



Final Project Report

10th February 2013

This report has been prepared by the consortium partners of the project TRAINREBUILD, based on the material developed during its implementation.

Detailed information on the project is available on the website:

www.trainrebuild.eu



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Foreword



An energy transition cannot succeed without energy savings and increased energy efficiency.

Nevertheless, the achievement of energy efficiency target of 20% by 2020 is still a key challenge both in European and German energy policies.

The building sector is crucial to reach this efficiency objective. This sector is responsible for about 40% of the final energy consumption and a third of the CO₂ emissions.

With the national implementation of the Energy Performance of Buildings Directive, Member States must ensure that no later than 2021 all new buildings are "nearly zero-energy buildings". This generates new planning and construction requirements; builders, installers and architects in particular have to work hand in hand. Given the fact that around 75% of the current building stock will still exist in 2050, the renovation of the existing building stock is also crucial.

Following the adoption of the new Energy Efficiency Directive, Member States have to develop by 2014 a long-term strategy for mobilising investments in the renovation of the national building stock. Simultaneously, the

public sector is meant to become a role-model regarding energy refurbishment of buildings and public procurements. Thus, Member States have to ensure that annually 3% of the central Government Institutions' building floor area will be renovated in an energy efficiency manner or that measures having equivalent effect will be undertaken.

We all know that this is easier said than done. There are still obstacles, especially the lack of financial resources and necessary initiatives. However, I am optimistic that we can achieve our goals. European projects such as the Intelligent Energy Europe funded project TRAINREBUILD, which through innovation and cooperation demonstrated in practice how crucial instruments for effectively saving energy should be shaped, also contributed to this objective. The TRAINREBUILD project did not only propose an integrated approach to training and communication, but also and in particular an instrument to change public and private property owners' mindset.

Disclaimer: Translated from German by the TRAINREBUILD Project Team



A handwritten signature in black ink, which appears to be 'Günther Oettinger'.

Günther H. Oettinger

European Commissioner for Energy

1. Background and Introduction



1.1. Context

TRAINREBUILD was an Intelligent Energy Europe project that commenced in December 2010; operated for 24 months until its conclusion in December 2012.

The objective of the project was to design a comprehensive value chain strategy to generate change in thinking of public and private property owners regarding the link between energy efficiency and value related to building ownership. The project aimed to train property owners and local authorities – the demand side of the renovation value chain - and encourage retrofitting in a wide range of residential buildings, spanning from individual to multi-family houses and from private to social housing.

TRAINREBUILD intended to aim at two focus groups providing them with targeted training:

1. Experts of property owners associations in United Kingdom, France, Italy, Germany, Spain, Greece, Belgium and
2. Local authorities' officials in charge of the retrofit of buildings in some Covenant of Mayors (CoM) cities in Hungary, Bulgaria, Romania, Portugal and France.

On the growing impact of EU legislation on the work actors in the building chain, the recently recast Energy Performance of Buildings EPBD (2010/31/EU) calls for more information and training to assist property owners and their advisors. EU measures aimed to improve the energy performance of the built environment have created more stringent building regulations and construction standards. Therefore, increased information transparency and change in behaviour can further encourage energy conservation and low and

zero carbon energy production among private owners.

TRAINREBUILD was the first EU supported project which had property owners and local authorities at the core of its consortium with the aim to train civil servants and homeowners and to promote breakthrough strategies and practices to enhance the energy consumption of existing buildings.

Property owners occupy a central role within the building chain. Ultimately, the owners decide what, when and how to carry out refurbishments - specific low energy solutions will only be successful if they are desired by homeowners. They are also the ones who have to support the financial burdens of these measures. Therefore, consumer information and confidence in saving solutions and technologies play a vital role in reducing energy consumption and generating clean energy in the built environment.

Currently, there is a lack of independent, authoritative and understandable information on what measures property owners should take to retrofit their assets and how these solutions can be procured. The complexity of the work necessary to retrofit buildings, the lack of knowledge on the best available cost-effective technologies, the lack of information on the available funding schemes and how to access these are clearly the main reasons for property owners' reluctance and scepticism towards retrofitting. They fear unexpected costs and damage to their buildings and consider that such improvements should be the responsibility of the next generation.

The key driver for demand of energy efficiency and renewable energy in buildings is closely linked to value. The TRAINREBUILD training events aimed to provide instruments to owners to evaluate that an increased energy

efficiency of dwellings, if it is carried out in a cost-effective manner, does not just reduce energy expenses, but it also has the potential of increasing a properties capital and rental value, improve comfort and health, retain tenants and reduce void periods. As energy performance certificates will be

required as part of advertisements, property owners will be more aware of the link between energy performance and value of their buildings, therefore they will be looking for advice on how to improve their properties to take advantage of any possible improvement in value.

1.2. Achieved Results

The main results of the TRAINREBUILD project can be summarised as follows:

- 1 survey of training needs and best training practices in retrofitting;
- 3 training toolkits, 1 for the trainers of property owners associations, 1 for the trainers of co-owned multifamily buildings and 1 for the trainers of civil servants from selected local authorities members of the Covenant of Mayor (CoM) in 11 countries;
- 1 manual on training on financial mechanisms for professionals in 11 countries;
- 29 training events in 11 EU countries: Belgium (2), Italy (3), France (8), Germany (5), Greece (2), Spain (3), UK (2), Hungary (1), Romania (1), Bulgaria (1) and Portugal (1);
- 7 national service packages to assist individual property owners towards the renovation process in 7 EU countries;
- 4 sets of policy recommendations from 4 events of the European Training for Rebuilding Forum;
- 11 national action plans and 2 European action plans (1 for property owners associations and 1 for local

« The Architects Council of Europe is embracing the outcomes of TRAINREBUILD acknowledging that the project has successfully set the grounds not only for a market transformation in the building sector to reach the EU 2020 energy goals, but also for a process that eventually will ensure a successful integrated approach in the retrofitting of residential buildings. The toolkits produced are of particular value to architects. They can be very useful in “convincing” clients to renovate their properties. The Architects Council of Europe will continue to promote to its members the outcomes of the project with a focus on the national adaptations of the toolkits. »

Selma Harrington

President, Architects Council of Europe (Project Partner)

- authorities) to scale up renovation in the EU and assist member States in producing their renovation roadmaps required under the EU Energy Efficiency Directive;
- A series of 11 voluntary commitments of national property owners associations to promote energy efficiency renovation and outreach to individual property owners in their local constituencies informing them about retrofit solutions, opportunities, encouraging collaborations between groups of owners and promoting the organisation of further trainings;
- Assistance regarding energy saving solutions provided to 500.000 property owners through the service package with the aim to reach 3 million until 2020. Out of 3 million property owners informed in the EU27, approximately the 2% of them will likely retrofit their properties over the following years;
- 8 short videos showcasing best practices in the field of retrofitting.

1.3. Partnership

The project involved the following ten partners:

European Partners for the Environment (EU)



The Royal Institution for Chartered Surveyors (EU)



The Architects Council of Europe (EU)



International Union of Property Owners (EU)



ESG Intelligence Consulting (France)



Regional Environmental Centre (Hungary)



Citta' Studi Biella (Italy)



Arene Ile-de-France (France)



Association of Professional Building Managers (Belgium)



Agencia Municipal de Energia de Cascais (Portugal)



2. Project Phases and Dynamics



2.1. Project Phases

The objectives of the project were related to executing three main phases, namely:

1. **PHASE ONE:** (survey of best practices in training the target groups),
2. **PHASE TWO:** (capacity building for professionals) and
3. **PHASE THREE:** (training deployment to the target groups).

After having assessed the training needs for the target groups and identified best practices in retrofitting, the project organized three laboratories to present the results of the survey and collect feedback from a broad range of professional stakeholders. In the next phase, the project brought together the knowledge resources gathered, produced

valuable training packages (one for property owners associations and one for local authorities), organized two train the trainers sessions to brief on the content of the training packages and finally organized two round of trainings in a number of priority countries directed to the target groups of the project: (a) national associations of property owners and individual property owners (second round) and (b) selected local authorities members of the Covenant of Mayors. In addition, a European Training Forum together with a dedicated Build Up Virtual Community complemented the communication approach ensuring that the project outcomes were disseminated, relevant feedback was factored and links were established with the whole building value chain.

2.2. Project Dynamics

The main aim of the project was to upgrade capacity and train public and private building owners with the aim to improve the energy performance of the existing EU building stock. The main project outcomes (the service package tested and developed during the second round of training) should be disseminated to 3 million property owners until the year 2020, with the hope to incentivize the 2% of them to retrofit their properties in the year after the service package has been transferred to them. This 2% figure has been

formulated as to aim beyond the 1.2% average refurbishment rate per year estimated by the European Commission but below the 3% refurbishment rate per year for the public sector indicated in the new EU Energy Efficiency Directive.

