



Sustainable solutions for affordable
REtroFIT of domestic buildings

Opening-
objective of the
workshop

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WS1 SUREFIT- Sustainable Solutions for Affordable Retrofitting of European Domestic Buildings

Risto Kosonen, Yangmin Wang, Juha Jokisalo and Simo Kilpeläinen
Aalto University



The University of
Nottingham

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Aalto University



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ADVANCED
MANAGEMENT
SOLUTIONS



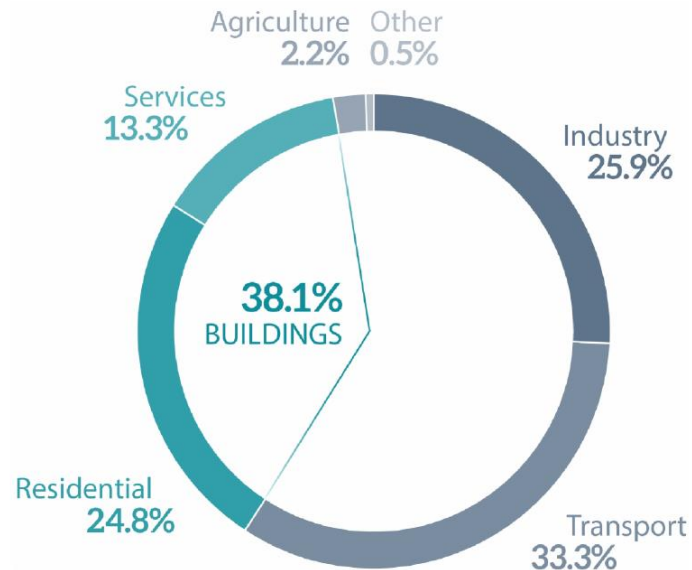
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 894511.

Buildings share 40% of the EU energy consumption



“Reflections of a Polar Bear” created by Smudge 9000, retrieved from: <https://www.flickr.com/photos/7599112@N08>

Energy consumption by sector in the EU



Data source: Eurostat, image retrieved from: <https://epthinktank.eu/2016/07/08/energy-efficiency-in-buildings/>



“BedZED” created by Tom Chance, retrieved from: <https://www.flickr.com/photos/53532973@N00/1008213420>.



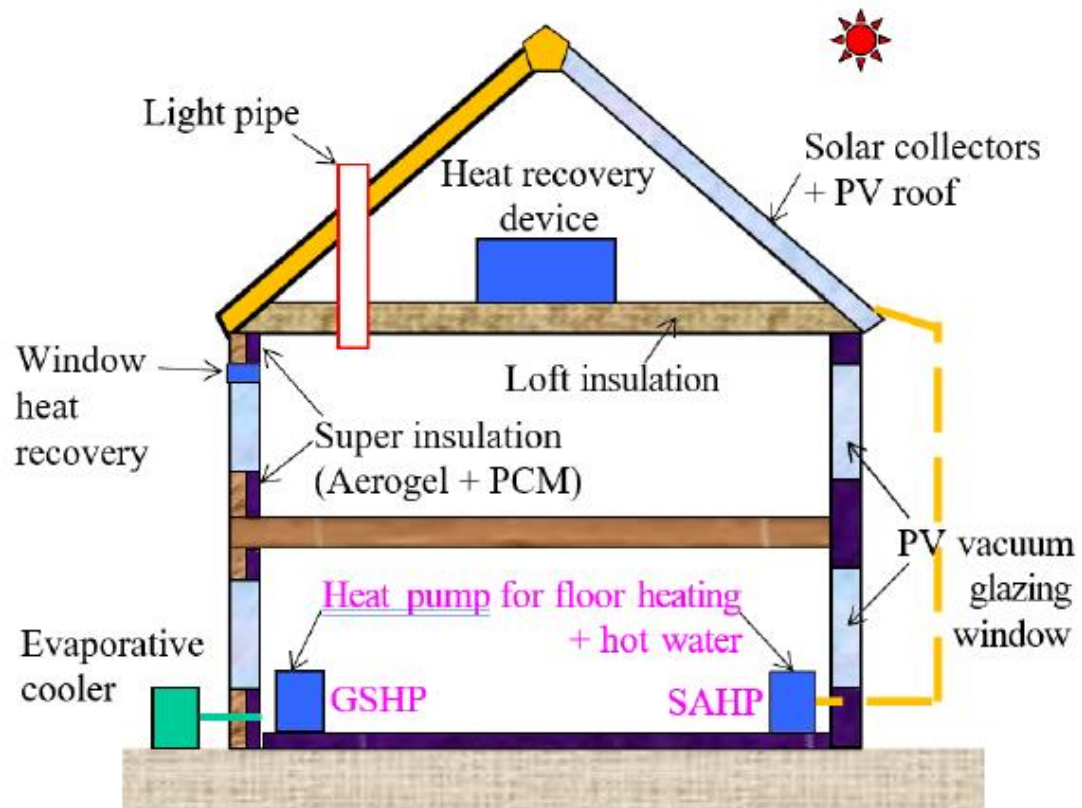
75% of the EU building stock is energy inefficient.

Project Objective



- SUREFIT will demonstrate fast-track renovation of existing domestic buildings by integrating innovative, cost-effective, and environmentally-conscious prefabricated technologies;
- SUREFIT will aim to reach the target of near zero energy through, reducing heat losses through building envelope and energy consumption by heating, cooling, ventilation and lighting, while increasing the share of renewable energy in buildings;
- In summary, this project will achieve:
 - ✓ Reduction in primary energy use and carbon emission by 60%;
 - ✓ Reduction of cost by 50%
 - ✓ Reduction of time for renovation by 40%

Retrofitting technologies



- Bio-aerogel thermal insulation
- Breathable membrane
- Phase-change materials
- PV glazing
- Distributed ventilation & heat recovery
- Solar-assisted heat pump
- PV/T solar collector
- Daylighting louvers
- Evaporative cooling

Demo buildings

Social house,
Portugal



843

Small apartment
building, Greece



981

Semi-detached house,
UK



2596

Small apartment
building, Spain



2089

Large apartment
building, Finland



3998

Heating degree days (17 °C)



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Thank You!

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