



# P2ENDURE

PLUG & PLAY BUILDING RENOVATION

## NEWSLETTER #3

spring edition 2019



This is the 3rd newsletter of the H2020 P2ENDURE research project. Having crossed the midterm of the project this newsletter highlights the work done in the last year, zooming in on the good practices and the replication potential regarding the demonstration activities and the integration with the P2ENDURE PnP solutions.

[www.p2endure-project.eu](http://www.p2endure-project.eu)

**Project aim:** provides scalable, adaptable and ready-to-implement prefabricated Plug-and-Play (PnP) technologies for building deep renovation. These innovative solutions are applicable to transform non-functioning or sub-optimal public and historic buildings into dwellings and are applicable for a wide range of building typologies.

**Main innovation:** PnP prefab systems enabled by 3D printing, innovative sensing technologies, such as laser scanning, thermal scanning and the Comfort Eye - an innovative IEQ scanning device. P2ENDURE presents a proof-of-performance of the optimised PnP renovation techniques by implementing ten large-scale live demonstration projects that represent the main deep renovation typologies and real market demand in four EU geo-clusters.



## PREFAB PANEL IMPLEMENTED IN MENDEN

A brand new demonstration case within the P2Endure project:

Partners [3L](#) and [Fermacell](#) are currently planning a renovation of an [office building in Menden](#) (DE) by deploying the Fermacell panel solution. The facade of this building is planned as a prefab light weight timber construction that contains a mineral thermal insulation and integrated channels for PnP HVAC ducts. A 3D BIM will be supporting throughout the realisation process. Check here [more in depth info](#) on this implementation.



## RENOZEB UNITS IN ANCONA

Since none of the solutions in P2Endure seemed to be suitable enough for the [Ancona demo case](#) a link with the [RenoZEB project](#) and their [PnP prefab solution](#) for renovating building envelopes was fast made. This technology consists of prefabricated units aimed at simplifying and improving the renovation process in terms of (thermal) performance, time, and costs.

The design of the project is under realisation and the BIM of the renovated building will be created in the coming months.



High flexibility in adjusting the units to the facade layout

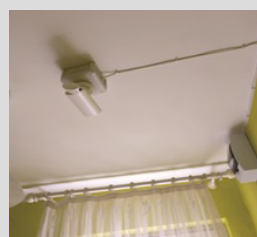
## COMFORT EYE AT WORK IN POLAND

The Comfort Eye, the P2ENDURE innovative sensing solution for the Indoor Environmental Quality (IEQ) monitoring, has been installed in the summer of 2018 in the two



Installation Comfort Eye system

Polish demo cases, [Warsaw](#) and [Gdynia](#). This patented solution provides an IoT system for the detailed monitoring and IEQ performance assessment, by measuring not only the thermal comfort but also the Indoor Air Quality (IAQ) in a non-intrusive way. A dedicated data processing software is now under development and will allow the user to view the data remotely by using dashboards. This experiment will demonstrate how the IEQ monitoring can be used in supporting the renovation design phase.



Comfort Eye - installed on ceiling of the room an IEQ monitoring device

### JOINT WORKSHOP IN ROME

We look back at a very successful stakeholders meeting and joint synergy workshop on the 5th of October 2018 in Rome! Great insights shared on deep renovation innovative technologies with our sister projects: [4RinEU](#), [Pro-GET-onE](#), [ENVISION](#) and [EENSULATE](#).

Check the [exhibited posters](#) and the [innovative solutions](#) presented.



### DEEP RENOVATION WEBINAR (WORLD CITIES DAYS 2018)

On the 31st of October 2018 we have joined our synergy project BuildHeat in their initiative for the [deep renovation webinar](#) in collaboration with ABRACADABRA and HEART.



See [presentation](#) of P2Endure during this webinar.

Follow [the webinar also on YouTube](#).

(minute 27 P2Endure).

### JOINT INITIATIVES DURING SUSTAINABLE PLACES 2018



Together with [4RinEU](#), [ProGETonE](#) and [MORE-CONNECT](#) projects, we have organised one of the 13 in total clustering workshops during the 2018 edition of the [Sustainable Places International Conference](#) in Aix-les-Bains, (FR). This joint workshop during the [Deep Energy Renovation](#) session focused on presenting successful experiences & pointing out existing challenges related to the low renovation rate of existing buildings in Europe. In addition, our poster was displayed during the scientific posters exhibition and the [paper](#) written for this conference was presented by Rizal Sebastian (DEMO Consultants) during the Retrofit, Renovation and Refurbishment session. All in all, we are proud to have been so actively involved during this SP edition.

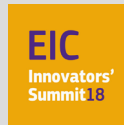
Up to the next 2019 edition!



## WE'VE ATTENDED

The consortium partners represented P2ENDURE on various meetings, workshops and conferences within the last year (2018):

- 8th ECTP Conference, "When EU construction industry shapes high-tech Sustainable Built Environment" 13-14 November (Brussels)
- Ecomondo Green Technology Expo 6-9 November (Rimini)
- SBE 19 NL Retrofit Europe 5-6 November (Eindhoven)
- BIM Community Forum 8-9 October (Madrid)
- 7th IBPC2018 23-26 September (Syracuse, NY)
- EU EIC Innovators' Summit on 10-11 September (Berlin)
- Sustainable Places 2018 on 27-29 June (Aix-les-Bains)
- 1st European conference "BIM and energy performance of buildings" 25 June (Brussels)



## WHERE THEORY MEETS PRACTICE

- Sustainable Places 2019 – Yes! We make it a tradition and will attend the SP 2019 edition! Stay tuned for more information!
- European Sustainable Energy Days (EUSEW 2019) – joint workshops with sister projects
- CIB W78 - Information Technology for Construction
- 26th International Workshop on Intelligent Computing in Engineering (EG-ICE 2019)

## So long, farewell, goodbye....

We take this opportunity to give a warm goodbye to Rizal Sebastian, our representative Project Coordinator. We wish Rizal all the best in his new career endeavour and hope our paths will cross again someday through synergy activities! Oana Schippers-Trifan will be assuming these responsibilities from now on.

## Upcoming papers:

- Abstract accepted and publication expected in June 2019: "Plug-and-Play technologies and new process for building deep renovation" paper for the *TECHNE* (Journal of Technology for Architecture and Environment)
- Publication expected soon: "IEQ measurement and assessment tools for Plug-and-Play deep renovation in buildings" (2018). See the presentation [here](#).
- Abstract submitted for this year's CIB W78 - Information Technology for Construction and the 26th International Workshop on Intelligent Computing in Engineering (EG-ICE 2019).



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