TRAINREBUILD was a training project aimed at creating an enabling framework for households and property owners to make energy efficiency investments. The training sessions took place during the second year of the project. Once having participated in these sessions, the national property owners associations transferred the service package to their own members at local level who transferred it or will transfer it to individual property owners, thereby testing the content of the service package. This took place at the very end of the project (end of year 2012) and will lead to retrofit plans by year 2013-14 at the earliest.



The project created a “value chain partnership” for training with property owners at the core and specifically between those having to “buy” a building (private or public property owners) and/or invest in the retrofit and the supply chain that “sells” it. It promoted an integrated approach based on training by technicians and professionals whose daily work has an impact on the design, selection, approval, installation, operation, maintenance, sales and marketing of sustainable building systems. This will in turn reduce risks and costs, while protecting the environment and create new jobs.

The long term purpose of the project was to create a significant European dimension for training "building professionals", i.e.

associations of private owners, residential building managers and local authorities to foster market transformation and develop a scale effect to reach the EU2020 Objectives, particularly a 28% reduction in CO₂ emissions in the built environment by 2020 and 20% share of renewable energy by 2020. Indeed, successful strategies to foster economic revival and the shift to a low-carbon economy depend on whether all the players in the value chain are capable of getting mobilized and joining forces to correctly implement at member State level the objectives set by the European Union in the field of climate change.

3. The Survey of Training Needs for the Target Groups



3.1. Survey Background

The survey conducted in the framework of the project focussed on best practices in training property owners and local authorities for the purpose of retrofitting, engineering co-operation among stakeholders along the building value chain and assessing the interactions between value chain partners (cooperation between building professionals, between building professionals and local authorities, between private owners and building professionals, between all these categories and financiers).

It appeared that on the side of property owners, there was a real lack of initiatives promoting training for energy-efficient retrofitting of residential buildings. There were in fact very few experiences that aimed to gather these very important actors around the same table with building practitioners and train them with innovative concepts for energy savings in buildings. Indeed, most of the training tools and projects included in relevant websites tackled generic vocational training,

training of inspectors, technical installers etc, but not building occupants, residential building managers and owners. It was therefore assumed that filling this gap by developing training schemes, which would target these actors, would have had a direct impact on the decision to retrofit the existing building stock in most of the countries targeted by the project.

Despite preliminary indications confirming that there were more best practices targeting new buildings than existing ones, it is a well established fact that the existing building stock represents the biggest potential of CO2 reductions and economic saving. This is why the survey exclusively focused on training for retrofitting existing residential buildings. In addition, the majority of EU funded projects surveyed confirmed that the main target of the current best practice collection at EU level focused on generic awareness raising but not on capacity building/training for the benefit of the priority group targeted by TRAINREBUILD.

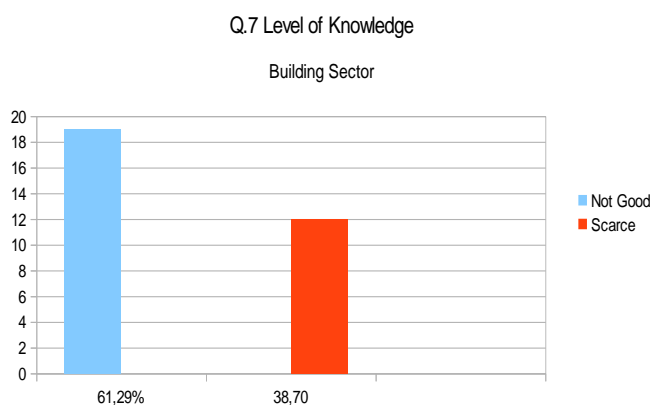
3.2. Survey Results

The analysis of the questionnaires circulated in preparation of the survey proved that all respondents felt there is a clear lack of initiatives and a need to act to make property owners change their behaviour towards the retrofitting of residential buildings, and that the project TRAINREBUILD can seriously contribute to implementing such change.

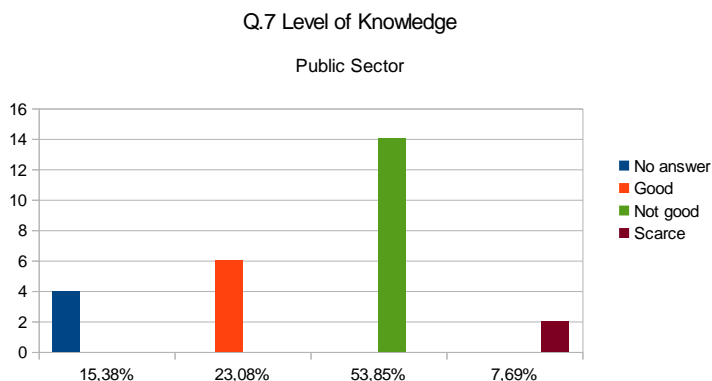
The property owners associations interviewed were all eager to have some of their staff trained to better tackle this vast subject and to make specific services available to their members. The public sector was equally convinced of the necessity to act and was looking forward to a holistic approach that puts together financial and technical aspects with

enhanced communication skills. Results of the survey (as shown in the charts below) indicated that both target groups possessed a low level of knowledge of the renovation benefits.

Knowledge of individual property owners



Knowledge of local authorities



The complexity of the work necessary to retrofit buildings, the lack of knowledge on the best available cost-effective technologies, the lack of information on the available funding schemes and how to access them were clearly the main reasons for property owners' and local authorities' reluctance and scepticism towards retrofitting.

The service package which was developed at the end of the project for property owners' organizations, based on the training package, was also perceived as an opportunity. The interest in the subject was further corroborated by the fact that almost all respondents wanted to be kept informed of the main project activities and deliverables.

The outcome of the survey demonstrated that the target groups of the training, had to be looked at carefully, possibly taking into account the needs expressed by the different categories of associations interviewed:

- Associations of property owners need to train their staff to organize seminars and to use the service package in order to reach the final target, property owners, directly;
- Associations of building managers and of building professionals represent an intermediate link in the value chain. Their members expect

from their associations services that are often of a less informative nature and that go into further depth on specific aspects (whether they be legislative, fiscal or technical).

In the public sector, the necessity to take into account that municipality staff attending the training can come from different departments (town planning, social housing management, etc) and hence might have different expectations and needs was taken into account.

It appeared that almost all respondents (both private and public) offer services or organize seminars and events on the topic of buildings renovation. All agreed that the key issue was to raise the interest of property owners and make them understand that an increased energy efficiency of buildings does not just reduce energy expenses, but also has the potential to increase property values, both capital and rental. Consumer information and confidence in environmental solutions and technologies, in their opinion played a vital role in reducing energy consumption and generating clean energy in building environments.

The interest shown in the survey went beyond the project resources available, which can organize only a limited number of pilot training of trainers sessions and pilot seminars. Modular training that can be better adapted to suit the needs which emerged in terms of both length and desired level of knowledge in each key area seemed to be the best solution, enabling each association/local authority to organize longer or shorter training sessions and also to decide, on the basis of the target attendees, which subjects should be dealt with in more depth.

The associations interviewed had different ways of looking at the training seminars. Many

of them preferred a format lasting less than half a day to be repeated various times across their countries, while some prefer one-day events with a conference-like approach and a large number of participants supported by good media coverage.

As for the key topics, it appeared that respondents pointed out their interest towards incentives and technologies, while on legislation and communication building owners and the public sector had different perceptions, the first group preferring the former and the second group the latter.

The survey concluded that the message to be conveyed to property owners during the training should have included a sort of "value proposition". This should focus on what benefits each target group will receive by being involved with the project:

- **PROPERTY OWNERS:** What are the benefits of retrofitting and integrating renewable energy technologies into their properties?
- **BUILDING PROFESSIONALS:** How can you sell more services and attract more customers by training and

acquiring new customers for energy efficiency retrofitting and renewable technology integration?

- **LOCAL AUTHORITIES:** How can you save public resources and meet local energy savings and environmental targets? How can you use your energy-efficiency as a way to attract new businesses and residents to your area?
- **FINANCIAL PROFESSIONALS:** How can you attract new clients and develop newer lower-risk financial products through retrofitting or renovation loans and other forms of financing? How can you partner with building professionals to offer financing to property owners that have made the decision to retro-fit?

