish Transport Administration	Jennie Carlstedt
The Netherlands	Netherlands' Rijkswaterstaat	Benno Koehorst
The Netherlands	Netherlands' Rijkswaterstaat	Hester van der Voort
UK	UK Government's BIM Task Group and Digital Built Britain	Mark Bew MBE
UK	UK Government's Department for Business, Energy and Industrial Strategy	Barry Blackwell
UK	Project manager for the EU BIM Task Group	Richard Lane
UK	Chair of the EU BIM Task Group	Adam Matthews



UK	Deputy-chair of the EU BIM Task Group	Ilka May
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## 5) Contacts taken through the sharing of other European projects

Countries	Organizations	People	Target/Project
Austria	Energy Agency Styria	Alexander Ebner	BUS Crosscraft
Austria	Austrian Energy Agency	Georg Trnka	BUS Crosscraft
Belgium	ULB	Patrick Hendrick	MEnS
Belgium	COWI	Jean-Baptiste Laffitte	BUS Evaluation
Bulgaria	Bulgarian Construction Chamber	Stiliyan Ivanov	BUS EnerPro
Bulgaria	EnEffect Group	Alexander Stankov	BUS EnerPro
Bulgaria	EnEffect Group	Dragomir Tzanev	Train-to-NZEB
Cyprus	Cyprus Energy Agency	Panayiotis Kastanias	BUS WE-Qualify
Cyprus	Ministry of Labour, Welfare and Social	Andreas Polydorou	eedf
Czech Republic	SEVEN	Jiri Karasek	IngREes
Czech Republic	ENVIROS	Lucie Kochova	BUILD UP Skills CZ
Denmark	Viegand Maagøe	Anne Svendsen	BUS Evaluation
Finland	TTS Work Efficiency Institute	Minna Kuusela	BUS BEEP
Finland	Motiva Services	Irmeli Mikkonen	BUS BEEP
France	Alliance Villes Emploi	Marie-Pierre Establie D'Argencé	BUS France
France	Alliance Villes Emploi	Loëva Labye	BUS France
France	Espace Inter-Initiatives	Henri Le Marois	BUS France
Germany	FBH	Aline Goldberg	BUS Qualitrain
Germany	German Confederation of Skilled Crafts e.V	Ursel Weissleider	BUS Qualitrain
Greece	Centre for Renewable Energy Sources and Saving	Charalampos Malamatenios	BUS
Greece	Technical University of Crete- Renewable and Sustainable Energy Systems Lab	Theocharis Tsoutsos	BUS UPSWING



Hungary	ÉMI Non-profit Limited Liability Company for Quality Control and Innovation in Building	Károly Matolcsy	BUS TRAINBUD
Hungary	AFIOE - Association for Building Engineering	Attila Zoltán	BUS TRAINBUD
Ireland	Institute of Technology Blanchardstown	Mark Keyes	BUS Qualibuild
Ireland	Limerick Institute of Technology	Elisabeth O'Brien	BUS Qualibuild
Latvia	Latvian Environmental Investment Fund	Silvija Bruna	BUS FORCE
Latvia	Riga Planning Region	Agris Kamenders	BUS FORCE
Luxembourg	myenergy	Christiane Conrady	BUS LuxBuild
Luxembourg	Chambre des Métiers	Christiane Hoffmann	BUS LuxBuild
Macedonia	Economic Chamber of Macedonia	Jadranka Arizankovska	BUS BEET
Macedonia	Association of business and consultancy	Risto Ivanov	BUS BEET
Portugal	National Laboratory of Energy and Geology	Susana Camelo	BUS FORESEE
Portugal	National Laboratory of Energy and Geology	Helder Goncalves	BUS FORESEE
Romania	National Institute for Research and Development in Construction, Urban Planning and Sustainable Spatial Development	Horia Petran	BUS QualiShell
Sweden	Teknologisk Institut	Peter Bergermark	BUS SWEBUILD
Sweden	Teknologisk Institut	Sara Karlsson	BUS SWEBUILD
Sweden	Energy Agencies of Sweden	Per-Johan Wik	BUS SWEBUILD



## 6) Total contacts in each country

Countries	Totals	Countries	Totals
Albania	2	Japan	1
Andorra	1	Jordan	1
Australia	3	Latvia	2
Austria	7	Lithuania	10
Belgium	5	Luxembourg	5
Bosnia & Herz.	1	Macedonia	6
Bulgaria	5	Madagascar	1
Canada	1	Mongolia	1
China	1	Netherlands	2
Costa Rica	1	Norway	1
Croatia	206	Perù	1
Cyprus	2	Poland	2
Czech Republic	2	Portugal	5
Denmark	2	Romania	4
Estonia	140	Serbia	2
Finland	8	Slovakia	14
France	8	Slovenia	1
Germany	10	Spain	10
Greece	4	Swaziland	1
Hungary	2	Sweden	9
India	1	The Netherlands	3
Iran	2	Ukraine	3
Ireland	5	UK	15
Isle of Man	1	USA	3
Israel	1	Venezuela	1
Italy	102		

**Total contacts: 627**



### 3. Capitalization Strategy

Besides the above already planned activities, the partners have identified, in each country, the decision makers at national and regional level to present the results of the project to promote the use of BIM in all the construction industry. In particular they:

- have contacted **public administration** (competent minister and/or regional departments) to introduce BIM model for energy performance in the building regulation, updated to 08th January 2020:

