



RECO2ST

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Residential retrofit assessment platform and demonstrations for Near Zero Energy and CO₂ emissions with optimum cost, health, comfort and environmental quality.

Horizon 2020 Innovation Action

Problem statement

The energy retrofit process for residential buildings is fragmented, while adoption of new technologies in the sector is slow. At the same time, this renovation process must be economically sound while solving a problem with many unknown variables at its start.

Project Objectives

- Develop a refurbishment assessment process that will be characterized as a 'Retrofit Kit' to **reduce energy consumption by 60-95%** in renovated buildings, bringing them close to nZEB.
- The Retrofit Kit will combine a number of advanced, cost efficient, and energy saving technologies which can be fitted **30% quicker** than typical renovations, while ensuring occupant comfort.

Outcomes Expected

- Definition of a Refurbishment Assessment Tool (RAT) to determine the optimal Retrofit Kit for each location, using Integrated Project Delivery (IPD) approach and verification of key performance indicators (KPIs).
- Demonstrate the process and its outcomes on 4 residential sites located in UK, Spain, Denmark and Switzerland

Impacts of research:

By the end of the project (June 2021), RECO2ST plans to deliver the following impacts:

- **Reduce energy use by >60%** in order to reach nZEB with improved indoor air quality as comfort measure.
- Affordable system with payback period **under 15 years.**
- Demonstration of high replicability potential and large market uptake.
- **Decrease installation time by >30%** as compared to typical processes for the same building type.
- Promote the formation of a skilled workforce and contractors using a systemic approach to energy renovation.

More info: <https://reco2st.eu/>