Following these preliminary results from the survey, project partners produced an external communication plan to include profiling/segmenting the target group of property owners based on the building type and individual mindset characteristics, which should have maximized outreach efforts:

PROFILE ONE		PROFILE TWO	
Property owners' champions of retrofit, having already retrofitted and providing a model for other property owners to follow. Partners active in the target countries will identify the champions to share their experience		Excellent looking for retrofit and fairly easy to reach a green light decision on retrofitting	
PROFILE THREE		PROFILE FOUR	
Excellent looking for retrofit, but not easy to reach the green light decision on retrofitting		Dubious looking for retrofitting and not easy to reach the green light decision on retrofitting	

4. The Laboratories on Capacity Building for Professionals



4.1. Background

The laboratories organised in the framework of the project meant to address in a collaborative way the development of a comprehensive “value chain strategy” representing the entire building sector and provide input to the training material, above all the toolkits to be used for the training of property owners and local authorities. The laboratory phase of the project specifically aimed at building capacity for professionals and was developed through three multi-stakeholder meetings and a series of additional bilateral engagements:

- 1. LABORATORY FOR BUILDING PROFESSIONALS** such as architects and surveyors as well as experts of property owners associations to obtain their views on best practices in energy efficiency measures across the EU Member States. The laboratory contributed to the development of the technical content of the training package and toolkit for property owners;
- 2. LABORATORY FOR FINANCIAL PROFESSIONALS** to maximise the participation of banks in support of

training programs, encourage more financial institutions to serve as intermediaries for public funded projects and to leverage greater private financing for public programs. The laboratory contributed to the development of the finance section of the training package and toolkit for property owners;

- 3. LABORATORY FOR STAFF OF SELECTED LOCAL AUTHORITIES** in charge with retrofitting to identify bottlenecks and improvements which could be made towards pilot training in cities signatories of the Covenant of Mayors. The laboratory contributed to the development of the training package and toolkit for local authorities.

All three laboratories have included participants from the target groups and built upon the results of the survey carried out in the preceding phase of the project and background papers that summarised the results of an online consultation with stakeholders.

4.2. Laboratory for Building Professionals

This laboratory was held to elicit the views of building professionals and property owners associations in the priority countries of the project regarding the content of the proposed training package and toolkit for property owners.

Prior to the meeting, a questionnaire had been distributed to partners and experts of national property owners associations to collect information about the EU housing stock including, age, type, typical construction and energy use.

The laboratory flashed out three main topics which needed to be covered by the training materials for property owners:

- 1. Incentives** - Overview of fiscal and financial incentives available in specific Member States to encourage renovation;
- 2. Legislation** - Overview of EU wide legislation such as the Energy Performance of Buildings Directive (EPBD) and the Recast of EPBD and national regulations;

3. Technologies – Overview of appropriate energy saving technologies.

The laboratory concluded that it is not possible to establish a hierarchy of best practice measures which could be applied universally to all target countries as was initially thought,

4.3. Laboratory for Local Authorities

One laboratory for local authorities representatives was carried out to collect information in Bulgaria, France, Hungary, Portugal, and Romania. Meetings with associations of municipalities were held and an electronic survey and interviews with local



civil servants was carried out based on an elaborated questionnaire. Civil servants in charge with building renovation (or if those were not existing, then the ones responsible for procurement of buildings or energy issues) were asked to explain their current achievements and problems in relation to informing and supporting citizens in implementing energy efficiency and renewable energy measures in their homes.

The purpose of the laboratory was to engage public authorities in contributing to the contents of the training toolkit, based on the internal knowledge regarding their current practice. The laboratory aimed to obtain the views of civil servants on their achievements as well as current problems related to informing and supporting citizens in

i.e. a top 10 recommended retrofit measures to property owners. Instead, the training materials needed to include the long list of all energy efficiency measures from which national trainers will eventually select those which are technically and economically applicable in their countries.

implementing energy efficiency and renewable energy measures in their homes.

The laboratory was not organised as a one day meeting but as a series of bilateral engagements with selected local authorities. It addressed the following key questions:

- What are the currently used materials for awareness raising, informing, and financially supporting citizens for retrofitting their homes?
- What are the current bottlenecks in these services?
- What are the priority topics and issues that should be addressed in the toolkit and the trainings?
- How is the retrofitting of housing already embedded in signatories of the Covenant of Mayors action plan? How should it be improved?

These questions were explored through an electronic survey with all involved municipalities and direct communication (interviews, meetings) with selected ones, based on the answers from the electronic survey.

The meetings held with associations of municipalities on the basis of the survey and interviews with representatives of local authorities resulted in the production of the general toolkit for local authorities. The exercise showed that there are vast differences throughout the EU Member States

as regards the capacity of local authorities and experiences regarding energy efficient retrofitting, desiring tailor-made assistance packages. This was reflected in the national

adaptations of the toolkit, where tailor-made information and solutions were provided to address the national specificities.

4.4. Laboratory for Financiers

The laboratory on financial mechanisms focused on the development of relevant and appropriate financing information to support an on-going educational platform to property owners to retrofit their buildings. After one laboratory meeting and a series of bilateral engagements with financial professionals that specialized either in renovations/retrofitting financing for the residential sector or in development sustainable finance, the following findings emerged:

- Generally property owners associations and public authorities are not confident that the banking and financial sector will develop innovative financial instruments.
- Mainstream banks and financial institutions are not interested in becoming privileged partners in the retrofitting agenda due to the current financial and political environment.
- Innovative financial instruments are not likely to emerge without major public policy and regulatory shifts that are well beyond the scope of this project.
- Specialty “green banks” or “eco-funds” have either too small a market share to offer financial instruments on a large scale.
- There is not enough demand (critical mass) from property owners to convince banks to deliver financial products for the retrofit process.
- Banks and financial institutions will be better engaged from the demand-side

(property owners) rather than from the supply side (financial instruments).

- The financial mechanisms that are currently considered to be viable from the perspective of property owners need to include the following features: low complexity, quick return on investment and large-scale dissemination.

Additional information emerged about the willingness of the financial sector to enter public private partnerships or to offer financial instruments around energy-efficiency renovation:

- An implicit reason behind the reluctance of banks to develop and offer explicit, longer-term financing mechanisms on energy efficiency revolves around the lack of confidence in the stability of property values in many regions of Europe. The concern is that property values in many regions may decline significantly in the coming 20 years due to demographic and economic shifts.
- The same lack of confidence applies in the case of current energy efficiency technologies (i.e. what are the standards and which ones will become dominant). Banks are unwilling to commit financing to technologies that may become outdated or below standard within the payback period. Longer payback periods mean less confidence in the technologies.
- Concern over the lack of coherence in existing public policies and financial schemes for retrofitting have also been

cited as a barrier to increased
participation cited by most financial

professionals.

5. The Training Packages



5.1. Training Toolkit for Property Owners

Existing buildings, especially the residential sector, are major emitters of carbon and require significant reductions to meet the EU 2020 targets. Lack of insulation, inefficient heating and cooling systems, among others, result in typical residential homes using one-and-a-half to two times as much energy as necessary to achieve comfort and convenience. While numerous European and national policies have been passed to improve the energy efficiency of buildings, questions remain about how to convince property owners to renovate. Only few local or national initiatives are working toward this direction, while debate on this issue often fails to involve the affected stakeholders: the property owners.



Against this background, the project partners prepared a training package and toolkit to be used in the training phases of the project directed at the target group of property owners. The training package consisted of approximately 300 PowerPoint slides divided into sections detailing an overview of the need for energy efficiency, EU and member state legislation, financing schemes and energy efficiency measures. The presentation slides were accompanied by speaker's notes, which provided the trainers with both background information and also suggested coverage of each topic.

In addition, a training toolkit offered broader background reading in a narrative form about energy efficiency improvements for property owners, being owner-occupiers or landlords in single buildings or in multi-occupied buildings. The document included a comprehensive list of energy efficiency and renewable energies measures that households could implement with detailed accounts on average costs, savings, payback times and disruption/maintenance issues.

The training toolkit was divided in four main sections covering aspects of policy, building stock, financing and technological solutions as follows:

- 1. SECTION 1:** Legal and policy background, providing information on the EU key legislation in the field of energy efficient refurbishment of building and the related national legal framework;
- 2. SECTION 2:** The existing housing stock and related building standards highlighting potential energy efficiency measures for improvement;
- 3. SECTION 3:** Financing of the refurbishment of existing buildings, covering the financial instruments available for property owners both on a global level (EIB, EU Funds, ELENA, JESSICA) as well as on a national level such as Green Deal (UK) and Grenelle de l'environnement (FR);
- 4. SECTION 4:** Energy efficiency measures, illustrating the most common and applicable technical solutions for the retrofitting of buildings including no and low cost improvements which would not

normally be eligible for financial support.

The toolkit, was drafted as an invaluable instrument for the trainers in the project (architects, surveyors and experts of property owners associations) to build on their existing skills as it provided them with expert information and best practice examples across the EU. In the case of those with limited skills, the toolkit enabled them to build their aptitude base to reach a level of mutual understanding of the implications and possibilities for energy saving and clean energy generation at EU level.