Countries	Number of contacts
Italy	275
Lithuania	9
Netherlands	9
Croatia	37
Spain	90
Slovakia	17
Estonia	4

- have promoted the new BIM profiles among **architects and engineers**, updated to 08th January 2020:

Countries	Number of contacts
Italy	28
Lithuania	0
Netherlands	29
Croatia	80
Spain	251
Slovakia	21
Estonia	10

- have promoted awareness among **associations and NGOs**, updated to 08th January 2020:

Countries	Number of contacts
Italy	302
Lithuania	16
Netherlands	0
Croatia	46
Spain	28
Slovakia	5
Estonia	0



- have promoted the use of BIM libraries integrated with energy performances parameters among **technicians and producers** of materials and components for BIM industries, updated to 08th January 2020:

Countries	Number of contacts
Italy	1
Lithuania	10
Netherlands	14
Croatia	419
Spain	18
Slovakia	14
Estonia	0

- have promoted the importance of developing a BIM model for the energy facilities among **owners, tenants and facilities managers**, updated to 08th January 2020:

Countries	Number of contacts
Italy	11
Lithuania	2
Netherlands	4
Croatia	11
Spain	12
Slovakia	3
Estonia	2

- have promoted the importance of developing a BIM model among **Financial Institutions and ESCO's**, updated to 08th January 2020:

Countries	Number of contacts
Italy	1
Lithuania	5
Netherlands	0
Croatia	1
Spain	1
Slovakia	1
Estonia	0

For a detail of the complete data base of the stakeholders examine the Dropbox folder "H2020 NET-UBIEP Project" (Stakeholders database). It is possible to find the Stakeholders database in the Dropbox folder (H2020 NET-UBIEP / WP7).



## 4. Relation to Communication tools

As it is important to disseminate the project Net-UBIEP, a Steering Committee and the Communication Board have decided the Communication Strategy showed in the Communication and Endorsement Strategy (D41 – D7.1).

### 4.1. Project visual identity

In order to share the same project “trademark”, all project partners used the same graphical design collected in the Dropbox folder (H2020 NET-UBIEP / General Communication Document). All managers engaged in the project are responsible for the compliance of visual identity in all communication tools related to the project.

Project visual identity had been subcontracted to Archimedes 181, a Company for Architecture, Design and Graphic which is in charge of elaborating a Project Visual Identity Tool Kit (H2020 / WP7 Communication / General Communication Materials) with:

- logo;
- official colors;
- project overview presentation;
- presentation layout;
- e-newsletter layout;
- brochure;
- banner layout;
- letterhead layout;
- list of attendance layout

### 4.2. Project web-portal and Partner website

The web site ([www.net-ubiep.eu](http://www.net-ubiep.eu)) plays a key role in the dissemination strategy of Net-UBIEP. It contains all relevant information regarding the project and its result, updated in a regular time.

The principal areas are:

- partner and project description;
- promotional clips to promote the project objectives and results as well as partners' role;
- clip of training activities;
- link to the training activities;
- seminars, classroom courses;
- recorded workshop and/or lectures to promote project activities

### 4.3. Social network

Each partner disseminates the project in their social network sites:



Tab.9: Social Networks and Followers for each partner			
Partner	Social Network	Followers	
		Planned	Effective
CSA	LinkedIn	4.400	29.113
	Facebook		5.766
	Twitter		50
ENEA	LinkedIn	6.500	31.621
	Facebook		18.909
	Twitter		11.898
FLC	LinkedIn	3.665	29.443
	Facebook	5.600	11.000
	Twitter	9.351	13.000
	Google+	268	268
	Instagram		2.052
ISSO/B&R	LinkedIn	1.882	2.279
	Twitter	1.360	1.615
FCE	LinkedIn Net-UBIEP HR		41
	Facebook Net-UBIEP HR		177
DIG.CON.	LinkedIn	50	
	Facebook	100	523
ViaEU & UVS	Facebook		889
	Twitter		77
VGTU	LinkedIn	23.440	31.442
	Facebook	25.771	31.667
	Twitter	399	0
EGLC	LinkedIn		12
	Facebook		60
Totals		82.786	230.939

Facebook is useful to promote a viral campaign;  
 Vimeo/YouTube to upload video clip of the project, record lectures and seminars;  
 LinkedIn reaches professionals and promotes project activities and group discussions;  
 Twitter could be useful to disseminate Project #Hashtag).  
 It is possible to find the confirmation of Social Network's posts published time by time in the Deliverables D7.7 and D7.8.



#### 4.4. Newsletter

Newsletter want to inform about progress made and new facts concerning the project activities and the program. In addition, newsflash aspire to inform about the last updates on the websites or about recent document published.

Each partner has a newsletter with different periodicity and a different number of people reached:

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Tab.10: Number of newsletter and average number of reached people for each partner				
Countries	Partners	Newsletter sent	Average number of reached people	
			Planned	Effective
Italy	CSA	21	7.500	3.839
	ENEA	(ENEA N.) 1	6.000	3.000
		(Project N.) 3		2.500
Spain	FLC	24	28.000	233.333
	CSIC	2	10.000	XXX
Slovak	UVS	3	6.000	5.485
	ViaEU			
Croatia	CSA (HR)			
	FCE	7	5.000	6.511
Estonia	EGLC	3		4600
	TUT			
Lithuania	DIG.CON.		2.000	
	VGTU *	4		11.169
Netherlands	BeR	5		1.965
	ISSO	(ISSO N.) 1	3.000	
		(BIM loket N) 2		125
Totals**		76	12.230	76.601

\* Assumption made that VGTU posted newsletters were read at least by VGTU employees (1.569) and VGTU students (9.600). Average number of reached people calculated by aggregation of both numbers. The number of outside VGTU community was not assessed.

