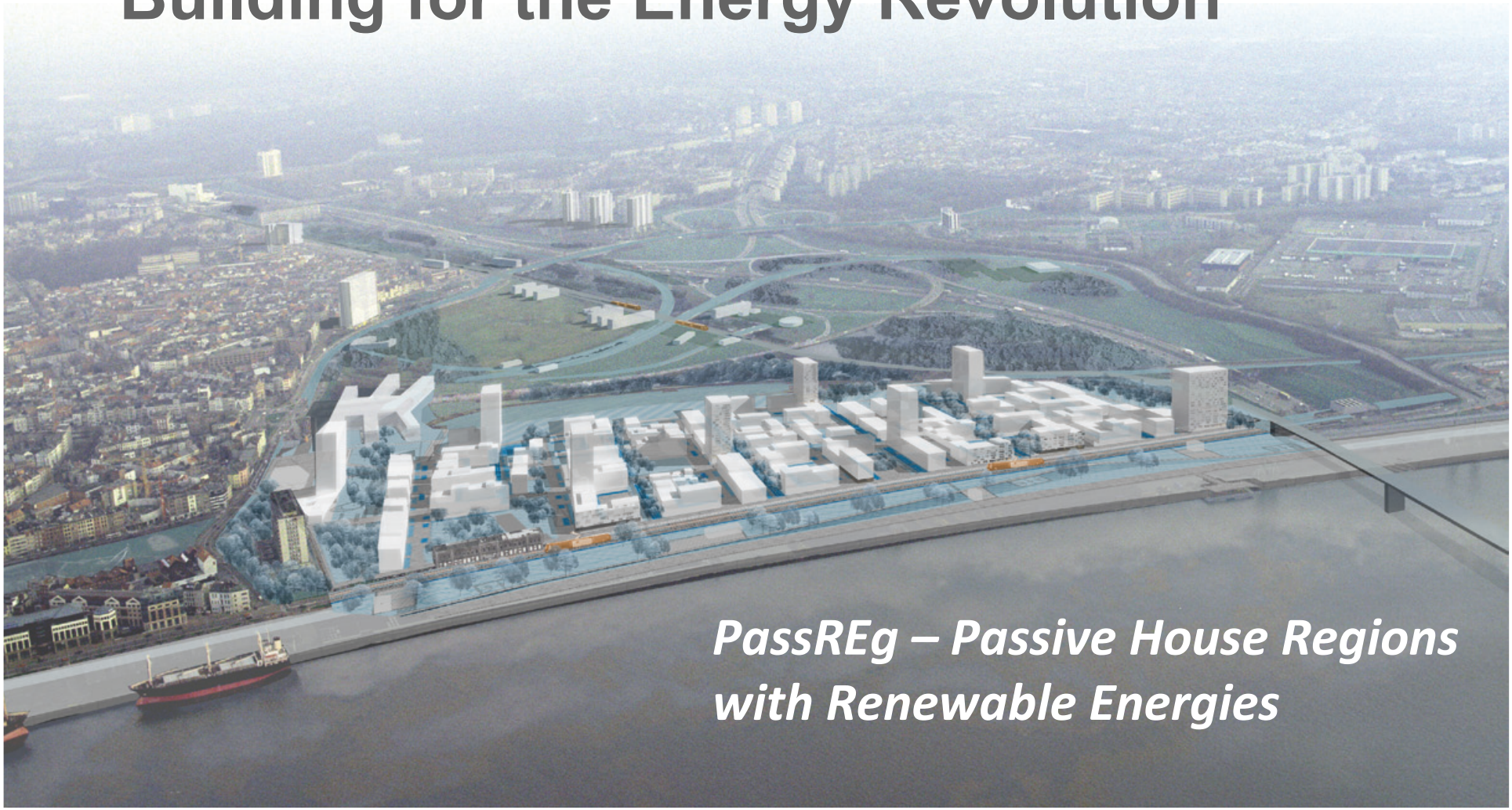
PassREg

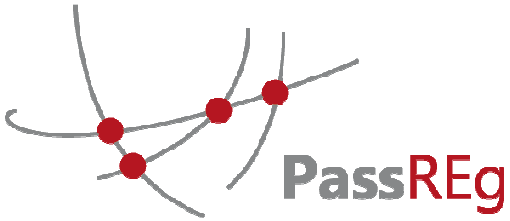
Building for the Energy Revolution



Overview

- Building for the energy revolution
- Passive House: a solid basis
- The PassREg project
    - Learning from best practice
    - Key outputs
    - Building the groundwork: Quality Assurance
    - Building the groundwork: Training
    - Sector specific benefits and opportunities
    - Project partners

Building for the energy revolution



In the face of climate change, the EU has set ambitious goals for an energy revolution...

