Cost-effective deep renovation technologies to make buildings decarbonisation a reliable, attractive and sustainable investment

Deep renovation is a key action to drastically reduce energy demand and achieve the EU vision of a decarbonised building stock by 2050. However, **only 1% of European buildings are being renovated yearly** and shallow retrofits persist with low impact on energy consumption.

The StepUP project is developing **new technologies and solutions** to make building renovation more attractive and affordable.

To achieve this, StepUP uses continuous feedback loops and promotes an iterative deep energy renovation approach, based on data insights, which **minimises performance gaps, reduces investment risks, minimises disruption and positively impacts on energy costs, Indoor Environmental Quality (IEQ) and comfort.**

StepUP will offer a real opportunity to reach NZEBs, by developing a non-intrusive, quick and reliable deep renovation intervention solution that will minimise the duration of onsite works and the risk of installation errors.

StepUP

Solutions and technologies for the uptake of deep energy renovation processes

www.stepup-project.eu

@StepUP_EU

StepUP Project

The project has received funding from the EU's Horizon 2020 programme. Grant N° 847053.

StepUP

Making decarbonisation of existing buildings a reliable and attractive investment

Project objectives

Make renovation more attractive and reliable
with a new methodology based on near-real time data intelligence.

Reduce the performance gap
to 10% by developing an integrated life-cycle software platform

Optimise renovation investments
by developing innovative financial models.

Minimise time on site
to 40% of current renovation onsite work by creating a market-ready modular renovation package of Plug & Play technologies.

Accelerate the renovation market
via an interoperability protocol for renovation solutions, enabling compatibility of StepUP with third-party market products.

Retrofitting solutions for improving building energy efficiency

1

Plug & Play Envelope System
Pre-assembled enveloped panel integrating windows and provisions for the technical systems.

2

Plug & Play SmartHeat solution
Groundbreaking technology for flexible consumption of thermal energy monitored and optimised through StepUP data tools.

3

Holistic iterative methodology
Methodology for a systematic whole building renovation, incorporating the stakeholders' needs at the centre.

4

Innovative financing tools for deep renovation
Energy Performance Contracts (EPCs) based on co-investment, continuous performance measurement and management.

5

Software tools and platform for data collection
Data intelligence solutions to generate a sound base for the continuous measurement and verification of the renovation.

StepUP Pilots

The project's deep renovation solutions will be demonstrated **in three different types of buildings:** multi-family residential dwellings, public non-residential buildings and rental private office buildings.

Schools
A kindergarden in Hungary demonstrating StepUP solutions for public authorities.

Offices
A virtual pilot in Scotland, testing StepUP analysis and diagnosis in working conditions.

Apartments
Multi-owner apartment blocks in Spain applying StepUP to common European housing.