\*\* The total average is calculated with a weighted average.

In the following pages, there are evidences about the newsletter



CSA 01/2018

**GRUPPO CS**  
**Newsletter Gennaio 2018**  
Salute e sicurezza negli ambienti di lavoro

**LA RESPONSABILITÀ DELL'IMPRESA DI LAVORO IN CASI DI NEGLIGENZA DA PARTE DEL LAVORATORE** [Leggi di più]

**AGGIORNAMENTO SOMMINISTRAZIONE ALIMENTARE E BEVANDE** [Leggi di più]

**PROGETTI EUROPEI**

**Interreg ALCOTRA**

**CBET**

Più stato pubblicato il nuovo Volantino Istruzionale del Progetto Cross Border Energy Training: **VISUALIZZA**

**NET-UBIEP**

Aperte le candidature per diventare ASSOCIATO **NET-UBIEP** - **REGISTRARSI** o per ricevere aggiornamenti sul Progetto **(M&B) ITALIA**

CSA 02/2018

**GRUPPO CS**  
**Newsletter Febbraio 2018**  
Salute e Sicurezza negli ambienti di lavoro

**Guida di sopravvivenza per l'evitamento degli incidenti**

**Lavoro e salute: come è importante conoscere i rischi per la salute e la sicurezza nei luoghi di lavoro**

**Progetti europei**

**Interreg ALCOTRA**

**CBET**

**NET-UBIEP**

Per conoscere tutti gli aggiornamenti sui progetti europei finanziati dall'Unione Europea, visitate il sito **www.interreg-europe.eu**. Per conoscere i risultati dei progetti europei finanziati dalla Regione Piemonte, visitate il sito **www.piemonte.it**.

**CORSI DI FORMAZIONE**

**Corso di formazione sul lavoro**  
• Corso sicurezza sul lavoro  
• Corso sicurezza alimentare  
• Corso addestramento incarichi speciali  
• Corso attrezzature di lavoro

CSA 02/2018

**NET-UBIEP**  
**01**  
Net-UBIEP newsletter

Indice

- 1. Introduzione generale all'incontro net-UBIEP ..... 2
- 2. Presentazione ..... 2
- 3. Guida alla redazione di un incontro ..... 2
- 4. Come organizzare un incontro ..... 2
- 5. 2. I concetti fondamentali (gradi professionalità) ..... 3
- 6. Strategie BIM nazionali ..... 4
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- 8. Strategie di crescita BIM: la legge ..... 8
- 9. Strategie di crescita BIM: le norme ..... 10
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- 12. BuildingSMART: soluzioni per professionisti perfette ..... 13
- 13. Messaggi chiavi per partecipanti finalisti per le tre main topics ..... 15
- 14. Pubbliche interazioni con le parti interessate ..... 15
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- 16. Partecipazione a eventi (Meeting Point) ..... 15
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NET-UBIEP Newsletter 01 è disponibile in versione PDF. Per scaricarlo cliccate su **Download**.

CSA 03/2018

**GRUPPO CS**  
**Newsletter Marzo 2018**  
Salute e Sicurezza negli ambienti di lavoro

**La responsabilità di Città di Saluzzo** - 25 aprile 2018 - 21 marzo di un canto di lavoro

**Il Regolamento Europeo sulla sicurezza e la salute nel luogo di lavoro** - 25 aprile 2018 - 21 marzo di un canto di lavoro

**PROGETTI EUROPEI**

**Interreg ALCOTRA**

**CBET**

È stato reso disponibile il Volantino Istruzionale del Progetto Cross Border Energy Training: **VISUALIZZA**

**CORSI DI FORMAZIONE**

**Corso sicurezza sul lavoro**  
• Corso sicurezza alimentare  
• Corso addestramento incarichi speciali  
• Corso attrezzature di lavoro

CSA 04/2018

**GRUPPO CS**  
**Newsletter Aprile 2018**  
Salute e sicurezza negli ambienti di lavoro

**Introduzione ai corsi di formazione**

**Allegamento alla normativa aziendale per Sicurezza dell'ambiente e dall'Industria**

**Progetti europei**

**Interreg ALCOTRA**

**CBET**

**NET-UBIEP**

**Volantino Istruzionale del Progetto Cross Border Energy Training: **VISUALIZZA****

**CORSI DI FORMAZIONE**

**Corso sicurezza sul lavoro**  
• Corsi sicurezza alimentare  
• Corsi addestramento incarichi speciali  
• Corsi attrezzature di lavoro

CSA 05/2018

**GRUPPO CS**  
**Newsletter Maggio 2018**  
Salute e sicurezza negli ambienti di lavoro

**L'aggiornamento del progetto europeo**

**Il progetto europeo**

**Progetto europeo**

**NET-UBIEP**

**Aggiornamento sul concorso per diventare associato Net-UBIEP**

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• Corso addestramento incarichi speciali  
• Corso attrezzature di lavoro

CSA 06/2018

**GRUPPO CS**  
**Newsletter Giugno 2018 - Newsletter**  
Salute e sicurezza negli ambienti di lavoro

**PROGETTI EUROPEI**

**Interreg ALCOTRA**

**CBET**

Partecipa al concorso fotografico Interreg ALCOTRA, clicca [qui](#) per autarti a vincere il concorso.