The toolkit was made up of information papers about energy efficiency and renewable energy measures and gave a detailed presentation of each of the technologies needed for retrofit and at the same time providing a back up for the trainers. Similarly, property owners who wish to obtain more information about a particular energy efficiency measure had a resource at hand providing more detail and directions about where to find further information or professional advice. The training toolkit addressed approximately 30 topics such as solar thermal, photovoltaics, biofuel, heat pumps, insulation and lighting to name a few. The different measures included in the toolkit were presented and explained by the trainers during the training workshops held in Member States.

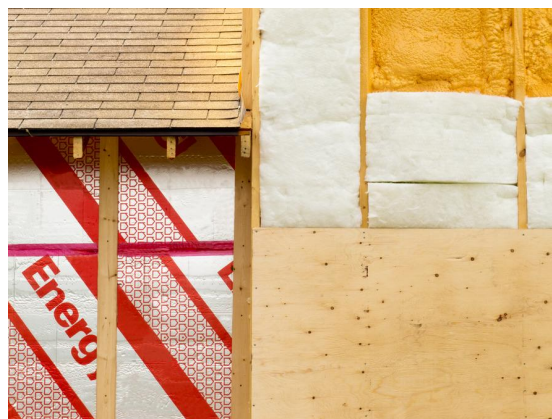
Considerations taken into account by the toolkit:

- EU policies and targets, national and regional (local) legislation;
- Available funding instruments, funding agencies or contact points in this regard;
- Improve the value chain and better integrate stakeholders involved with

building refurbishments in order to foster change in behaviour and uptake of energy efficiency;

- Treat each property as an integrated system recognising the interaction between the various energy efficiency and renewable energy measures that affect the overall saving and carbon reductions, metering and control, economics and comfort and health.

The objective was to produce a toolkit as detailed as possible in the first place and let the professional associations adapt it according to the needs of individual property owners represented in their local constituencies. The final toolkit was later delivered to the country level trainers for national adaptation. The 7 national versions of the toolkit translated the technical details contained in the toolkit into a simpler and ready to use format for individual property owners at the national level.



In this sense, the national adaptations of the toolkit were completed by PowerPoint slides presentations with speaker notes on financing energy efficiency, focusing on the reasons to invest, how to access finance, when to do so (taking into consideration the life cycle of buildings), whom to contract, how to draft a business plan, how to manage the budget, as well as issues of quality assurance risks and responsibilities. Additionally, the adaptations also offered a comprehensive list of measures

such as incentives, reduced interest rates and tax deduction with concrete examples illustrating the existing financial incentives available for energy efficiency refurbishments in EU Member States. Hence, most national toolkits were completed with information on finance and part of the trainings were dedicated to this end.

One payback spreadsheet template was included in the toolkit and presented a particularly useful cost calculation tool to quantify the optimal level of efficiency investment and savings in existing homes and allows landlords to get an insight into the potential costs, benefits and payback derived from a number of retrofitting measures. The payback spreadsheet which completed the training package was an effective guidance for the decision making regarding where and when to invest to maximise energy efficiency, carbon reduction and return on investment based on real-world situation, occupants needs and behaviour.

5.2. Training Toolkit for Local Authorities

The training toolkit was addressed to local authorities and in particular municipalities which are signatories of the Covenant of Mayors. It was drafted with the aim to help them include a chapter related to buildings as part of their sustainable energy action plan (SEAP) and design a strategy to mobilize citizens and property owners, public and private, to retrofit housing. This training toolkit



Aerial view of Bucharest, Romania where one of the TRAINREBUILD training events took place

The overall aim of the training package was to provide property owners with information about the measures which they can take to improve the energy efficiency of their properties and help them to decide which are the most appropriate for their circumstances. Furthermore, as home refurbishments are rather complex interventions with many constraints to consider, the training package sought to explain not only the technologies but also the practices involved. In this sense, it intended to make property owners also understand the manifold practical obstacles and successfully negotiate these in order to develop the right solutions and balance between highest energy efficiency goals (CO₂ reduction, energy saving, costs) and risks emerging from real-world complexities (legalities, planning, disruption, owner-tenant relationship, etc.).

The training toolkit is available for download [here](#).

was tested with local authorities' representatives that participated at the national training sessions.

The toolkit was also meant to be used as a standalone reference document for other local authorities' representatives interested in supporting citizen in energy efficiency retrofitting, as well as for any further spin-off training events. This training toolkit aimed to reach EU-wide local authorities' representatives. Therefore, a general English version has been produced along with five national adapted versions to the specific national context for countries in which the training events for local authorities were held. The national versions of the toolkits included additional country specific information and good practice examples.

The toolkit for local authorities has been drafted to bring into consideration the large diversity of local authorities civil servants' expertise on buildings retrofit in the EU, some of whom lacked technical knowledge on the retrofit process and have never been directly in contact with individual property owners, particularly in the new EU member States where most of the training took place. The general version of the toolkit had been therefore drafted having this in mind and to provide a generic reference for further adaptation and use. The toolkit structure include 4 modules as follows:

1. **MODULE 1:** Policy and Legislation
2. **MODULE 2:** Financing Energy Efficiency in Buildings
3. **MODULE 3:** Technologies and Project Implementation
4. **MODULE 4:** Citizen Awareness Raising
5. **MODULE 5:** Good Practice Examples
6. **MODULE 6:** Presentations

One of the most prominent result of the training toolkit was to put forward a strategy for local authorities to organise local awareness raising campaigns on retrofit topics.

Citizen awareness campaigns are designed to provide the public with balanced and objective information about a given set of issues and to assist them in understanding the problems, alternatives, and/or possible solutions in a given situation. Citizen awareness campaigns are designed to reach a wide audience, but they can also contain elements that are targeted at specific groups, such as different types of residential building users (owners, tenants, in flats, condominiums or family houses). It is best if a citizen awareness

campaign is designed and implemented in the context of an on-going policy / planning / decision making process and implementation of a concrete energy efficiency project in the municipality. Working with citizens through an awareness raising campaign will add value to the plan or project.

There are several key steps in designing and implementing a successful public awareness campaign. The first step is the campaign preparatory process. There is a need to discover and define the key issues, collect information on target audience(s) and understand what the target groups know and do not know about the key issues, how they feel about those issues, how do these issues affect their daily lives, and are they motivated and capable (financially and otherwise) to implement potential solutions. It is also important to know whom do these groups trust, which media do they use the most and so on.

The second step is the design of the campaign. The title of the campaign, as well as key messages and tools need to be selected and streamlined. If possible, the key messages should be tested with focus groups before the campaign begins. Already existing good practice examples need to be identified and made available (through exhibitions and open houses) for use during the campaign. The existing media houses in the municipality / region should be identified in order to assess the possibilities and potential costs for information dissemination through these media.

The next step is to determine the funds needed for implementing the awareness campaign. Some of these funds can be obtained through the energy efficiency earmarked parts of the municipal funds, current and forthcoming national grants or otherwise externally funded energy efficiency

projects, in-kind contributions from cooperating organisations, as well as sponsorships. Next, potential cooperating and/or sponsoring organisations should be identified and contacted for potential cooperation on the campaign.

The toolkit concluded that local authorities have a different basis and development curve throughout the EU as regards the capacity

and experiences regarding energy efficient retrofitting, therefore tailor-made strategies and assistance packages are needed to be elaborated. Best practice exchange and knowledge transfer would be welcome from the more advanced local authorities and by the Covenant of Mayors signatories.

The training toolkit is available for download [here](#).

5.3. The Service Package for Individual Property Owners

The service package designed in the framework of the project was an adaptation of the training package and toolkit to take their content further to the audience of individual property owners, members of the national/local associations and beyond the duration of the TRAINREBUILD project. It represented a form of customised assistance and/or tailored advice on issues affecting home improvement projects, such as energy efficiency/renewable solutions, funding, planning, etc. In this sense, the service package consisted of a set of 7 national service packages, highly customised and issued in the language of the priority countries based on the toolkit and the already existing services provided by national associations of property owners to their members.

The service packages were developed by national trainers, aware of the needs of property owners and together with the feedback collected after the first round of training for representatives and experts of property owners associations. These consisted of simplified and tailored versions of the toolkit for property owners associations and included hands on information such as contact points and information on where to find building professionals qualified for carrying out the retrofit works in each priority country, list of financial instruments available per country with web links or other redirection

means for more information, list of cost effective energy efficiency and renewable energy technologies, energy performance certificates etc according to what work best for each country.



