



BIPV boost

D9.17 Deliverable Report on onsite visits and training at demonstration sites

T9.13 Guided visits to demo sites and onsite training

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BIPVBOOST

“Bringing down costs of BIPV multifunctional solutions and processes along the value chain, enabling widespread nZEBs implementation”

Start date: October 2018. Duration: 4 Years

Coordinator: TECNALIA Grant Agreement No: 817991 www.bipvboost.eu

Summary

This document describes all the visits held at the project demonstration sites: Aretxabaleta (Spain), Puertollano (Spain), Mons (Belgium) and Morbegno (Italy). During this visit the demonstration sites owners had the opportunity to share and explain their experiences and best practices for design, construction, as well as operation and maintenance.

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Contents

Summary	1
Document Information.....	2
Document History	2
Acknowledgements	3
Disclaimer	3
1 EXECUTIVE SUMMARY.....	6
1.1 Description of the deliverable content and purpose	6
1.2 Relation with other activities in the project.....	6
1.3 Reference material	6
1.4 Abbreviation list	6
2 Demonstration sites visits	7
2.1 Aretxabaleta, Spain	7
2.2 Puertollano, Spain	10
2.3 Mons, Belgium.....	13
2.4 Morbegno, Italy	16

Tables

Table 1.1 Relation between current deliverable and other activities in the project	6
Table 2.1: Aretxabaleta Demo site visit Agenda	8
Table 2.2: Puertollano Demo site visit Agenda	11
Table 2.3: Mons Demo site visit Agenda	14
Table 2.4: Morbegno Demo site visit Agenda	17

Figures

Figure 2.1.1: Invitation to Aretxabaleta demo site	7
Figure 2.1.2: Presentation during the visit	8
Figure 2.1.3: Demo site visit	9
Figure 2.1.4: Demo site visit	9
Figure 2.2.1: Invitation to Puertollano demo site	10
Figure 2.2.2: Demo site visit	11
Figure 2.2.3: Demo site visit	12
Figure 2.2.4: Demo site visit	12
Figure 2.3.1: Invitation to Mons demo site	13
Figure 2.3.2: Mons Demo site visit	14

Figure 2.3.3: Mons Demo site visit	15
Figure 2.3.4: Mons Demo site visit	15
Figure 2.4.1: Invitation to Morbegno demo site	16
Figure 2.4.2: Morbegno Demo site visit	17
Figure 2.4.3: Morbegno Demo site visit	18
Figure 2.4.4: Morbegno Demo site visit	18

1 EXECUTIVE SUMMARY

1.1 Description of the deliverable content and purpose

This document compiles all the guided visits to the demonstration installations conducted during the BIPVBOOST project. These visits were hosted by each demo site owner and allowed to the different stakeholders (such as architects, engineers, installers, students, local decision makers, etc.) to see the real-life installed technologies in each demo site: Aretxabaleta (Spain); Puertollano (Spain); Mons (Belgium) and Morbegno (Italy). All these visits were made in their national-local language.

1.2 Relation with other activities in the project

Table 1.1 depicts the main links of this deliverable to other activities (work packages, tasks, deliverables, etc.) within BIPVBOOST project. The table should be considered along with the current document for further understanding of the deliverable contents and purpose.

Table 1.1 Relation between current deliverable and other activities in the project

Project activity	Relation with current deliverable
Task 8.6.	D8.10 Global report on the architectural, energy efficiency, operational, economic and environmental assessment of the demonstration activities. Specific feedback to designers, technology providers and building owners
Task 8.6.	D8.11 Public report summarizing lessons learnt, approaches, actions, results and experiences. Oriented towards a diverse stakeholder audience
Task 9.13	Guided visits to demo sites and onsite training

1.3 Reference material

- Grant Agreement 817991

1.4 Abbreviation list

No Applicable.

2 Demonstration sites visits

2.1 Aretxabaleta, Spain

The demo site visit took place on 26 April 2023 at Mondragón Assembly installations located in Aretxabaleta, Spain. During the visit, professionals involved in the project presented and shared their experience with photovoltaic integration in buildings from different perspectives: energetic, architectural and manufacturing.