Qui il [link del Sito](#).

Contact Information

Nome	Gruppo CS	Stilek Repubblica
Fax	+39 01 987 01 24	Socia Legale e Osservata
E-mail	<a href="mailto:info@grupposc.com">info@grupposc.com</a>	Ris. Svezia
Web	<a href="http://www.grupposc.com">www.grupposc.com</a>	Registrazione

I partner si sono riuniti a Bruxelles il 10 e 11 giugno per partecipare al secondo meeting europeo del progetto. Per ulteriori aggiornamenti su Net-UBIEP clicca [qui](#).

Qui il [link del sito](#).

CSA 07/2018

**GRUPPO CS**  
**Newsletter Luglio 2018**  
Salute e sicurezza negli ambienti di lavoro

**10 anni del D.Lgs. 81/2008**

**I vantaggi della formazione finanziata**

**Progetti europei**

**Interreg ALCOTRA**

**CBET**

**NET-UBIEP**

**NET-UBIEP ha partecipato al concorso fotografico "I lavori di costruzione e manutenzione sono sempre più complessi e ricchi di pericolosità". Per maggiori dettagli [clicca qui](#).**

Qui il [link del sito](#).

CSA 09/2018

**GRUPPO CS**  
**Newsletter Settembre 2018 - Newsletter**  
Salute e sicurezza negli ambienti di lavoro

**PROGETTI EUROPEI**

**Interreg ALCOTRA**

**CBET**

**NET-UBIEP**

In data 3 Ottobre si terrà presso Palazzo Lascaris, in via Alfieri 15 a Torino, il Seminario « Un ponte verso le professioni del futuro », organizzato da CBET. Per maggiori dettagli [clicca qui](#).

Qui il [link del sito](#).

Contact Information

Nome	Gruppo CS	Stilek Repubblica
Fax	+39 01 987 01 25	Socia Legale e Osservata
E-mail	<a href="mailto:info@grupposc.com">info@grupposc.com</a>	Ris. Svezia
Web	<a href="http://www.grupposc.com">www.grupposc.com</a>	Registrazione

Net-UBIEP ha provveduto alla stesura del materiale informativo in seguito alla pubblicazione della matrice tridimensionale delle competenze. Per maggiori informazioni [scarica l'allegato](#).

Qui il [link del sito](#).



CSA 10/2018

**GRUPPO CS**  
consulenza&formazione

**Newsletter Ottobre 2018**  
Salute e Sicurezza nell'ambiente di lavoro

**La introducción del Garante Privacy sul Registro dei Tratamientos:** El Garante para la Protección de Datos personales ha publicado una propuesta de leyes (tratado) sobre el registro de las oficinas del tratamiento. [\[Leer más\]](#)

**Fatturazione Elettronica:** A partire dal 1° gennaio 2019 tutti i canali della fatturazione. Dicono diversamente, oggi è già possibile.

**Progetti Europei**

**Interreg ALCOTRA CBET**

E' stato reso disponibile, in lingua italiana, l'eNewsletter digitale per supportare la Pubblica Amministrazione nell'avvio di Progetti BIM. [\[Leer más\]](#)

Qui il [Link del Site](#).

CSA 11/2018

**GRUPPO CS**  
consulenza&formazione

**Newsletter Novembre 2018**  
Salute e Sicurezza nell'ambiente di lavoro

**IL MERCATO DIREZIONALE:** In tutto l'Europa nel 2018 è stata approvata, in esame pre-memorato, la legge che consente una vera e propria riforma in materia di diritti sociali e del DSA sul mercato. [\[Leer más\]](#)

**IL GRANDE PROGETTO E LA FATTURAZIONE ELETTRONICA:** Il Garante Privacy ha scattato diverse crisi monetarie, con conseguente riforma e cessione, che avverrà a cominciare dal 1° gennaio 2019. [\[Leer más\]](#)

**PROGETTI EUROPEI**

**Interreg ALCOTRA CBET**

E' stato reso disponibile, in lingua italiana, l'eNewsletter digitale per supportare la Pubblica Amministrazione nell'avvio di Progetti BIM. [\[Leer más\]](#)

Qui il [Link del Site](#).

CSA 01/2019

**GRUPPO CS**  
consulenza&formazione

**Salute e sicurezza negli ambienti di lavoro**  
Gennaio 2019 - Newsletter

**PROGETTI EUROPEI**

**Interreg ALCOTRA CBET**

**NET UBIEP**

È stato reso disponibile, in lingua italiana, l'eNewsletter digitale per supportare la Pubblica Amministrazione nell'avvio di Progetti BIM. [\[Leer más\]](#)

Qui il [Link del Site](#).