The specific format and content of the service packages were chosen according to the already existing services provided by the national organisations of property owners (e.g. help lines, training programmes, leaflets, newsletters and other information channels). Each national property owners' association involved within the project decided on the most appropriate communication means according to their national circumstances and experience in successfully dealing with their membership. The majority of national property owners associations decided to organise further training seminars given the great interest created by the project among property owners' on retrofit matters. At the end of the project's life cycle, one representative of each

national property owners' associations was appointed as responsible for the distribution of the service package to his/her members and beyond.

The service packages were tested during the second round of training seminars with individual property owners to ensure their effectiveness. The seminars refined the content and format of the package to

guarantee that the information contained was directly accessible to the target audience and that additional seminars could be organised by property owners associations based on the materials and tools enclosed in the service packages.

The national versions of the service package are available for download [here](#).

5.4. Training Toolkit for Multi-Family Buildings

Toolkits for co-owned multi-family residential buildings have been designed and tested with specific materials respectively in France and Belgium (Brussels Region and Wallonia Region). The structure included the content of the toolkit to property owners, but was further adapted to the need of co-owners in multi-residential buildings. These toolkits enabled co-ownership associations and their boards to inform co-owners of the issues and resources to enable them to meet energy and costs challenges.



Multi-family residential building in Brussels, Belgium where one of the TRAINREBUILD training events took place

This strategy aimed to ensure that co-owners were better informed and able to take part in retrofit projects, which may reduce their energy bills. The toolkits provided:

1. An overview of the current situation in energy terms and the resulting challenges, together with a summary of the obligations and standards

currently in force at national and European level.

2. A summary of the specific legislative context of co-ownership and some of its working rules.
3. An identification of the relevant stakeholders and how to coordinate their efforts. These stakeholders include the co-owners, co-ownership associations, energy facilitators and energy accountants.
4. Various funding sources were analysed and proposed also in view of presenting this funding to the general condominium meetings.
5. Technologies for retrofitting, so that building managers were made aware of various opportunities to make energy savings.

The training toolkit provided recommendations for addressing in a new way:

- Legal specific framework (with co-owners majority voting system etc.)
- The steps of a co-owned building retrofit (planning)
- Specific financial tools
- Specific support policies to co-owned buildings

- Specific coaching system for co-owned buildings
- Co-owners new behaviours and energy saving
- Energy Performance Contract in co-owned buildings
- Partnerships between cities and pilot co-owned buildings
- Energy management support programs for tenants
- Incentives to co-owned building managers
- How to convince co-owners to renovate

The training toolkit for multi-family building managers is available for download [here](#).

6. Training Deployment



6.1. Training of Property Owners

Training events took place in each of the project targeted countries:

- One training event for representatives of property owners associations (and associations of building managers from multi-residential buildings in France and Belgium);
- (At least) one training for individual property owners (and owners from multi residential buildings in France and Belgium).

The first round of training took place in the first half of 2012 while the second during the fall 2012. The first training events brought together the staff of national associations and collected their feedback to further refine the content and format of training materials and toolkits.

In terms of participation, numbers varied in accordance with the type of training (first or second round), the national peculiarities, the location, etc. The same remark can be made regarding the format and duration, especially for the second training, which was meant to implement and test the service package. Some country trainers preferred shorter seminars than a full day training (especially for the training of property owners), others included external speakers, for example from local authorities or companies to present specific financial schemes or techniques.

Altogether, 23 training events were organised in the 7 project target countries: Belgium (2), Italy (3), France (6), Germany (5), Greece (2), Spain (3) and UK (2). Feedback received after the first training round (with staff of property owners associations and professionals) were taken on board and used in the drafting and adaptation of the service packages, while the second round

of training sessions was a testing field of the service packages among individual property owners which eventually resulted in further improvements to the content of the specific services provided by property owners associations to their members.

General findings from the training events included:

- Overall, there was a large and general interest for this type of training events, even if in terms of concrete outcomes resulting in property owners to renovate their buildings, figures remain imprecise (especially due to the current European economic and financial situation);
- The use of the term "training", which was originally debated as being perhaps a wrong choice, appeared to be readily accepted as there was a real demand, even among individual owners, for training, educating, improving the skills and capacity building rather than a mere awareness raising;
- Even nationally adapted training packages would still need local adaptation (especially in large member states or in member states largely decentralised);
- Training packages would need regular updating to extend their shelf life and continue to be useful in the future;
- Difficult to find the right balance

«The information given during the training was very useful because the trainers made a strong business case about it. I will promote energy efficiency retrofits to other landlords by being an example for my neighbors.»

UK Landlord
Participant of the UK Training Events

between the general information and more specific information for certain needs, therefore local or specific users of the service package would need to further prioritise and custom-tailor the materials;

- Practical additional information, such as case studies of concrete refurbishments and cost calculations tools were welcome.

« As the Chair of the Confedilizia Technical Committee I enjoyed participating to TRAINREBUILD. Me and my colleagues learned and shared interesting information with the trainers that without doubt will help us to inform property owners in the future. »

Michele Vigne

Vice-President, Chair of the Technical Committee of Confedilizia - Italian Property Owners Association (Participant of the Italian Training Events)

The present economic and financial situation as well as budgetary restrictions imposed in a number of Member States involved in TRAINREBUILD had an indirect impact on the project that was not foreseen in the original project proposal drafted under different economic circumstances. In Greece in particular, despite the fact that the participants to the training events were largely interested in the topic, a general pessimism was expressed regarding energy efficiency renovation, which is understandable considering that vacancy rates reached a record high level and where daily financial concerns largely prevail over any kind of environmental concerns or financial investment in the future such as energy efficiency. Similar remarks, but to a lesser extent can be made about Spain and Italy, also extensively subjected to the financial crisis that lead to considerable budgetary restrictions (notably in term of funding for energy efficiency, cutting subsidies and feed-in tariffs for renewable energy), difficulty to access loans (including green loans) and tax increases (that largely impact on property owners budget). In contrast, in countries like

the UK and Germany and to some extent in France and Belgium, more readiness to invest in energy efficiency was noted. This was particularly the case of UK with the momentum created around the Green Deal, while in Germany the market of energy efficiency refurbishments is more advanced and matured.

Several issues were highlighted during the training events as a means of increasing the uptake of energy efficiency refurbishments, which are summarised below:

Capacity building

- Further or longer training would improve the capacities of the staff/representatives of property owners associations which would enable to roll out improved training seminars.
- Build property owners communities and partnerships with local authorities, building professionals, experts, financial institutions and the supply chain with the view to develop Public-Private Partnerships, ESCOs, favourable financing packages for refurbishment and economies of scale.
- Encourage cooperation between local communities and the relevant stakeholders (energy providers, academia/schools, NGOs, SMEs) for sustainable energy production and consumption. The involvement of these stakeholder groups and cooperation could provide extra resources in terms of awareness raising, bonus packages for energy efficiency behaviour, additional financial resources.

Financing

- Development of local financing schemes to facilitate investment and independence from central government financing.
- Support and combine national financing schemes with local ones to lessen the burden on the property owners.
- Cooperate with local banks in developing innovative financial packages.
- On national level, long term, reliable funding scheme and programmes.
- The economical situation and financial possibilities of the different stakeholders cannot be changed in a short timeframe however adjusting funding schemes and programmes to the current needs might improve the appetite for energy efficiency investments in all sectors.

Administration

- Policies to remove split incentives and ease decision-making.
- Cut red tape and administrative burdens.
- Stable and coherent regulatory and financial framework both at national and local level.

Information Dissemination and Awareness

- Develop local strategies on how to communicate and involve the public on energy efficiency refurbishments, with the cooperation and support of other important market players.
- Regular meetings between the local public administration and the building

owners association on the subject of energy efficiency in buildings.

- Communication campaigns must be supported by all stakeholders involved (policy makers, financial market and supply chain).
- Awareness raising to be strengthened on all levels/subjects related to energy efficient investments and solutions.
- Involvement of multidisciplinary teams in the drafting/roll out of future training programmes and information campaigns.
- Establishment of local, free of charge, Info Points on energy efficiency for citizens.
- Find the right balance between the scope of the training and the depth/level of details of subjects covered.

« Undoubtedly these training days were useful to receive information relating to a topic of no obvious knowledge and that requires to be developed further in Spain. There is a clear case in promoting these types of course and activities in the future. »

Angel Merino Berthaud

President of the Spanish Confederation of Chambers
(Participant of the Spanish Training Events)

In the last months of the project, co-operation was sought with higher education institutions providing specialised courses on the building sector and with training agencies running courses for local authorities' technical personnel. The purpose was to transfer the project training material to appropriate organisations in view of organising further training events and ensuring the training approach to the target groups developed by the project were incorporated in long term institutional programmes. Several further training events, building upon the project results, are already scheduled in 2013 by

some national property owners associations using the material developed in the project. The objective will also be to transfer TRAINREBUILD training material to other

property owners associations in other member States than the ones which were directly involved in the project.