The organization of the event was carried out by Mondragón Assembly and WIP Renewable Energies, and supported by TECNALIA. The call for the event was made through social media and other main communication channels of the partners involved in the demo site. A selective email contact was made due to the limited capacity of the meeting room (20 people maximum)



Invitación Jornada BIPV

Proyecto BIPVBOOST: Integración de soluciones fotovoltaicas en edificios. Aretxabaleta: soluciones, experiencias y lecciones aprendidas

El sector de la edificación es uno de los principales consumidores de energía. La integración de sistemas de energía renovable como la fotovoltaica en edificios, posibilita su autosuficiencia energética, acortando el camino hacia edificios energía cero (ZEB) o energía positiva. El proyecto BIPVBOOST desarrolla soluciones técnicas para fomentar aplicaciones fotovoltaicas integradas en edificios.

El proyecto BIPVBOOST y Mondragon Assembly os invitan a una demostración real de integración fotovoltaica en edificios a realizarse el día 26 de abril a las 9:30 am en sus instalaciones (Polígono Industrial Baintxe, Pab. 5A, 20550 Aretxabaleta, Gipuzkoa, España). Durante la visita los asistentes podrán conocer más sobre la integración fotovoltaica en edificios (BIPV por sus siglas en inglés) tanto desde el punto de vista energético, como arquitectónico y de fabricación.

Agenda

9:30 - 10:00 Presentación de Mondragón Assembly	Mondragón Assembly
10:00-10:30 Presentación Proyecto BIPVBOOST	Tecnalia
10:30-11:00 Experiencias y lecciones aprendidas en el diseño y ejecución de la instalación arquitectónica del demostrador	AGM Arquitectos
11:00-11:30 Experiencias y lecciones aprendidas en el diseño y ejecución de la instalación eléctrica del demostrador	Ekilor Energías Renovables
11:30- 12:30 Visita guiada a la instalación BIPV y fábrica de Mondragón Assembly	MASS, Ekilo & AGM

[Regístrate aquí](#)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 817991

Figure 2.1.1: Invitation to Aretxabaleta demo site

Table 2.1: Aretxabaleta Demo site visit Agenda

Time	Presentation title	Speaker
09:30 - 10:00	Presentation of Mondragón Assembly	Mondragón Assembly
10:00 - 10:30	Presentation of the BIPVBOOST project	Tecnalia
10:30 - 11:00	Experiences and lessons learned in the design and execution of the architectural installation of the demonstrator	AGM Arquitectos
11:00 – 11:30	Experiences and lessons learned in the design and execution of the electrical installation of the demonstrator	Ekilor Energías Renovables
11:30 – 12:30	Guided tour of the BIPV facility and Mondragón Assembly factory.	


Figure 2.1.2: Presentation during the visit

The visit and presentations were held in Spanish. A total of 12 external professionals attended, representing different players from the construction value chain, including: construction material manufacturers, façade specialists, coating developers, BIPV manufacturers and architects.



Figure 2.1.3: Demo site visit



Figure 2.1.4: Demo site visit

2.2 Puertollano, Spain

The visit to the demonstration site, which corresponds to the ISFOC headquarters, located in Puertollano (Spain) took place on April 13, 2023.

The visit also included several presentations held by BIPVBOOST partners such as COMSA, Onyx and Tecnalia. The visit and presentations were held in Spanish and are available for download on the project website in the following link: [Media corner - BIPV Boost](#). Approximately 30 external professionals participated in the event. Among them, professionals, representatives of the Official College of Industrial Engineers of Ciudad Real, architects and companies linked to the photovoltaic sector participated in the event.

The organization of the event was carried out by ISFOC with the collaboration of WIP Renewable Energies.



Jornada “Integración de soluciones fotovoltaicas en edificios. Proyecto BIPVBoost: soluciones y experiencias”

ISFOC tiene el placer de invitarle a la [Jornada “Integración de soluciones fotovoltaicas en edificios. Proyecto BIPVBoost: soluciones y experiencias”](#) que organiza el próximo día 13 de abril en su sede en Puertollano en el seno del [Proyecto BIPVBOOST](#).