The building sector represents 40% of our carbon emissions and is KEY to this revolution!

The EU Energy Performance of Buildings Directive (EPBD)

- All new builds must be Nearly Zero Energy Buildings (NZEBs) by 2020; all public buildings by 2019
- NZEBs must be cost effective over their life cylces
- NZEBs must be supplied by RES where possible

We need solutions! PassREg has answers...

Passive House: a solid basis

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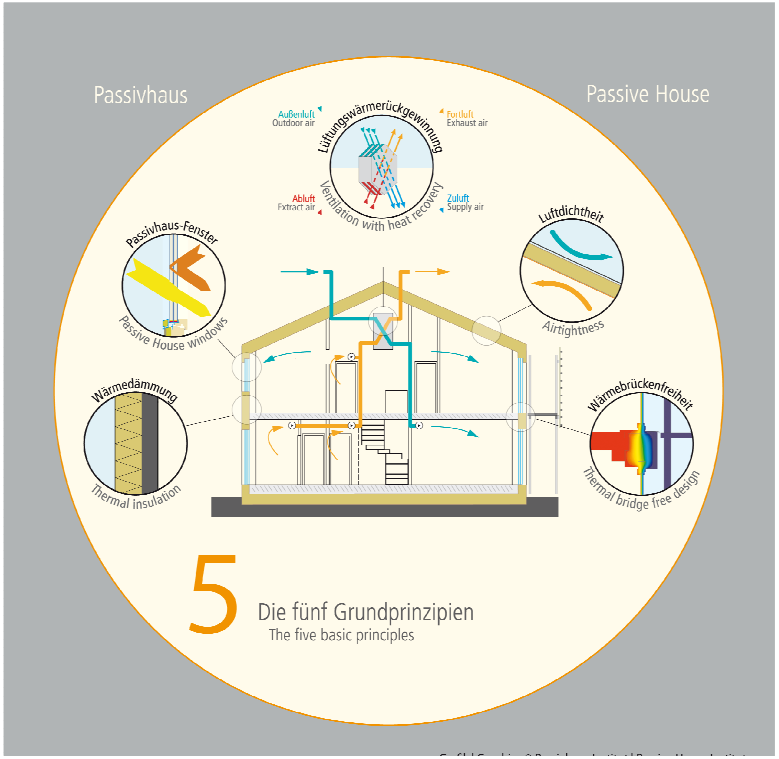
Passive House is the basis

- Internationally recognised building energy standard
- Applicable to a variety of climates and building types
- Maximum comfort with minimal energy use and life cycle costs
- Tried and true over 2 decades
- Assessed with the Passive House Planning Package (PHPP)



Passive House buildings use up to 90% less energy than ‘typical’ buildings

Passive House: a solid basis

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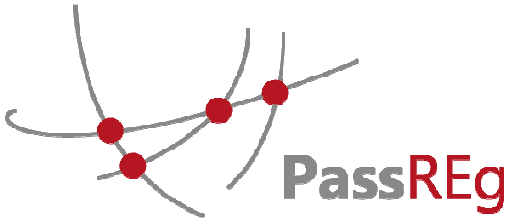
Passive House makes renewables feasible

Energy efficiency first!

Passive House reduces energy demand such that it becomes more feasible and economical to supply remaining energy needs with renewable technologies, onsite or nearby

The PassREg project



The PassREg project promotes the growth of

Passive House **Reg**ions with **R**enewable **E**nergies

Regions that promote an 'energy efficiency first' approach with the Passive House Standard, thus making renewable energy sources to deliver the remaining energy demand feasible

Some regions are already successfully implementing Passive House with renewable energies; Others have a longer road ahead of them…

The PassREg project

14 Partners. 11 Countries. 3 Years. 1 Goal.

Supporting the growth of Passive House regions

PassREg: an EU funded project, under Intelligent Energy Europe (IEE) programme helping regions to implement EU energy goals in construction

PassReg helps aspiring regions succeed by

- Investigating successes
- Making them known and accessible
- Building up training, quality assurance and certification infrastructure
- Simulating the market for suitable products and professionals

Learning from best practice

PassREg draws from experiences in front runner regions (already implementing Passive House + RES)

The Region of Tyrol (Austria)
The Brussels Capital Region (Belgium)
The City of Hanover (Germany)
The City of Frankfurt am Main (Germany)

Front runners may also learn from one another or from aspiring reigons in this process!