Contact Information

Nome	Gianni Sestini	Tel. ufficio	051 221000
Cognome		Tel. casa	051 221000
Indirizzo	Via Giacomo Matteotti, 10 - 20131 MILANO	Data nascita	01/01/1962
Email	<a href="mailto:g.sestini@ogcspa.com">g.sestini@ogcspa.com</a>	Post. nascita	00199 ROMA
Cell. ufficio	0333 221000	Sesso	Uomo
Cell. casa	0333 221000	Residenza	Milano
Cell. portatile	0333 221000	Stato	Italy
Cell. mobile	0333 221000	Regione	Lombardia
Cell. fax	0333 221000	Città	Milano

CSA 02/2019

**GRUPPO CS**  
consulenza&formazione

**Newsletter Sicurezza Febbraio 2019**  
Salute e sicurezza nell'ambiente di lavoro

**14 MARZO - IN VISORIA IL NUOVO REGOLAMENTO DI PROTEZIONE INDIVIDUALE - 5 STAGNALE:** È stato pubblicato in Gazzetta Ufficiale il decreto-legge 14 marzo 2019 (n. 106) che introduce alla discussione delle legislative strutturali sulle disposizioni per la protezione individuale.

**PROGETTI EUROPEI**

**Interreg ALCOTRA CBET**

Disponibile sul sito di Net-UBIEP il dispositivo normativo sui temi della Regolamento Privacy GDPR e la sua applicazione.

**FORMAZIONE**

Corso Sicurezza sul lavoro  
Corso Sicurezza alimentare  
Corso addestramento aziendale  
Corso addestramento al lavoro

Qui il [Link del Site](#).

CSA 03/2019

**GRUPPO CS**  
consulenza&formazione

**Newsletter Sicurezza Marzo 2019**  
Salute e sicurezza nell'ambiente di lavoro

**DISPOSITIVO DI PROTEZIONE INDIVIDUALE - IN VISIONE LE NUOVE DISPOSIZIONI:** È stato pubblicato il decreto-legge 12 marzo 2019 (n. 107) che introduce alla discussione delle legislative strutturali sulle disposizioni per la protezione individuale.

**PROGETTI EUROPEI**

**Interreg ALCOTRA CBET**

Disponibile sul sito di Net-UBIEP il dispositivo normativo sui temi della Regolamento Privacy GDPR e la sua applicazione.

**FORMAZIONE**

Corso Sicurezza sul lavoro  
Corso sicurezza alimentare  
Corso addestramento aziendale  
Corso addestramento al lavoro

CSA 04/2019

**GRUPPO CS**  
consulenza&formazione

**Newsletter Sicurezza Aprile 2019**

**Regolamento Privacy GDPR: La nuova legge europea sulla privacy entrerà in vigore il 25 maggio 2018.** È stato pubblicato il decreto-legge 14 marzo 2019 (n. 106) che introduce alla discussione delle legislative strutturali sulle disposizioni per la protezione individuale.

**PROGETTI EUROPEI**

**Interreg ALCOTRA CBET**

Disponibile sul sito di Net-UBIEP il dispositivo normativo sui temi della Regolamento Privacy GDPR e la sua applicazione.

**FORMAZIONE**

Corso Sicurezza sul lavoro  
Corso sicurezza alimentare  
Corso addestramento aziendale  
Corso addestramento al lavoro

CSA 05/2019

**GRUPPO CS**  
consulenza&formazione

**Newsletter Sicurezza Maggio 2019**

**Regolamento Privacy GDPR: Nuove ammendazioni:** L'8 maggio 2019 sono state fatte le nuove modifiche al Regolamento Privacy GDPR, che riguardano la gestione dei dati personali.

**PROGETTI EUROPEI**

**Interreg ALCOTRA CBET**

Disponibile la versione di Agosto 2018. Qui il [Link del Site](#).

**FORMAZIONE**

Corso Sicurezza sul lavoro  
Corso Sicurezza alimentare  
Corso addestramento aziendale  
Corso addestramento al lavoro

CSA 06/2019

**GRUPPO CS**  
consulenza&formazione

**Newsletter Sicurezza Giugno 2019**

**Regolazione nazionale dell'attività lavorativa:** La nuova normativa si avicina rapidamente. È stata approvata la legge 10 giugno 2019 (n. 108) che introduce alla discussione delle legislative strutturali sulle disposizioni per la protezione individuale.

**PROGETTI EUROPEI**

**Interreg ALCOTRA CBET**

Disponibile la versione di Giugno 2019. Qui il [Link del Site](#).

**FORMAZIONE**

Corso Sicurezza sul lavoro  
Corso sicurezza alimentare  
Corso addestramento aziendale  
Corso addestramento al lavoro

CSA 07/2019

**GRUPPO CS**  
consulenza&formazione

**Newsletter Sicurezza Luglio 2019**

**PRIMO INCONTRÒ DEL LAVORO DI SVILUPPO:** Il primo incontro di sviluppo è stato organizzato con l'ospedale Stato Regionale del BRESCIA-SESTRI, con la presenza di rappresentanti di 10 imprese della regione.

**PROGETTI EUROPEI**

**Interreg ALCOTRA CBET**

Disponibile la versione di luglio 2019. Qui il [Link del Site](#).

**FORMAZIONE**

Corso Sicurezza sul lavoro  
Corso sicurezza alimentare  
Corso addestramento aziendale  
Corso addestramento al lavoro

**CHIUSURA ESTIVA**

GRUPPO CS AUGURA A TUTTI BUONE FERIE!

Questo ultimo numero di newsletter è finalmente arrivato. Grazie per averci seguito.