La Jornada tiene como objetivo acercar a los asistentes a una demostración real de integración FV en edificios a través del piloto ejecutado en ISFOC. Los asistentes podrán descubrir que la utilización de módulos fotovoltaicos como componentes de un edificio, permite la sustitución de materiales de construcción convencionales, tales como cerramientos de techos, tragaluces, pérgolas y fachadas, que son pasivos energéticamente, por materiales activos capaces de generar energía a partir de la radiación solar incidente. De esta manera se optimiza el comportamiento energético del edificio lo que además supone un ahorro hacia los propietarios. La integración arquitectónica de la energía solar fotovoltaica, conocida internacionalmente con el acrónimo BIPV (*Building-Integrated Photovoltaics*) constituye una de las herramientas clave para la consecución de edificios de energía cero (ZEB) o de energía positiva.

La jornada contará con representantes y expertos en el campo BIPV españoles de centros tecnológicos, fabricantes de soluciones, empresas de la construcción, y se visitará la instalación piloto de ISFOC con barandilla y suelo fotovoltaicos. La visita está dirigida a profesionales y empresas del sector, inversores, empresas del sector de la construcción, arquitectos y aparejadores.

AGENDA

- 09:30 – 10:00h Recepción de asistentes
- 10:00-10:30 – Integración Arquitectónica de la Fotovoltaica (BIPV). Principales resultados y enseñanzas del proyecto BIPVBoost (programa Horizonte 2020 de la Unión Europea)
Eduardo Román, PV systems manager/Energy, Climate and Urban Transition Unit, Fundación Tecnalia.
- 10:30-11:00h – Experiencia de ISFOC como demo site del proyecto BIPVBoost
Óscar de la Rubia Carretero, Director Operaciones, ISFOC.
- 11:00-11.30h - El proceso de diseño para el uso de BIPV en fachada. Experiencia en BIPVBoost y proyectos recientes.
Jacobó Peláez-Campomanes Guibert, Jefe de Proyecto, Envolvertes Arquitectónicas (ENAR)
- 11:30 -12:00 - Pausa para café
- 12:00- 12.30h – Aplicaciones BIPV en el sector de la construcción
Merche Polo, Responsable de proyectos de I+D+i en Eficiencia Energética, COMSA Corporación
- 12:30-13.00h - Avances tecnológicos y Nuevos productos desarrollados para BIPV
Teodosio del Caño, CTO & COO, Onyx Solar.
- 13:00-14:00h – Vino Manchego durante visita a la instalación demo y presentación de equipos Huawei por parte de Wattkraft.

La inscripción a este evento es gratuita. [Formulario de Inscripción](#)

Figure 2.2.1: Invitation to Puertollano demo site

Table 2.2: Puertollano Demo site visit Agenda

Time	Presentation title	Speaker
10:00 - 10:30	Architectural Integration of Photovoltaics (BIPV). Main results and lessons from the BIPVBoost project (Horizon 2020 program of the European Union)	Eduardo Román, Tecnalia.
10:30 - 11:00	ISFOC experience as a demo site of the BIPVBoost project	Óscar de la Rubia Carretero, ISFOC.
11:00 - 11:30	The design process for the use of BIPV on the façade. Experience in BIPVBoost and recent projects	Jacobo Peláez-Campomanes Guibert, ENAR.
12:00 – 12:30	BIPV applications in the construction sector	Merche Polo, COMSA.
12:30 – 13:00	Technological advances and new products developed for BIPV	Teodosio del Caño, Onyx Solar.


Figure 2.2.2: Demo site visit



Figure 2.2.3: Demo site visit



Figure 2.2.4: Demo site visit

2.3 Mons, Belgium

The visit to the demo site was carried out in conjunction with the visit of the consortium on May 24, 2023. The demonstration site located in Mons; Belgium corresponds to a residential building.

The event was organized by OPTIMAL Computing with the collaboration of WIP Renewable Energies and Becquerel Institute. The promotion of the event was made through social media and other main communication channels of the partners involved in the demo site. After the visit, several presentations about best practices and lessons learned were given by project partners. The visit was held in French and English, and presentations were held in English.



