

outPHit is addressing barriers to the uptake of high quality deep retrofits by

- **INTEGRATING** the use of streamlined processes and pre-fabricated elements with the high performance of the EnerPHit Standard
- **SUPPORTING** building component suppliers to further improve their products for use in deep retrofits to the EnerPHit Standard
- **CRAFTING** a certification scheme for whole house renovation systems as well as tools and guides to support decision making
- **DRAFTING** simplified monitoring and approval concepts for the renovation design stage
- **ENCOURAGING** a one-stop-shop business model for deep renovation by collaborating with local contractors and building users
- **BOOSTING** demand for streamlined, high performance approaches by involving stakeholders in the promotion of findings

DELIVERING ON PERFORMANCE



Find out more about how outPHit is making deep retrofits faster, cheaper and more reliable on

outphit.eu

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DEEP RETROFITS MADE
FASTER, CHEAPER
AND MORE RELIABLE

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Photo: ecoworks

Our building stock is generally inefficient. The energy that our buildings waste makes them both key contributors to climate change and amplifiers of energy poverty. Deep retrofitting tackles this waste and improves building performance, yet the accessibility and delivery of consistently high quality deep retrofits presents a challenge.

outPHit makes deep retrofits faster, cheaper and more reliable by pairing approaches such as the Energiesprong and serial renovation with of the EnerPHit Standard for renovations according to Passive House principles.

On the basis of case studies across Europe, outPHit is **addressing barriers to the uptake of high quality deep retrofits** and facilitating the development of high performance renovation systems, tools for decision making and quality assurance safeguards.

TACKLING INEFFICIENCY

We believe in **minimising the points of contact** when it comes to the planning, financing, execution and quality assurance of a renovation. Services that these contact point should be able to provide include:

PLANNING Defect remediation
 Commissioning **WARRANTIES**
Architectural surveys Manufacturing
ENERPHIT CONSULTANCY MONITORING
QUALITY ASSURANCE & CERTIFICATION
ASSEMBLY Funding & related advice
 Installation

outPHit brings all the pieces together to facilitate rapid deep retrofitting solutions to the EnerPHit Standard.

EnerPHit is perhaps the world's most **stringent and comprehensive** standard for energy retrofits. Elaborated on the basis of sound building physics, EnerPHit calls for the consistent use of high quality, energy efficient building components. The result is outstanding energy performance as well as:

- Uniformly warm walls, floors and windows with no more draughts, condensation or mould
- A constant supply of fresh, filtered air at just the right temperature making for superior air quality
- A reduction in heating of up to 90% meaning independence from energy price fluctuations and a safeguard against energy poverty
- Reduced CO₂ emissions due to a lower heating and cooling demand

Photo: Sam MaCafee



Photo: ecoworks

A variety of methods have been developed to make energy retrofits both faster and cheaper. outPHit is taking advantage of **two main approaches** in particular with the EnerPHit Standard as the basis.

STREAMLINING CONVENTIONAL RETROFITTING

Conventional retrofitting can be challenging, especially in terms of timing and costs. These challenges can be significantly lessened with digitised, streamlined processes. Such processes optimally organise the multitude of organisations involved. They provide building owners with accurate and timely information, allowing them to make informed decisions on energy efficiency improvements.

PREFABRICATION IS SIMPLIFICATION

Serial renovation and Energiesprong approaches make use of pre-fab components, assembled off-site. Digitised building processes combined with prefabricated wall and roof assemblies as well as prefabricated building modules bring all the actors together from the start, reducing the cost and time needed to retrofit. The benefits become even more evident when larger numbers of similar buildings can be retrofit in one go.

How does EnerPHit ensure such high levels of **energy performance, comfort and quality?**

The answer lies in the Passive House principles at its foundation.

Passive House combines unparalleled comfort with extremely low energy consumption. A focus on **quality design and craftsmanship** paired with superior windows, high levels of insulation and heat recovery ventilation are the key elements that set Passive House construction apart.

The EnerPHit Standard ensures **Passive House quality in retrofits**, calling for the consistent use of Passive House components and very low annual space heating demands. With EnerPHit, you lock in optimal cost and energy savings as well as the highest levels of comfort for decades to come.

Photo: Hellenic Passive House Institute

Photo: Beattie Passive Building Systems