NET-UBIEP | Network for Use BIM  
to Increase Energy Performance

CSA 09/2019

The image shows the front page of the 'Newsletter Sicurezza Settembre 2019'. It features a large yellow header bar with the title 'Newsletter Sicurezza Settembre 2019' in black. Below the header is a blue horizontal bar with the text 'GRUPPO CS' and 'cooperativa formazione'. The main content area has a light blue background. On the left, there's a yellow box containing a small image of a laptop and a smartphone. On the right, there's a dark blue box containing an image of a hand holding a smartphone. The central column contains several articles with headings like 'LA GUIDA INAI: PER LA VALUTAZIONE DEL RISICO VERBALE IN OCCASIONE NEL LUOGO DI LAVORO', 'NUOVI DOCUMENTI DI CONFERMA PER IL DIZIONARIO NUOVA DIZIONARIA', and 'FORMAZIONE PER CREATORES BACK DA KODU E LOGO CLOUD'. There are also sections for 'INTERREG ALCOTRA', 'CBET Disponibile l'indirizzo del Progetto CBET', 'FORMATIVA', and 'UBIEP'. Each section includes a brief description and a call to action like 'Scopri di più' or 'Visualizza dettagli'.

CSA 10/2019

ENEA – CSA 1

**NET**  
**UBIEP**

# 01

Net-UBIEP newsletter

ENEA – CSA 2



# NET UBIEP

## 02

**Net-UBIEP newsletter**

ENEA inform@

ViaEU 1

ViaEU 2

ViaEU 3



ISSO 01/2019

This is the front page of the first issue of the Net-UBIEP newsletter. It features a large image of a building's energy performance report, a green header with the title, and a sidebar with links to social media and other resources.

ISSO 2

This is the front page of the second issue of the Net-UBIEP newsletter. It features a green header with the title, a large central image, and a sidebar with links to social media and other resources.

ISSO 3

This is the front page of the third issue of the Net-UBIEP newsletter. It features a green header with the title, a large central image, and a sidebar with links to social media and other resources.

FCE 1

This is the front page of the first issue of the FCE newsletter. It features a green header with the title, a large central image, and a sidebar with links to social media and other resources.

VGTU 12/2017

This is the front page of the December 2017 issue of the VGTU newsletter. It features a green header with the title, a large central image, and a sidebar with links to social media and other resources.

FLC BD 544 06/2017

This is the front page of the June 2017 issue of the FLC BD newsletter. It features a green header with the title, a large central image, and a sidebar with links to social media and other resources.

FLC BD 550 07/2017

This is the front page of the July 2017 issue of the FLC BD newsletter. It features a green header with the title, a large central image, and a sidebar with links to social media and other resources.

FLC BD 559 11/2017

This is the front page of the November 2017 issue of the FLC BD newsletter. It features a green header with the title, a large central image, and a sidebar with links to social media and other resources.

FLC BD 572 02/2018

This is the front page of the February 2018 issue of the FLC BD newsletter. It features a green header with the title, a large central image, and a sidebar with links to social media and other resources.



FLC BD 590 07/2018



FLC BD 598 10/2018



FLC BD 622 05/2019



FLC BD 624 05/2019



FLC BD 625 05/2019



FLC BD 635 09/2019



FLC BD 639 10/2019



FLC BD 641 10/2019



FLC BD 642 10/2019



FLC BD 643 11/2019



FLC BE 01 10/2018



FLC BE 02 01/2019



FLC BE 03 04/2019



FLC BE 04 07/2019



FLC BE 05 10/2019



EGLC 02/2018



EGLC 10/2018



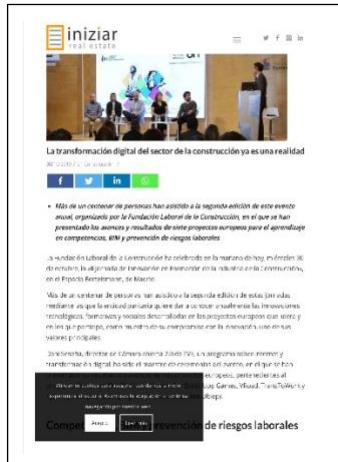
EGLC 09/2019



## 4.5. Press office

Press releases to local, regional and European newspaper and on-line news join press conferences to contribute to disseminate the project's results. It is possible to consult the chart below to a confirmation of the press office:

### FLC – Iniciar Real Estate



### FLC – Política local



### FLC - Promateriales



### FLC - Smart Lighting



### FLC – Cemento Hormigón



### FLC - Inmodiario

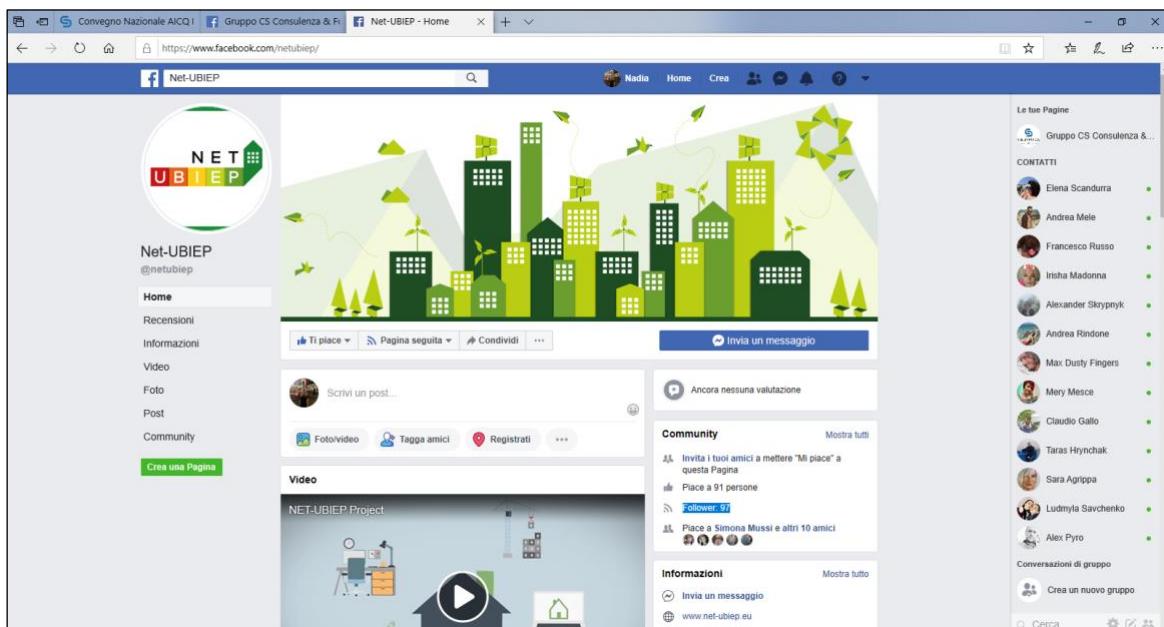


## 5 Impact monitoring

### 5.1 Social network activities

The evidences of partners social network activities (Facebook, LinkedIn, Twitter) are in the deliverables 7.7. and 7.8. Below we report some statistics related to Net-UBIEP social networks pages.

#### Facebook



The partners opened four Net-ubiep Facebook pages which differ according to the language: English (EN), Italian (IT), Croatian (HR), Estonian (EE). In the following there are the number of Likes updated until the beginning of December 2019.

Tab.11: Likes to each Facebook page

Facebook pages	Likes to pages
EN	97
IT	87
HR	176
EE	48
Totals	408

Facebook make available for pages administrators some performance indicators. Two of them are the organic coverage and the paid coverage.

The organic coverage depends on interactions of users. If users interact with the post (clicks and reactions), then the collective of people reached will grow, otherwise it will block. Therefore, this indicator could be an estimator about the interest in the project.

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Tab.12: Indicators in 2019 for each Facebook page

Pages	Posts	Coverages	Average C.	Interact.	Average I.
EN	40	13.615	340	805	20
IT	15	2.009	134	317	21
HR	65	25.546	393	1.245	19
EE	27	2.929	108	609	23
Totals	147	44.099	300	2.698	20

Tab.13: Indicators in 2018 for each Facebook page

Pages	Posts	Coverages	Average C.	Interact.	Average I.
EN	10	1.161	116	124	12
IT	9	1.461	162	115	13
HR	40	5.401	135	506	13
EE	16	2.676	167	511	32
Totals	75	10.699	143	1.256	17

Tab.14: Indicators in 2017 for each Facebook page

Pages	Posts	Coverages	Average C.	Interact.	Average I.
EN	1	55	55	20	20
IT	3	18	6	13	4
HR	23	240	10	13	1
EE	4	316	79	73	18
Totals	31	629	20	119	4

The average coverages has increased over the time. It may be due to an increased of interest in the project.



## Twitter (Follower: 81 people)

## LinkedIn (Follower: 12 people)



## 5.2 Video

### YouTube

videos: 19 - views: 2171



<https://www.youtube.com/watch?v=S3qnlQ877xY>



<https://www.youtube.com/watch?v=FLeXtt4SsQ8>



[https://www.youtube.com/watch?v=\\_H8LTtWabKo](https://www.youtube.com/watch?v=_H8LTtWabKo)



<https://www.youtube.com/watch?v=8Q8pCs0zuWQ>



<https://www.youtube.com/watch?v=nQfxYkzxMUM>



<https://www.youtube.com/watch?v=EXzd9oqqaVg>



[https://www.youtube.com/watch?v=U\\_Dn1sA8CBA](https://www.youtube.com/watch?v=U_Dn1sA8CBA)



<https://www.youtube.com/watch?v=N3hRBWnBabo>



<https://www.youtube.com/watch?v=-KxigIys68I>





<https://www.youtube.com/watch?v=lyNPP4QaEZo>

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<https://www.youtube.com/watch?v=A0aXVTelQwA>



<https://www.youtube.com/watch?v=hRVBKpBSdDo>



<https://www.youtube.com/watch?v=AUytljbVmI0>



<https://www.youtube.com/watch?v=yZK0id7Fa8U>





<https://www.youtube.com/watch?v=zga04VA8BCA>

65



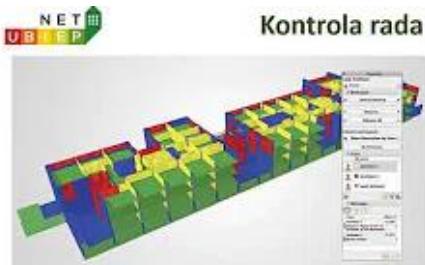
<https://www.youtube.com/watch?v=GoR8ATK3LGY>



<https://www.youtube.com/watch?v=T4JMjqs8uT4>



<https://www.youtube.com/watch?v=3oc2XZC7LmE>



[https://www.youtube.com/watch?v=8iw2Mi\\_13Gw](https://www.youtube.com/watch?v=8iw2Mi_13Gw)

## 5.3 Training and energy saving

### Parameters

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**Number of operators trained in each country.** The section 2.7 provide the number of professionals, technicians, PAs and Building administrators involved in training activities. Below we reported these number the totals.