Grant Agreement 817991

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**VISITE ET RETOUR D'EXPERIENCE D'UNE MAISON INDIVIDUELLE
EQUIPEE DE PANNEAUX SOLAIRES DE TYPE BIPV
(intégrés au bâtiment)**

Le mercredi 24 Mai 2023

PROJET BIPVBOOST (2018-2023)

**SITE DE DEMONSTRATION BELGE A SAINT-DENIS
Panneaux métalliques, CIGS, 9.9 kWp**



Adresse : Rue de la vignette 36, 7034 Saint-Denis, Belgique

Tél. 0498 / 622 632

Email : stephane.pierret@optimalcomputing.be

1

Figure 2.3.1: Invitation to Mons demo site

Table 2.3: Mons Demo site visit Agenda

Time	Presentation title	Speaker
09:30 - 10:30	Demo site visit	Optimal Computing.
10:45 - 10:55	General Presentation BIPVBOOST	Jose M. Vega de Seoane, Tecnalía.
10:55 - 11:45	Feedback and Experience about the demo-site	Stéphane Pierret, Optimal Computing.
12:00 - 12:15	Fast roof integration – structures	Andreas Haller, Schweizer.
12:15 - 12:15	PV solutions for residential buildings based on CIGS thin film technology	Julien Perrenoud, Flisom.
12:15 – 12:30	BIPV roof modeling with BIM solutions to support design and decision	Philippe Alamy, EnerBIM.


Figure 2.3.2: Mons Demo site visit



Figure 2.3.3: Mons Demo site visit



Figure 2.3.4: Mons Demo site visit

2.4 Morbegno, Italy

The visit to the demo site located in Morbegno Italy, was on March 31, 2023. The tour to the residential building included talks/presentations on good practices and lessons learned.

The promotion of the event was made through social media and other the main communication channels of the PIZ. The visit was held in Italian. PIZ with the collaboration of WIP Renewable Energies organized the visit. Approximately 20 professionals participated. Among them, engineers, architects, journalists and companies linked to photovoltaic integration in buildings participated in the event.



Grant Agreement 817991

BIPVBOOST PROJECT - Riduzione dei costi del fotovoltaico integrato per consentire un'implementazione diffusa degli edifici a energia zero - Visita al Demosite PIZ 31/03/2023 @ Morbegno.

31/03/2023 _ Programma:

Ore 14.30 Punto di incontro presso l'indirizzo Piazza Aldo Moro 10/A, Morbegno (SO)

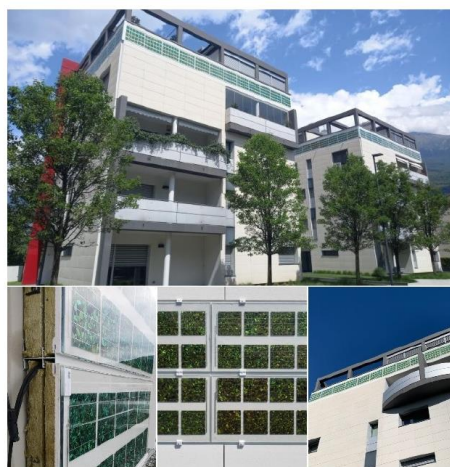
Ore 14.45 Introduzione al progetto BIPVBOOST, partner coinvolti e finalità.

Ore 15.00 Descrizione delle opere, del processo di montaggio ed installazione e delle tecnologie applicate. Visione da diverse prospettive dei risultati ottenuti.

Ore 15.15 Visita alle apparecchiature elettriche, ai contatori e agli inverter in produzione.

Ore 15.30 Eventuali domande.

Ore 15.45 Fine della visita.



Si prega di confermare la presenza entro e non oltre il 15 Marzo

Scrivendo all'indirizzo: luca.pelizzatti@zecca.com

o tramite whatsapp al numero: +393407468069

o tramite telefono al numero: +390342606023

Ulteriori informazioni sull'azienda PIZ Srl: <https://www.piz.it/>

Ulteriori informazioni sul progetto BIPVBOOST: <https://bipvboost.eu/demos/>

INFO - BIPVBOOST - PIZ Demo-site Visit - Morbegno 31/03/2023

1

Figure 2.4.1: Invitation to Morbegno demo site

Table 2.4: Morbegno Demo site visit Agenda

Time	Presentation title	Speaker
14:45 - 15:00	Introduction to the BIPVBOOST project, partners involved and aims	PIZ
15:00 - 15:15	Description of the works, the assembly and installation process and the applied technologies. View from different perspectives of the results obtained.	PIZ
15:15 - 15:30	Visit to electrical equipment, meters and inverters in production	PIZ
15:30 - 15:45	Questions	


Figure 2.4.2: Morbegno Demo site visit


Figure 2.4.3: Morbegno Demo site visit**Figure 2.4.4: Morbegno Demo site visit**