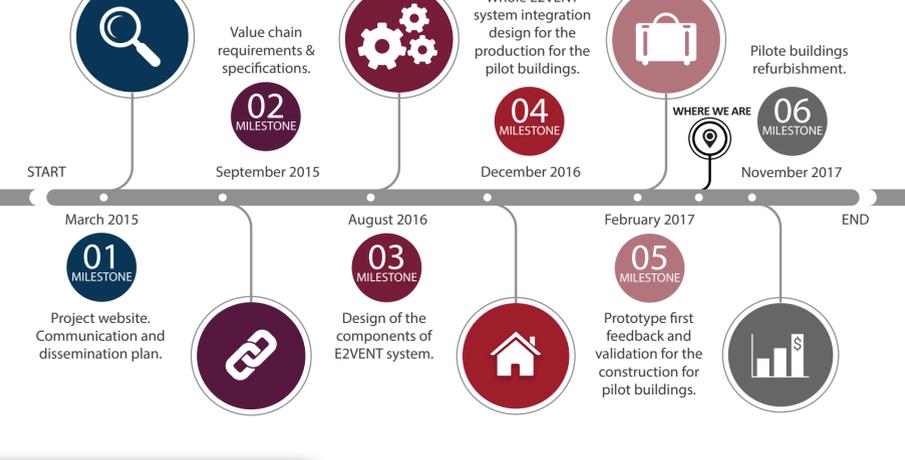


Dear Reader,

we proudly present the fourth E2VENT newsletter. The aim of this newsletter is to provide you with an overview of the progress of the E2VENT project. The project has reached a milestone of 30 months and it is at this point that we would like, once again, to share with you the latest news on the advances that were made in the past months as well as elaborate on our plans for the upcoming period.



Energy Efficient Ventilated Façades for Optimal Adaptability and Heat Exchange enabling low energy architectural concepts for the refurbishment of existing buildings



THE TEST BENCH

After measurements carried out in the laboratories of **TECNALIA** and **NOBATEK**, new versions of the **SMHRU** and **LHTES** have been designed and then manufactured by **ELVAL** at month 26. The systems were then shipped to Anglet in order to be assembled and installed on the test bench.

The test bench located in **Anglet, France in Nobatek's facility**, allows installing the systems on a 2.6 m high and 2,7 m width wall associated to a cell that is fully equipped with HVAC systems and measurements, allowing to assess the energy performance of those systems on the associated zone. Another cell with an identical wall has been renovated with an ETICS and serves as a business reference. The performance of the two renovations will be compared.



Regarding the LHTES in this version, the Phase Change Materials are encapsulated in aluminium tubes. Custom-made dampers allow changing effectively from one circuit to another while ensuring air tightness. The BEMs (Building Energy Management system) allow collecting the data measured by the sensors and manages both systems effectively. A series of onsite tests is now being carried out (acoustic, thermal measurements, quality of the signals and others)



FIRST TESTING ON THE TEST BENCH IN ANGLÉT

As the SMHRU and LHTES are now installed on the test bench in Anglet (Nobatek), a series of onsite tests is ongoing. We can list the following:

- Value coming from the sensors
- Air tightness tests
- Forced piloting of the ventilators and dampers by the use of the GUI of the BEMS
- Automatic piloting of the ventilators and dampers based on the piloting algorithm implemented in the BEMS



The next step is to install the mineral wool board to insulate the cell and to place the anchorings, profiles and cladding for the ventilated façade.

CONTROL AND VISUALIZATION OF PARAMETERS

Control system is visual and changes are made through the means of selectors and text fields. These graphics are customised for each demo site. The elements are configured with an XML list easy to implement. For the graphs tab, there is the chance to select a range of time and then consult values of variables, daily KPIs and monthly KPIs, also with options to save the data of the time interval related to the LHTES, SMHRU and weather only by using the corresponding buttons.

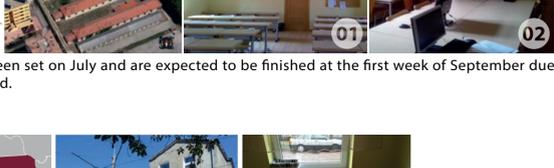


DEMO-SITE PROGRESS

BURGOS - SPAIN

Block 3
Two Rooms:

- 01 Lecture Room 102 m²
- 02 Computer Room 57 m²

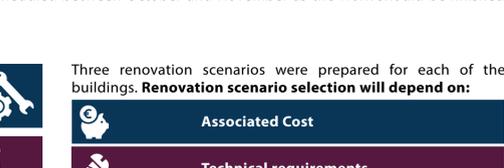


The dates for the refurbishment procedures have been set on July and are expected to be finished at the first week of September due to the summer holidays when the university is closed.

GDANSK - POLAND

Multi-story residential building
Two dwellings:

- 01 Dwelling n°2 (Ground Floor) 32m²
- 02 Dwelling n°7 (First Floor) 32m²



The dates for refurbishment of demo-site in Gdansk are scheduled between October and November as the work should be finished before the winter season.