Tab. 15: Operators trained with Net-UBIEP project		
Countries	Total effective [M]	Total planned [M]
Italy	1.098	560
Spain	366	290
Croatia	692	330
Estonia	507	320
Slovakia	218	120
Lithuania	306	240
Netherlands	267	240
All countries	3.454	2.100

**Employees of the construction sector.** The International Labour Organisation provide data about employment by economic activity (according to the international Standard Industrial Classification of all economic activities (ISIC Rev. 4)) and occupation (according to the international Standards Classification of Occupations (ISCO-08)). According to the project needs we selected data representing the total number of people employed in the economic activity "Construction" (including the whole value chain) in the year 2015.

Tab. 16: Employees of Construction Sector.	
Source: ILO	
Countries	Employees [M]
Italy	1.468.300
Spain	1.073.700
Croatia	109.400
Estonia	61.800
Slovakia	213.600
Lithuania	105.000
Netherlands	402.600

## Quantification of Net-UBIEP impact on energy savings

let's proceed with the calculation of the energy saving triggered by the Net-UBIEP project. We can assume that the implementation of BIM in construction phases (conceptual design, structural design, construction, maintenance, refurbishment and eventual demolition) involves a reduction of energy consumption of 20% compared to traditional processes currently used. So, each operator trained in Net-UBIEP project can activate an energy saving equal to the 20%.

We can obtain the energy saving triggered by each operator (s), dividing the Annual Energy consumption for the Residential Sector by the number of employees in the construction sector and multiplying the result for 0.20.

Tab. 17: Energy saving triggered by each operator who works implementing BIM			
Countries	Annual Energy consumption for the Residential Sector [GWh/Y]	Employees of Construction Sector [M]	(s) Energy saving per each operator who works implementing BIM [GWh/(Y*M)]
Italy	343.619,98	1.468.300	0,0468052
Spain	171.068,00	1.073.700	0,0318651
Croatia	25.397,59	109.400	0,0464307
Estonia	10.342,56	61.800	0,0334711
Slovakia	22.702,92	213.600	0,0212574
Lithuania	16.364,57	105.000	0,0311706
Netherlands	106.084,21	402.600	0,0526996



Thus, we can obtain the energy saving triggered by the project multiplying the energy saving triggered by each operator for the number of operators trained in each country with Net-UBIEP project. The effective numbers consider also the number of PAs and Building administrators who have been trained within the project, unlike the planned numbers which consider only the number of technicians and professionals.

Tab. 18: Total energy savings triggered by the project

Countries	Energy saving per each operator who works with BIM [GWh/(Y*M)]	Operators trained by Net-UBIEP by the project (Nov 2019) [M]		Total Energy saving per country (S) [GWh/Y]	
		Planned	Effective	Planned	Effective
Italy	0,0468052	560	1.098	26,21	51,39
Spain	0,0318651	290	366	9,24	11,66
Croatia	0,0464307	330	692	15,32	32,13
Estonia	0,0334711	320	507	10,71	16,97
Slovakia	0,0212574	120	218	2,55	4,63
Lithuania	0,0311706	240	306	7,48	9,54
Netherlands	0,0526996	240	267	12,65	14,07
Totals		2.100	3.454	84,16	140,40

## Quantification of Net-UBIEP impact on the Renewable Energy produced

According to the benchmarks defined previously and to the selected method we can proceed in quantifying the project impacts calculating the production of Renewable Energy (RE) that can be triggered by each operator in the building sector. We assume that an operator trained with the Net-UBIEP project can triggered an increase of RE produced equal to 15%.

We can calculate the increase in the production of RE triggered by one operator who work applying BIM, dividing the annual RE produced by the number of operators in construction sector and multiplying the result for 0.15 (Tab. 15).

Tab. 19: Increase of RE production triggered by each operator who works implementing BIM

Country	Renewable Energy produced in a year [GWh/Y]	Operators in construction sector [M]	(i) Increase in RES production triggered per each operator who apply BIM [GWh/(Y*M)]
Italy	110.136,10	1.468.300	0,011251389
Spain	58.754,76	1.073.700	0,008208265
Croatia	16.377,72	109.400	0,022455746
Estonia	13.607,10	61.800	0,033026942
Slovakia	9.873,87	213.600	0,006933897
Lithuania	13.013,97	105.000	0,018591386
Netherlands	17.142,62	402.600	0,006386967

To know the total increase of RE production triggered by the Net-UBIEP project it is necessary to multiply the increase of RE production triggered by an operator for the number of operators trained in each country (Tab. 16). The effective numbers consider also the number of PAs and Building administrators who have been trained within the project, unlike the planned numbers which consider only the number of technicians and professionals.

Tab.20: Total Increase of RE production triggered by the project

Country	Increase in RES production triggered per each operator who apply BIM [GWh/(Y*M)]	Operators trained by Net-UBIEP project Nov 2019 [M]		Increase in RES production per country (I) [GWh/Y*M]	
		Planned	Effective	Planned	Effective
Italy	0,011251389	560	1.098	6,30	12,35
Spain	0,008208265	290	366	2,38	3,00
Croatia	0,022455746	330	692	7,41	15,54
Estonia	0,033026942	320	507	10,57	16,74
Slovakia	0,006933897	120	218	0,83	1,51
Lithuania	0,018591386	240	306	4,46	5,69
Netherlands	0,006386967	240	267	1,53	1,71
Totals		2100	3.454	33,49	56,55