



StepUP

Solutions and technologies for deep energy renovation process uptake

Reliable and cost-effective solutions to decarbonise existing buildings

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About StepUP

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

- **StepUP** develops a new process for deep renovation for decarbonisation, to minimise performance gap, reduce investment risk and maximise value.
- To achieve this, the project uses continuous **feedback loops** and **promotes an iterative deep energy renovation approach**, based on data insights, which positively impacts on energy costs, Indoor Environmental Quality (IEQ) and comfort.



*“The **StepUP** approach relies on a set of solutions and technologies applied at different phases of the implementation of the renovation methodology”*

StepUP pilots

StepUP solutions will be demonstrated in three different types of buildings

1 Public non-residential buildings (Hungary)

2 Rental private office buildings (UK)

3 Multi-family residential dwellings (Spain)



StepUP solutions

- 1 Plug & Play Envelope System**
Pre-assembled envelope 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 Innovative financing tools for deep renovation**
Energy Performance Contracts (EPCs) based on co-investment, continuous performance measurement and management
- 4 Software tools and platform for data collection**
Data intelligence solutions to generate a sound base for the continuous measurement and verification of the renovation



Objectives



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



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



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



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



Optimise renovation investments by developing innovative financial models

Key challenges

1

Interoperability

Set up an open environment of technical specifications which ensure renovation products are intercompatible:

Plug & Play Protocol

<https://www.stepup-project.eu/results/>

P1	Industrialisation	P1.1	Preassembled Offsite
		P1.2	Low Intrusive System
		P1.3	Easy and time-saving on-site installation
P2	Customisation	P2.1	Adaptable to different architecture geometries
		P2.2	Adaptable to different architectural aesthetics
P3	Compatibility and Interoperability	P3.1	P&P Envelope and Smart Heat
		P3.2	P&P Envelope and TPC
		P3.3	SmartHeat and TPC
		P3.4	SmartHeat and District Systems
P4	Circularity	P4.1	Low Embodied Energy
		P4.2	Lean Philosophy
		P4.3	Design for Disassembly
P5	Open Exchange Information	P5.1	Technical Sheets
		P5.2	2D 3D Drawing
		P5.3	BIM objects
P6	Certification and Regulation	P6.1	European Union Regulations
		P6.2	Environmental Certificates

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Clustering

Bring together innovative technology providers to test integration, share knowledge, find joint route to market for compatible products:

TPCs (Technology Provider Clusters)

<https://www.stepup-project.eu/tpc-getinvolved/>

StepUP

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THANK YOU!



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