6.2. Training of Local Authorities

The purpose of the training events was to provide local authorities with sufficient knowledge on the requirements of the main EU Directives related to residential buildings retrofit (e.g. EPBD and its recast, Energy Services Directive, Combined Heat and Power Directive and the Energy Efficiency Directive), on the existing financial supporting schemes, on technologies currently utilized, on disseminating information and raising awareness of the general public, cooperating with multiple stakeholders and on learning from existing good practice examples. The training events also enabled local authorities to understand the importance of a strategic approach when thinking about local energy production and sustainable consumption and on how to communicate and involve the public. The development of a Sustainable Energy Action Plan (SEAP) for Covenant of Mayor members was not only relevant for the local authorities that signed up to the CoM initiative, but for all local authorities which wanted, and had the capacity to act towards a sustainable energy future. The knowledge gained through the training events have indirectly assisted them in designing SEAPs, covering different chapters of it, starting from policies and measures to technologies, behaviour, public participation etc in relation to buildings renovation.

In the framework of the project, 5 national training events were organized during the first half of 2012 in the five priority countries, namely: Bulgaria, France, Hungary, Portugal and Romania. During the trainings altogether 194 local authority experts/representatives

were trained and involved in the follow up discussions.

The national training followed the structure and content of the toolkit for local authorities modules, providing information on the various chapters by experienced experts, tailored and adapted to the specificities of the priority countries, supported by best practice examples. The practical training component was reinforced by three on-site visits conducted in the framework of the national trainings, where participants visited and investigated how energy efficient retrofits worked out in practice in various buildings.



TRAINREBUILD Training Event in Cascais, Portugal

The results of the training events have been widely disseminated to several local authorities' associations in the priority countries targeted by the project. In addition, the Covenant of Mayor Secretariat has pledged to disseminate the project outcomes to every municipality having to produce sustainable energy action plans with relevant chapters on buildings renovation.

During the training events several issues have come up as bottlenecks regarding both national and local implementation of energy efficient refurbishments. The summary of these gaps identified and some recommendations on how to solve them are listed below:

Capacity building

- Targeted training for local authorities to step up capacity and knowledge related to energy efficient refurbishments (application or development of local policies, technologies, financing possibilities, approval procedures, real implementation etc.).
- Increase support to local authorities from experts like local/regional energy agencies.
- Build partnerships between local authorities, property owners associations and the business community on how to develop public-private partnerships with ESCOs and financial institutions in order to develop innovative and cheap financing packages for energy efficiency refurbishments in the housing sector.
- Municipalities need to closely cooperate with the main local stakeholders (energy providers, academia/schools, NGOs, SMEs, other active and powerful local communities etc.) for sustainable energy production and consumption. The involvement of these stakeholder groups and cooperation could provide extra resources for the municipality in terms of awareness raising, bonus packages for energy efficiency

behaviour, additional financial resources etc.

Financing

- Targeted training events for local authorities on how to engage the banking sector beyond traditional financing.
- National programmes and funds should be steady, long term so to initiate real market boost for retrofitting.
- Development of local financing schemes to facilitate investment and independence from central government financing.
- Support and combine national financing schemes with local ones to lessen the burden on the property owners.
- Cooperate with local banks in developing affordable financial packages, lower the financial risks and make longer investment return rates.
- Less complicated approval procedure both for property owners and for local authorities when deciding/applying to energy efficiency investments.

Information dissemination and awareness

- Increase level of access to information for the public on energy efficient investment procedures, applications, available and mostly utilized technologies and their use, investment costs and returns etc.
- Increase level of information sharing between local authorities about their experiences and best practices and also between the different departments of a single local authority

(e.g. Energy Department and PR Department).

- Increase level of trust between municipality and citizens in larger municipalities.
- Develop local strategies on how to communicate and involve the public into energy efficiency refurbishments, with the cooperation and support of other important market players.
- Organise regular meetings between the local public administration and the building owners association on the

subject of energy efficiency in buildings.

- Establish local Info point on energy efficiency for the citizens.
- Communication campaigns have to address specific target groups with customised approaches, priorities of each target group are different and should be reflected during the campaign.

7. European Forum on Training and Skills for Re-Building



7.1. Forum Background

The Forum set up in the framework of the project was envisioned as a face-to-face, action-based meeting place to facilitate the exchange of established best practices and evolving innovative solutions related to training, to achieve the energy-efficient retrofitting of Europe's existing building stock. The key feature of the Forum was its holistic approach in involving the whole buildings chain in a common, results-oriented process. The Forum's unique offering was to be a place for coordinated action among the different other initiatives at EU level addressing training and the building sector.

Four events of the Training Forum took place during the project:

1. **FIRST FORUM:** How to Incentivise Local Authorities and Property Owners to Renovate Their Buildings;
2. **SECOND FORUM:** Partnerships Between Local Authorities and Private Property Owners in Launching Retrofit Programs;

3. **THIRD FORUM:** Co-Ownership Issues Affecting Energy Retrofit Programs in Multi-Occupancy Buildings;
4. **FOURTH FORUM:** Training Local Authorities and Private Property Owners in Retrofitting Heritage Buildings.

The Forum events primarily addressed issues related to training for all actors aiming to retrofit to high-energy performance standards. The Forum was meant to collect views from the actors contributing to the supply side (architects, designers, construction workers), but also and particularly the demand side (public and private property owners and local authorities) and other relevant sector actors (e.g. building assessors, inspectors, asset managers, real estate market actors, surveyors, tenants). The Forum was co-chaired in each of its events by a representative of the European Commission and one from the business sector.

7.2. Forum Recommendations

The Forum topics had been chosen following the outcome of internal project discussions and feedback from the target groups. Each event of the Forum, broadly sought to elicit the views of local private property owners' associations and municipalities members of the Covenant of Mayors (target groups of our project) in jointly undertaking large scale retrofit programs for buildings.

Following the completion of each event, TRAINREBUILD partners produced a set of recommendations directed to the target groups of the project, such as national associations of property owners and selected local authorities members of the Covenant of Mayor. The aim was to incentivise the uptake

of the project training methodology and material produced in view of scaling up energy efficient renovation in the EU and increase the number of yearly retrofit plans by individual building owners as indicated in the targets of the project. The recommendations emphasised that barriers to large-scale energy efficiency refurbishments are complex and varied. No single approach has been truly effective in removing these barriers. This has been the case especially for the residential

« TRAINREBUILD played the role of a conductor who sought and gathered all the musicians in Europe able to play the symphony of energy efficiency. »

Olivier J Brane

Avocat Honoraire, Planète Copropriété (Participant to the Third Forum Event in Paris)

retrofit market. Therefore, in order to succeed, any strategy addressing the complexity of residential retrofits must be multi-pronged and simultaneously combining a number of solutions.

Some of the most relevant recommendations that originated from the Forum events included:

- Training is needed for property owners associations and focus should be kept on driving the demand side of the building chain to retrofit.
- Communicating the retrofit value and return of investment to property owners is needed to create a scale effect in the retrofit process.
- Advice to property owners should be provided by trusted organisations or public authorities to be accepted by the client.
- An integrated approach is needed in linking the fragmented building chain (supply and demand side).
- Minimizing disruptions to occupants is needed during the retrofit process.



- Technical training and certification is needed for construction workforce as well as independent advice and training is needed for energy advisors.
- Partnerships between local authorities and property owners' associations can create momentum for renovation at local level.
- Local authorities have a role in promoting energy efficiency renovation in the local private stock, notably by creating local programmes, local renovation plans and by fostering incentives.
- Condominium managers should be trained to stimulate retrofit decisions in multi-family buildings general assemblies.
- Heritage buildings need specific recognition in national conservation policies and require a specific approach in the retrofit process.
- Promote the training of qualified experts and conservation architects is needed for the renovation of historic buildings, in particular on energy saving.

7.3. TRAINREBUILD Build Up Virtual Community

One Build Up Community was set up to virtually complement the Forum as a physical meeting place for the whole chain of the building sector. The Forum and the Community have been working in synergy for the whole duration of the project. The Community helped

« In order to address the end-users, it is very important to keep in mind they will understand the challenges and methods only in their national language. We cannot expect property owners or tenants to learn from best practices that are demonstrated in another language or even another country/region. The project TRAINREBUILD correctly addressed these issues in producing customised national adaptations and translations of the training material. »

Build Up Community Participant

to connect experts in the field of retrofitting and training (mostly those ones participating

to the Forum events) and was instrumental to facilitate the exchange of best practices, while at same time disseminating and gathering feedback on the recommendations produced at each Forum event, including the selection of potential themes for its next events.

