

## The Largest European Implementation of EEBUS with over 240 Residential Buildings in the Netherlands

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### Content of this press release:

- The EU “REnnovates” lighthouse project is a model for efficient plus-energy renovation throughout Europe.
  - EEBUS enables manufacturer-independent energy management, paving the way for connection to the smart grid.
  - The networking of all energy-relevant systems permits the use of self-produced solar power in the home and connects households to form “smart neighbourhoods”.
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As part of the REnnovates project, the largest Dutch construction company, the Royal BAM Group, with a consortium of nine partner companies, has begun with the energy-efficient renovation of more than 240 single-family terraced houses and equipped them with smart energy management. This has led to an energy modernisation concept for European mass markets as part of a funding project under the EU Framework Programme Horizon 2020.

In addition to renewing and insulating the façade, each house has been equipped with a photovoltaic system and an innovative energy module. The energy module bundles all the energy-relevant devices such as inverters, battery storage systems and heat pumps and thereby powers the building technology. Standardised EEBUS communication is used for the smart networking of these devices.

### **EEBUS connects photovoltaic systems, building technology and the smart grid**

The newly installed technology makes the efficient use of locally generated energy possible. All houses can also be used as active consumers and energy storage devices on the local power grid as part of “smart neighbourhoods” and “smart micro grids” to cushion peak loads, for example.

This is made possible by networking all the components of the energy module via EEBUS. As the “world language for energy on the Internet of Things”, EEBUS ensures that all these systems communicate with each other, using an energy manager to coordinate their supply and demand. As part of the REnnovates project, the EEBUS member company KEO GmbH has developed the appropriate software interfaces to enable manufacturer-independent control of photovoltaic inverters, battery storage systems, heat pumps, hot water storage tanks and networked household appliances. The newly installed, smart electricity meters also form part of this connectivity and enable intelligent load and grid management at district level. In addition, a clear display shows the information on all the energy flows, allowing residents to actively participate in saving energy.

### **An industrial approach for effective renovation**

REnnovates is defined, in particular, by its systematic and industrial approach to modernisation. This has permitted each house to be modernised within only eight days. To achieve this, the consortium partners jointly developed a modular system consisting of a prefabricated building shell and roof supports with integrated photovoltaic modules to

generate the house's own electricity. This can reduce energy consumption by 60%. The energy consumption of the residents on site is further optimised by the innovative energy module with all the domestic components networked via EEBUS.

For Dennis van Goch, innovation manager at BAM Construction & Technique and technical coordinator of the project, RENnovates is the first integral business model that aims to make the energy transition affordable for all parties. For him, the cooperation within the consortium was essential for the success of RENnovates: "As long as parties don't cooperate, we won't solve the problems of the energy transition, such as the necessary transformation to an all-electric energy supply. Network administrators, but also builders, research institutes, governments and investors, need to visit each other and share their knowledge to develop the smart neighbourhood of tomorrow in an integrated manner," says van Goch, as he describes the process.

### **The first project is finished – the next steps**

On 28 Aug 2018, the Royal BAM-led consortium will complete the RENnovates project with more than 240 successfully renovated houses in the Netherlands in order to then transfer it to several European markets. At a closing event in Utrecht, the participating project partners will present their solutions for this innovative modernisation concept in the form of lectures, workshops and an exhibition. This will also offer a valuable opportunity for the various sectors to exchange views. High-ranking politicians such as Eric Wiebes, the Dutch Minister for Economic Affairs and Climate policy, Bart Tommelein, the Flemish Deputy Minister President and Minister of Budget, Finance and Energy as well as representatives of the European Commission are expected to attend.

There will also be a live demo of EEBUS, which will show networked energy management with mature products from many manufacturers in the fields of heating technology, renewable energies, electric mobility, white goods and the smart grid. This means that an expansion of the RENnovates concept can now be reshaped.

"RENnovates involves various manufacturers of different devices and technologies, each speaking their own language. Only standardised communication such as EEBUS enables the best possible connectivity and interoperability," explains Marc Eulen, Executive Manager of KEO GmbH, and emphasises, "In implementing the EEBUS standard under the RENnovates project, we've successfully demonstrated EEBUS' great potential and added value. This implementation is a giant step in the development of EEBUS as a global language for energy and for the future of smart neighbourhoods and smart grids."

"The communication between different systems and sectors with EEBUS is an important factor in the success of RENnovates," says Dennis van Goch, and adds, "EEBUS is an open standard, so we're not locked in to specific systems or manufacturers. Now and in future, we will be free to use the most suitable components for every project in every market."

RENnovates is only the beginning of the systematic and efficient renovation of old buildings; it also holds great potential for new buildings throughout Europe. Further projects based on networked energy management and EEBUS are planned in the Benelux countries, Germany and Spain.

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[Register for the REnnovates closing event](#)

Please visit <https://rennovates.eu> for a video and more information on this project.

For photos of REnnovates please use the following download link:

[https://www.dropbox.com/s/45lmyg7b1d83y77/Bildmaterial\\_Rennovates.zip](https://www.dropbox.com/s/45lmyg7b1d83y77/Bildmaterial_Rennovates.zip)

(Source: Royal BAM Group nv)

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**About EEBUS Initiative e.V.**

The EEBUS Initiative is a non-profit organisation with over 65 members who are the leading stakeholders in all fields of connected home, electrical mobility, energy and smart appliances. Members of the EEBUS Initiative collaborate in various Working Groups to establish a standardized and common language for the interoperability of connected devices. Smart heating, electrical vehicles, photovoltaic systems, smart home systems, energy managers and other appliances can thus communicate seamlessly about energy management and usability. To learn more, visit [www.eebus.org](http://www.eebus.org)

Twitter: EEBUS\_ORG

**About Royal BAM Group nv**

Royal BAM Group nv is the largest construction company in the Netherlands with European subsidiaries in Belgium, the United Kingdom, Ireland and Germany. In its strategic program „Building the present, creating the future“, the Group defined its vision: By 2020 BAM will be recognized as one of Europe’s leading sustainable and innovative construction businesses, active across the total construction life cycle in European home markets and in selected growing economies worldwide. BAM’s philosophy is to offer real value to its clients and work with them in close and lasting collaboration that provides outstanding sustainable performance in relation to the maintenance, innovation and expansion of built environments. [www.bam.com](http://www.bam.com), [rennovates.eu](http://rennovates.eu)

**About KEO GmbH:**

KEO GmbH is a Spin-off Company of the Kellendonk Group based in Cologne and Gladbeck. With 17 Experts the company is working on Software solutions for an ecosystem of connected, interoperable and manufacturer independent energy systems. The products of KEO include the EEBUS framework with several software interfaces. In addition, KEO delivers EEBUS implementations as complete engineering services to customers from the automotive, heating, appliances and renewable energy sectors. Based on its solutions in EEBUS communications, the company has successfully joined in various research projects like the German Economic Department’s (BMWi) Econnect and 3Connect as well as REnnovates as part of the European Union’s Horizon 2020 program. [www.keo-connectivity.de](http://www.keo-connectivity.de)

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