Through
Awareness raising
Dissemination

Makes them accessible to aspiring regions striving to become front runners themselves

Learning from best practice

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Key fields of focus

- Policy and strategy implementation
- Financial mechanisms
- Education and training needs
- Quality assurance

One to one transfer is NOT the goal!

Tailoring successes for local contexts is critical to all areas!!

Key outputs

- New Passive House buildings + RES throughout partner countries as case studies (Beacons)
- A ‘Success Guide’ detailing successes in frontrunner regions
- A ‘Set of Solutions’ detailing individual solutions and resources
- International and regional events and study tours
- Wider network of important actors in the regions

Building the groundwork: Quality Assurance

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Key quality assurance methods for NZEBs on the basis of Passive House:

- Competence in the use of the Passive House Planning Package (PHPP): the energy balance and design tool
- Certification of suitable components
- Certification of Passive House buildings
- Certification of qualified tradespeople and designers

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Building the groundwork: Training

The availability of high quality training will facilitate delivery of Nearly Zero Energy Buildings on the basis of Passive House

Courses for Designers and Tradespeople will be rolled out in the regions

New modules to existing courses are being developed

- Integrated design procedures
- Integration of renewable energy supplies
- Energy efficient cooling
- Training for Passive House Building Certifiers

Sector specific benefits and opportunities

Policy makers and local authorities

Highlighting mechanisms for target setting, implementation and leading by example

Financiers

Extracting and disseminating models for financing

Developers and housing associations

Understanding lifecycle costs/ impacts and benefits to occupants

Architects and engineers

Up-skilling in low energy design techniques

Construction companies and craftspeople

Training for high quality on-site delivery

Manufacturers of building components

Exploring new market opportunities, product certification, wider exposure

Opportunities for policy makers and local authorities

Learn from regions successfully implementing wide-scale NZEBs to:

- Establish ‘cost optimal’ solutions in line with EPBD
- Provide mechanisms for target setting

Lead by example through own construction projects

- Explore financing options

Provide guidance to help the industry deliver the desired outcomes

Conferences, workshops and study tours to witness demonstration buildings first hand

Opportunities for financiers

Ethical investment, allowing portfolio holders to differentiate themselves within the market

Learn about proven methods for delivering low energy buildings economically

Explore financial models used by successful projects and regions

Conferences, workshops and study tours to witness demonstration buildings first hand

Opportunities for developers

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Learn about proven methods for delivering low energy buildings economically

Explore financial models used by successful projects and regions

Understand lifecycle costs, impacts and benefits to occupants

Conferences, workshops and study tours to witness demonstration buildings first hand

Opportunities for designers and engineers

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Learn about proven and varied methods for delivering low energy buildings economically

Understand lifecycle costs and compatibility with other existing national standards

Training in low energy design techniques

Conferences, workshops and study tours to witness demonstration buildings first hand

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Opportunities for Construction companies and craftspeople

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Learn about proven and varied methods for delivering low energy buildings

Understand lifecycle costs and compatibility with other existing national standards

Training for high quality on-site delivery

Conferences, workshops and study tours to witness demonstration buildings first hand

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Opportunities for manufacturers

Increased delivery of NZEBs will bring demand for high performance construction products and systems

Potential for manufacturers to adapt and diversify to expand into new markets

Product Certification by the Passive House Institute

Regional and international exhibits, workshops, events and study tours at which to promote and market products

Project partners

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Get involved! www.passreg.eu

Passive House Institute (DE)
iPHA (DE)
Passiefhuis-Platform (BE)
Plate-forme Maison Passive (BE)
EnEffect Group (BG)
DNA in de Bouw (NL)
City of Zagreb (HR)
End Use Efficiency Research Group, Politecnico di Milano (IT)
IG Passivhaus Tyrol (AT)
Environmental Investment Fund (LT)
Municipality of Cesena (IT)
Nobatek (FR)
BRE Wales (UK)
proKlima (DE)
Burgas Municipality (BG)