The Community has been progressively fed with up to date news items, publications, announcements of events, tools and best

practice sharing and targeted discussions around topical issues were kicked off. These discussions were of input in the formulation of recommendations that were produced after each Forum event. The Build Up Community will continue to operate beyond the conclusion of the project. The Community is available at the following link [here](#).

7.4. Voluntary Commitments from Property Owners Associations

A document featuring voluntary commitments from property owners associations to promote energy efficiency retrofit among their members has been drafted following the concluding event of the Forum. Some of the most relevant commitments include:

- Promote energy efficiency renovations among their members.
- Transfer the knowledge gained during the project and continue to outreach to property owners in their associations to foster the uptake of energy efficient buildings in order to reach 3 million property owners by 2020 all over Europe.
- Continue to inform their members about new technologies available for improving the energy efficiency of their buildings.
- Keep property owners members of their associations informed about funding opportunities for energy efficiency in buildings.
- Make use of the materials, know-how and lessons learnt from the

TRAINREBUILD project to best address property owners: the service package developed in each priority country will be used to assist individual property owners.

- Organise further training events or information channels, depending on the priority country.
- Promote energy efficient solutions that can address some specific needs of specific types of ownership or buildings, such as the needs of co-owners in condominium, owners of historical houses, landlords or owner-occupiers.
- Pinpoint and stimulate best practice examples that could be used as catalyzer.
- Encourage collaborations between groups of owners, between property owners associations and other associations or/and local authorities to create momentum at national or local level that could lead to the improvement of energy efficiency of group of buildings.

7.5. Forum Work Program 2013-2014

The Forum represents a lasting legacy of the project TRAINREBUILD and will continue to operate on the basis of annual work plans to

encourage exchange of experiences in retrofitting and addressing the needs of building professionals, local authorities,

financiers, policy makers and end users. A provisional calendar of forthcoming events of the Forum has been drafted to reflect current priority themes. The Forum partners will be working on a roadmap of actions to be taken at Member State and local level by Public Authorities, Companies, Property Owners and Tenants Organisations, focused on up-scaling bottom up initiatives and good practices to create a scale effect and accelerate change in upgrading the existing EU building stock to best energy performance standards. The expected outcomes of this roadmap will be a two-fold set of recommendations:

1. **POLICY LEVEL** - Proposals for implementing relevant buildings legislation at EU Member States level and partnership engineering between the supply and demand side of the building retrofit value chain;
2. **TECHNICAL LEVEL** - Proposals for retrofitting programs and pilot bankable projects at EU Member State level, including a number of financing tools and mechanisms that will provide the resources needed by investors to implement the bankable projects.

Further, the Forum strategy for 2013-2014 will aim to push Member States to go beyond the Energy Performance of Buildings implementation, addressing topics not covered by the directive (e.g. the owner-tenant dilemma) and propose recommendations for policy makers to address bottlenecks faced by industry and demonstrate best practice in order to overcome these bottlenecks.

A draft program of Forum events envisaged for 2013-2014 is listed here below:

Design of a Training MoU between Member States, Local Authorities and Property Owners

A joint workshop of the TRAINREBUILD consortium with the EU institutions, Member States and the Covenant of Mayors signatories.

Subject: commitment to develop a training programme for all local administrations of the Covenant of Mayors to aim at better civil servants understanding of procuring services and products needed for buildings renovation.

Co-Owned Buildings Programme of Events 2013-2014

- European Condo Forum – first semester 2013, at the Committee of the Regions, Brussels.
Subject: Mobilisation at regional and local levels of interested parties for energy retrofitting of co-owned buildings.
- European Condo Forum – second semester 2013, at the Committee of the Regions, Brussels.
Subject: Implementation of the EU directives in co-owned multi-apartments buildings and Member States objectives 2014.
- European Condo Forum – first semester 2014.
Subject: 'Green condo pilots' in Europe, partnership with their regions/cities as well as their coaches.
- European Condo Forum – second semester 2014.
Subject: Financing condominium retrofitting in Europe and fuel poverty.

EU Objectives and Implementation, the Role of Property Owners and Local Authorities

A joint workshop which could be co-hosted by UIPI, CEPI, Renovate Europe and the Covenant of Mayors.

Subjects: How property owners and municipalities will help to design the third European Environmental Action Plan.

7.6. TRAINREBUILD Videos

Originally the production of videos was originally intended to film training sessions. However, the project partners agreed that shorter videos illustrating project examples and best practices would have been more effective given the diverse target audience of TRAINREBUILD, consisting mostly of private owners. All the eight videos were particularly memorable for various reasons for instance:

The video in Kent, England and the one on the passive house in France were remarkable in order to recognise that highly motivated homeowners are the best to move forward the retrofit market with energy efficiency projects.

The video about the first Energy Performance Contract (EPC) in France, showed the process of an energy efficiency renovation and how leadership of a few property owners

in a co-owned building can drive the process forward.



Screenshot of the TRAINREBUILD video in Portugal

The videos in Hungary and Portugal showed that there are many opportunities for private owners and local authorities to collaborate and exchange project knowledge and best practices.

All TRAINREBUILD videos are available [here](#).

8. Success Stories



8.1. TRAINREBUILD Spin Off Association in Italy

Background

The EN-zyme Association was created at the beginning of October 2012 with the mission of building up a strategic and operating tool to pursue in mid-long terms TRAINREBUILD project goals. It can be considered as the first factual result from TRAINREBUILD activities implemented in Italy.

The registered office of EN-zyme Association was settled in Città Studi Biella headquarters in Biella, partner of the project TRAINREBUILD and a well recognized training and education center. Furthermore EN-zyme Association and Città studi Biella have stipulated a formal agreement in order to transfer TRAINREBUILD project achievements after its conclusion in December 2012. The Association is independent from Città Studi Biella, even if it shares common values and purpose for promoting special training courses and new methodologies and technologies for energy efficiency and renewable energy applied to buildings.

Objectives

The Association has the mission to promote and spread new technologies, methodologies and a new culture for building retrofitting towards property owners. In doing so, the Association will use the service package produced in the framework of the project TRAINREBUILD and assist individual owners with a step by step retrofit process. In order to further promote these goals, the Association will organize technical assistance services

and training for professionals in public and private sectors involved in the building development sector. The service package for Italy produced during the project and to be used for these training events will be further refined to comprise:

- Web technical assistance services offered to property owners association members;
- Specific toolkit for retrofit evaluation, offered to property owners association members.

The main goal is the assistance En-zyme will provide to property owners associations technical department as it will be the fastest way to cover a great numbers of private owners who want to renovate their building with energy efficiency interventions. With these activities, En-zyme wants to fill the gap in Italy between high level but expensive energy efficiency practices, and the majority of buildings that barely comply with national law requirements in terms of energy efficiency and retrofit interventions.

Expected Outcomes

The Association founding members have a multi-year experience on these issues and are convinced that it is possible to implement energy efficiency interventions and raise comfort level at current and acceptable costs, as long as interventions are undertaken by experts with adequate technical background and mindset constraints are minimised from the property owners' side.

8.2. The KIQ (Kooperation im Quartier) Project in Germany

Background

The KIQ project, where the German property owner association Haus & Grund Deutschland is involved, is part of a research programme of

the Federal Ministry of Transport, Building and Urban Development and of the Federal Institute of Building, Urban Affairs and Spatial Development. This programme finances

research, studies and initiatives which propose innovative planning and action on major urban and housing policy issues with the aim to provide guidance for urban and housing policy development. The project will run from summer 2011 until autumn 2014.

Most residential buildings in Germany belong to private owners, who play a central role in the creation of sustainable housing and sustainable inner-city neighbourhoods. The management of urban areas and the development of urban and housing policies cannot be done without fully involving private actors. KIQ is the recognition of the growing importance of private initiatives and the increasing role of private owners in urban development.

Objectives

The aim of the project is to identify best forms of cooperation between municipalities and local owners associations for mobilisation and advice to private owners. The owner associations act as facilitators between all actors of the process (local authorities, owners, but also professionals). This cooperation should help to improve inner-city neighborhoods, urban development, the renovation of the building stock, including energy efficiency renovation, and eventually increase the value of real estate by mobilizing private owners and generating closer cooperation between local authorities and property owners associations.

How Does It Works

On the basis of pilot projects, several forms of cooperation between private owners and municipalities that aim at improving inner-city neighborhoods and promote a sustainable housing stock will be tested in practice. The pilot projects should stimulate private initiatives supported jointly in cooperation with local governments and help to provide

exemplary affordable and suitable solutions. The research is to show how can private investments be initiated and implemented successfully in the neighborhoods. All the projects will be monitored and evaluated: the bests of all projects will be identified and put together in a best practice model of cooperation. In December 2011 eleven pilot projects have started.