THE NEXT STEPS

- 01 Manufacturing of the elements and units
- 02 Preparation of the site
- 03 Construction works
- 04 Commissioning

Three renovation scenarios were prepared for each of the buildings. **Renovation scenario selection will depend on:**

- Associated Cost
- Technical requirements
 - Efficiency/Savings/Comfort (Climatic)
 - Structural
- Regulations/Normative
- Social acceptance

THE TEST BENCH VIDEO

The **E2VENT** project released a time-lapse video from the test bench installation in Anglet, France. The E2VENT system is now ready to be tested by **Nobatek**, one of the project partners.



PARTNERS



The project leading to this application has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 637261

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www.e2vent.eu



UPCOMING EVENTS

PASSIVE LOW ENERGY ARCHITECTURE CONFERENCE

One of our partners **Nobatek** will participate in the **Passive Low Energy Architecture (PLEA) Conference** held in **Edinburgh, 3rd to 5th July 2017** to present a paper related to the **LHTES** and **E2VENT** project. The title of the paper is: "E2VENT: an energy efficient ventilated façade retrofit system. Presentation of the embedded LHTES system."

PLEA is a global network that has led a worldwide discourse on sustainable architecture and urban design through its conferences since 1982. Thousands of professionals, academics, students and industry actors from over 40 countries are members of the PLEA.



PAST EVENTS

EU SUSTAINABLE ENERGY WEEK

The **E2VENT** project was presented by **Bernard Gilmont** from **EUROPEAN ALUMINIUM** during a speaking slot at the **EU Sustainable Energy Week 2017** which took place **19th-25th June 2017** in **Brussels**. Sessions organised by the European Commission and energy stakeholders debate new policy developments, best practices and innovative energy ideas, while networking events forge alliances.



WORKSHOP of the PARTNERSHIP in PUBLIC AND PRIVATE SECTOR in HORIZON 2020

The **E2VENT** project was presented by **Petra Colantonio** from **FENIX TNT** during the **Workshop of the Partnership in Public and Private Sector in HORIZON 2020**. The event was organised by the **Technology centre CAS in Prague, the Czech Republic** and took place on **24th May 2017**. The aim of the workshop was to inform about results made during the programs PPP factories of the Energy, Energy-efficient Buildings and SPIRE a Photonics.



INTERNATIONAL CONFERENCE ON BUILDING ENVELOPE SYSTEMS AND TECHNOLOGIES

Paolo Basso from **Rina Consulting** presented a paper related to the **E2VENT** project during the **International Conference on Building Envelope Systems and Technologies (ICBEST)**, which took place **15th-18th May 2017** in **Istanbul**. The presentation was dedicated to the design of the E2VENT and its integration with the building system.



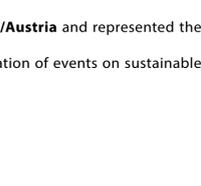
E2VENT PROJECT PART OF THE EEB PPP PROJECT REVIEW 2017

We are proud that the **E2VENT** project is one of the **155 energy efficient H2020 and FP7** projects presented in the **6th edition of the EeB PPP Project Review 2017**. This yearly publication highlights progress and results of 110 co-funded projects within the EeB PPP under the 7th framework programme (FP7) for 2010, 2011, 2012 and 2013 and 45 co-funded projects under the HORIZON 2020 programme for 2014, 2015 and 2016.



JOURNAL OF FAÇADE DESIGN AND ENGINEERING

The **E2VENT** project was published by **Picharchitects** in the "**Journal of façade design and engineering**" **Conference of Istanbul**. Article is called: "E2VENT – design and integration of an adaptable module for residential building renovation"



BUILDING FAIRS – BRNO, CZECH REPUBLIC

The **E2VENT** project was exhibited by **FENIX TNT** at the **Building Fairs in Brno, Czech Republic**. The event took place on the **26th-29th April 2017**. Fairs in Brno are well known for a unique presentation of all aspects of housing and house constructions, building management services, technical solutions, equipment, interior design and furniture. Visitors can learn about the latest developments, trends, products and services in various fields.



LCC AND LCA CONFERENCE

The **E2VENT** project was presented by **ACCIONA** during the **LCC and LCA conference** which took place **14th March 2017** in **Madrid, Spain**. The Conference is dedicated to the analysis of the life cycle and environmental product declarations.

WORLD SUSTAINABLE ENERGY DAYS

On **March 1st-3rd**, **Rina Consulting** participated in the **World Sustainable Energy Days (WSED)**, **Wels/Austria** and represented the **E2VENT** project there. WSED, one of Europe's largest annual conferences in the field of sustainability, offers a unique combination of events on sustainable energy.

M26 GENERAL ASSEMBLY MEETING

The **M26 general assembly meeting** took place in **Anglet, France** on the **22nd and 23rd February**. This meeting was the opportunity to evaluate the project progress. It took place few days after the test bench retrofitting. Various of workshops were conducted in order to deal with the retrofitting of the pilot buildings in **Gdansk** and **Burgos**. The workshop concerning any needed redesign for the prototypes for the prototypes based on the feedbacks received was held there. During the **E2VENT** general meeting, a video showing the demo sites, interviews and projects advances was filmed. The outcome of the filming will be the new project video.

