

# International cooperation

*Article September 2019*



## **INDU-ZERO as a benchmark**

Brian Cassidy, CENG FIEI, is a member of the Advisory Board of INDU-ZERO and works for Cork City Council (Ireland) in the housing maintenance department. The Council maintains 10,000 social houses of many different types varying in age from 1886 to the present. He is convinced that INDU-ZERO is a key success factor in the drive towards a low carbon economy: “Because of the volume and of typologies of houses in European countries including Ireland we have to find a way to industrialize the renovation of the existing stock. INDU-ZERO offers an innovative approach that will enable mass production of the renovation packages. Industrialization is the best way to achieve the climate migration targets set out in the Paris Accord.

## **Benchmark**

“If we succeed in building the smart factories, INDU-ZERO will become the benchmark for everybody and the norm for the industry. That is why Cork City Council is investing in networks amongst the education, industry and government sectors in the participating countries. It requires a joint effort to build a whole new industry that combines expertise from different fields and countries. The European structure of the project offers these possibilities. We can learn from each other’s experience and make sure that the renovation process scan be upscaled significantly.”

**Public perception and increasing awareness**

According to Brian it is also very important that the residents of the houses are involved in the process: “They are easily overlooked when the focus is on Technology. However citizen enagament will be a key success fatcor in the drive towards low carbon economy.” To help increase citizen awareness of the need to move towards alow carbon economy Cork City has become a partner in the Interreg Europe INTENSIFY project (<https://www.interregeurope.eu/intensify/> (<https://www.interregeurope.eu/intensify/>) ) – a project that aims to increase awareness amongst the general population of the need to reduce greenhouse gas emissions.

**Better product, minimum disturbance**

Imparting Brian stated that “Cork is determined to contribute positively to the success of INDU-ZERO, because it has the potential to deliver a better quality product with minimum disturbance to it’s occupants, and increase the rate of the Europe transform to a low carbon housing stock”.

**Note**

European Interregional learning will be a key driver of developing and piloting the technologies that will allow society to function in a low carbon environment. To that end as well as advising INDU-ZERO Cork City is a partner in:

- the Interreg North West Europe project REDWOLF (<http://www.nweurope.eu/projects/project-search/red-wolf-rethink-electricity-distribution-without-load-following/>), a project that will demonstrate how key electrical devices can be combined to reduce greenhouse gas emissions;
- MINI-STOR, a horizon 2020 project that aims to demonstrate the benefits of a specially designed battery prior to its launch on the market;
- EMPOWER (<https://www.interregeurope.eu/empower/>) which seeks to demonstrate how measuring the benefits of low carbon actions can change peoples behaviour.

Cork City also avails of supports from the Irish Energy Authority (SEAI), the Irish Government and the European Cohesion/Eregional Devdlopment funds to reduce carbon emissions from its social housing stock.

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### **Delegation of Strathclyde University visits the Netherlands**

At the end of May two project partners from Strathclyde University together with their researchers visited the Netherlands for 2 days. The goal of the visit was to discuss the first steps towards developing the production process of the INDU-ZERO factory.

The delegation visited two factories: timber frame factory De Groot Vroomshoop and sandwich panel factory RC panels.

During the visit several meetings were planned as well. One meeting took place together with the German logistics partner, the Jade university of Applied Sciences, in order to talk about the logistic interfaces to the factory, within the factory and to the building site where the renovations will occur. A more detailed logistics plan will be presented at the next project partner meeting in Elsfleth (Germany) in July 2019.

The other meeting was with project partners from the Netherlands: Buro de Haan (engineering company), Saxion University of Applied Sciences, D'Andrea & Evers (industrial designer) and Recreate (VR/AR company).

Both these meetings and the factory visits have resulted in a clear understanding of current production methods and the first layout of the new INDU-ZERO factory. The first layout of the factory will be developed in more detail over the coming months and will also be presented at the next INDU-ZERO partner meeting in July 2019.

*Contribution: Ulla-Britt Krämer, project manager INDU-ZERO, Provincie Overijssel, the Netherlands*

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### **More efficiency in housing is needed**

BASF is part of the Advisory Board of the INDU-ZERO project. The worldwide company with divisions in 170 countries produces chemicals for different industries. Pieter van Gent is business director construction chemicals for the Benelux: “By 2050 70% of the people in Europe will be living in an urban environment. This means that more efficiency in building is needed and more high-rise housing. As BASF we have been working on sustainable housing since the early nineties of the last century. So we have been in the forefront of sustainable housing ever since. By producing insulation materials but also as a visionary in presenting showcases and market approaches.”

“We hope to contribute to the project in a way that is both challenging and stimulating. The construction industry is quite traditional and the work is still done manually to a great extent. We can use our expertise in material properties to industrialize the production of the renovation packages in Europe. We have divisions in the countries that participate in the project. So it will be easy for us to translate our expertise to these countries.”

“I often use the car industry as an example to demonstrate how the production facility should be upgraded. Eventually it should be possible to produce a renovation package in one day at a prize that is comparable to a middle class car, so under 40.000 euro a piece. The production process of a renovation package is less complex than that of a car. I think that together we can realize this kind of mass upgrade that can contribute to a more sustainable Europe.”

*Contribution: Pieter van Gent, BASF, the Netherlands*