The first step of the project consists in drawing up action plans and activating counselling strategies regarding the economic situation and real estate development of a district, taking into consideration the views of private property owners regarding the strengths and weaknesses of their district. In parallel, working structures involving the core group, the community and local club owners, but also experts, are created. It is only in the second phase that the actual activation of the project and advice to private property owners begin. Each model projects have different strategies, which will be tested and further developed in the course of the project.

Expected Outcomes

This project is a unique opportunity to mobilise property owners, normally difficult to address and to bring them together to foster changes in the neighborhood and the buildings in a local area. It is innovative in the sense that it involved property owners' representatives as a direct facilitator between local authorities and property owners. It could create a real momentum at local level and eventually with the support of local funding, local professionals and local authorities facilitate changes, including energy efficiency improvements at local level.

TRAINREBUILD and KIQ

The KIQ project has inspired the second Forum event of TRAINREBUILD that tackled partnership between property owners and

local authorities. By addressing communities of property owners locally, the project indeed explores how to bring together the two target groups of TRAINREBUILD, property owners and local authorities to eventually foster energy efficiency improvement without a delimited local area/district. KIQ pilot projects can constitute platforms to further put into

practice the materials developed during the TRAINREBUILD project, especially to advise property owners on the energy efficiency refurbishment of their buildings. It could be tested to this end and generate best practice examples of partnership at local level to continue TRAINREBUILD legacy.

8.3. The French National Property Owners Association (UNPI) Partnership on Retrofitting

Background

Within the framework on the French energy efficiency legislation, the UNPI (UNPI member in France) concluded a partnership with TOTAL, the French energy company, and ECONORMES HABITAT, a company specialised in energy performance certification and consulting on energy efficiency renovation of buildings.

Objectives

This partnership aims at fostering energy efficient renovations in the French real estate market by delivering direct financial subventions to property owners that subscribe to this scheme and will realise substantial improvement in term of energy efficiency. This is mainly valid for the residential sector, but can also be used in the commercial and office building sector.

This partnership is included in the UNPI, the French property owners association's voluntary commitment to promote TRAINREBUILD's content and foster concrete uptake of energy efficiency renovation in France, among French property owners, in order to enhance the energy efficient refurbishment rate in the country. It is rightly designed at answering some of concerns expressed during TRAINREBUILD training in France on the lack of funding available and should help to reach TRAINREBUILD targets.

It is a win-win collaboration between the UNPI, which can thereby support its members' effort toward energy efficiency and provide concrete solutions to overcome the main obstacles to refurbishment i.e. financial burden and complicated procedures to access funding; the owner, who benefits from it, and the energy distributor company, which by law has to make its clients realise energy saving.

Advantages

This partnership should have a considerable success since:

- The property owner remains the contractor and can choose the craft companies that will do the work;
- The application file is prepared and verified with the support of Econormes Habitat, which is a company specialised in energy efficiency auditing and certification;
- The subvention, calculated according to the type of refurbishment, the geographical situation of the building and its surface is a direct financial subvention paid to the owner after the execution of the work;
- The procedure to access this scheme is easy and simple;
- A juridical protection is offered for a year;

- This scheme can be accumulated with the eco-loan at zero interest rate or the scheme of tax incentive for sustainable development.

Conditions

In order to be eligible to this scheme, the renovation work should fulfil several conditions:

- The work done is for renovation only;
- The work should be directed to energy efficiency refurbishment;
- The improvements should reach a certain level of energy efficiency (depending on the work done and the materials use);
- The work needs to be done by a qualified professional with whom it is necessary to draw up a cost estimate;

- The products used need to answer certain norms (conform to the standardised list defined by the ministry of sustainable development, e.g. NF, ACERMI, etc.);
- The products used should have a minimum performance (e.g. $R \geq 5 \text{ m}^2\text{C/W}$ for roof insulation);
- An application form should be filled and sent before the realisation of the work;
- The beneficiary has to send back the final attestation document (where improvements realised are mentioned) together by the relevant bill(s) ensuring that the work has been done.

8.4. A Vision for a New Era of Co-Ownership in the EU

Background

With the TRAINREBUILD focus on co-ownership in France and Belgium, an extremely important sector with very specific legal, technical and sociological problems has been addressed for the first time in a European perspective leading to a very new and collaborative agenda at EU level between public authorities, co-owners associations and co-owned buildings managers. On the basis of the training events of multi-family building managers and co-owners within the project in France and Belgium and the conclusions of the European TRAINREBUILD Forum, a European informal platform is being set up with an online portal: www.greencondo.eu

Objectives

The aim of the platform will be to:

- Bring together at EU level "condominium partners" interested in retrofit;
- Mobilize, train and support co-owners in their efforts for energy retrofitting and new forms of co-owners engagement.

Expected Outcomes

The platform should:

- Contribute to the implementation of EU directives in the field of energy renovation of co-owned buildings;
- Promote the concept of eco-condominium, defined in terms of criteria that must exceed the energy efficiency and should lead to behavioural changes and enhance the common use. The implementation of common standards is essential; it will

cover the technical aspects, as well as the economic and legal aspects;

- Participate to the European Commission's Smart Cities and Communities Stakeholder Platform promoting the concept of "Smart ready co-ownerships": in the frameworks of the "smart cities" and "smart buildings" initiatives, condominiums must be "smart ready"

and have optimised means of calculation, as all the consumption data must be sent to the energy supplier for him to drive the consumption with regards to the uses observed. Condominiums are at the heart of this system to come; the smart grid can only exist within a multitude of reporting points remote-read in buildings.

9. Conclusions



From the implementation of project TRAINREBUILD, several lessons have been learnt which are summarised below.

1. Capacity Building and Training

Specialised training and not simple awareness raising campaigns are needed for professional association of property owners, their members, local authority experts in energy and the building sector to understand the connection between building ownership and the value of the retrofit process. Capacity building and professional trainings should be addressed to the demand side of the building chain (associations of property owners and local authorities but also individual property owners themselves) and not only to the supply side (buildings professionals, building workforce etc) and this

requires very specific approaches, having the target group of end users in mind. Crisis in trust for regulations, technologies, finance, building professionals is widespread among property owners.

This training should go beyond mere awareness raising and is needed for property owners associations and communities to engage in a fruitful dialogue with the building sector professionals and local authorities to communicate the retrofit value to individual owners, and to create a 'scale effect' in the retrofit process of the building stock. This training is also crucial for individual property owners as they can gain appropriate knowledge to prepare individual business plans for retrofitting their properties and confidently engage in business relations with professionals. There is a real interest from property owners' side for such training that

has not yet been correctly addressed by public authorities.

2. Pan-European Retrofit Programme

The demand for retrofit should reach a tipping point through the establishment of a large-scale pan European retrofit programme including a large scale funding programme supported by a stable regulatory framework that should privilege cost-effective solutions. This is the only way for the industry to realise the market development potential, for financiers to support the process and needs to remain cost effective for property owners to engage in this process. A European Training Forum active at EU level needs both institutional support from regulators and financial support from industry and

« Let me sum up my participation in the project TRAINREBUILD in three words:

- 1. ENJOY because I had a very good time both during the training and the coaching.*
- 2. SATISFACTION at having achieved the goal of reaching out to property owners with the right tools.*
- 3. CHALLENGE to continue to develop the project after its completion to reach out to the largest possible number of property owners. »*

Agustin Pujol

Architect, Spanish Confederation of Chambers of Urban Property (Participant/Trainer of the Spanish Training Events)

professionals to scale up the development of a European retrofit programme, address the fragmented value chain of the building sector and put a focus on the demand side (property owners) of the retrofit process.

3. Partnerships Property Owners - Local Authorities

Individual property owners in individual properties and in multi-property residential buildings should be encouraged to organize themselves in communities and enter into partnerships with local authorities to facilitate the retrofit of groups of buildings and negotiate preferential interest rates with the banking sector. Guidelines for partnerships are needed for groups of property owners (communities at

local and block of buildings level) and for local authorities to carry out large joint pilot retrofit projects at local level and prepare bankable projects for submission to financiers.

4. Specialised and Independent Advice

Property owners require independent and trusted guidance from energy advisors/coach specialised in the building sector. Local authorities and property owners associations

are generally trusted by individual owners and should partner with one another. They should be directly involved in training and employing accredited experts to provide a comprehensive service package made of information on the most efficient technologies, available funding instruments, fiscal measures, lists of certified building professionals, relevant legislation etc to property owners at local level.



10th February 2013

Training for Rebuilding Europe (TRAINREBUILD)

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