

# TOWARDS LARGE SCALE DEEP RENOVATION – UNLOCKING IRELAND’S POTENTIAL

DEVELOPING A FRAMEWORK FOR HOLISTIC ENERGY EFFICIENCY TRAINING OF BUILDING PROFESSIONALS



ECCoPro Report

5

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[www.igbc.ie](http://www.igbc.ie)

## About the Irish Green Building Council

The [Irish Green Building Council](#) (IGBC), is the leading authority on sustainable building in Ireland. With a network of [over 100-member organisations](#), the IGBC is working to transform the Irish construction and property sector into a global leader in quality and sustainability.

To do so, the IGBC has developed several sustainable building tools, including the [Home Performance Index](#) - Ireland's first national certification system for quality and sustainable residential development – and an [Environmental Product Declaration Platform](#). The IGBC has also developed an extensive green building education programme, which includes BREEAM, LEED and LCA training courses.

See [www.igbc.ie](http://www.igbc.ie) for further details.

## Acknowledgment

Thanks to all the organisations and individuals who attended and contributed to this workshop. These are listed below. Thanks also to our workshop facilitator, [Chris Chapman](#).

Finally, we would like to thank the various organisations who took part in [Ireland's National Renovation Strategy Consultation Process](#) as part of the Build Upon project. Their feedback on the building industry energy efficiency upskilling needs directly led to the ECCoPro initiative.



## Project Overview

As construction workers and building professionals interact with end-users at key moments in time (e.g. when a building is sold or refurbished), they have a key role to play in driving energy renovation. However, depending on training and engagement they can act as advisor or as negative influencer; hence the necessity to better incentivise them to upskill in energy efficiency and sustainability.

The aim of this project is to explore the opportunity of introducing a customer-friendly energy efficiency accreditation system for construction professionals - [ECCoPro](#). This accreditation system would support closer alignment between professionals, allow end-users to clearly identify professionals who have upskilled in energy efficiency related skills, and thus incentivise professionals to upskill in the area.

The ECCoPro initiative primarily targets employed and unemployed building professionals. Nevertheless, it is hoped that some of the key findings of this project would be used by higher education institutions to ensure a multidisciplinary approach to energy efficiency and sustainability in their degrees.

## Background Reading

- [Construction Professionals' energy efficiency knowledge and upskilling – A Short review](#) – Sept. 2017
- [Holistic Energy Efficiency Certification for Building Professionals – Initial Set of Recommendations](#) – Jan. 2018

## The Dialogue Journey

In September 2017, the Irish Green Building Council released the "[Construction Professionals' energy efficiency knowledge and upskilling - A short review](#)" report. The document is intended to be used as a source of reference by all organisations involved in the development of a customer-friendly environmental accreditation for building professionals in Ireland. The IGBC is now hosting a series of workshops focusing on the potential design and delivery of this certification system.



The results of the first part of the consultation process (October 2017 to January 2018) is summarised in a short report [available here](#). The objective of this second last project meeting was to discuss how the holistic energy efficiency certification system could empower users and building professionals, and how it could be improved over time.

Organisations and individuals interested in getting involved in this process should [contact Marion](#).

## Summary

The following bullet points sum up the workshop key learnings and outcomes.

- **Keep the framework simple.**
  - It must be easy to manage from a policy and an administrative point of view.
  - It must be easy for building professionals to engage with the certification process. A clear pathway to certification should be developed, which recognises prior learning and allows for modular and flexible training. To create a momentum, it was suggested to launch it with a single level of certification.
- **Make the framework credible.** The system must be quality assured. Certified building professionals should complete a number of energy efficiency related CPDs each year and submit examples of completed projects every x years to retain their certification. Furthermore, actual projects delivery should be monitored. Note: Building performance is likely to be higher if building professionals are trained in giving advice to users on how to operate a building.
- **Launch the framework as part of a broader energy renovation awareness campaign,** highlighting the benefits of renovation and of using the register.
  - Branding is key, and branding exercises will be required.

- Barriers that prevent consumers to talk to building professionals must be broken. It is suggested to use the BER report to direct users to an online wizard where they could find information on the first steps they could take themselves, and when they need to contact a building professional (with a link to the register) – click [here](#) for further details.
- **Coordinate with existing initiatives to maximise impact.** Although the framework may not be made mandatory, various actions could be taken to support its uptake:
  - Using certified building professionals could become a requirement as part of public procurement, SEAI grants and energy efficient mortgages applications.
  - Extra points could be awarded under certification schemes such as LEED and [HPI](#), based on the number of certified professionals in the design team.
- A system set by construction professional bodies and backed by an independent body such as SEAI is more likely to be trusted by large-scale procurers, building professionals and consumers.

## Introduction

Marion Jammet of the Irish Green Building Council opened the workshop with a brief overview of the project and progress to date. A copy of her presentation is [available here](#).

Workshop participants were subsequently asked to introduce themselves and to give one recommendation to the IGBC team to make the project successful.

As encouraging the masses of building professionals to upskill in the area is key, and as a common level of energy efficiency knowledge and understanding is required across the board, several workshop participants said that the framework should initially be launched with a single level of certification. Yet, the certification system must be quality assured to ensure transparency and must fulfil a checklist of learning outcomes. Certified building professionals should complete a minimum number of CPDs on this topic per year to retain their certification. Yet, these courses should be delivered in a modular and flexible format.

The certification system will need to be extensively promoted to gain societal recognition. It should be easy for the consumer to access and to find experienced professionals. One suggestion was to make a clear connection between BER and the register, i.e. that when someone access his/her BER with a list of energy renovation recommendations, it includes a link to the register. A fully independent certification system is likely to be more widely trusted by consumers.

Furthermore, the system should be easy to manage from a policy and administrative point of view if it is to be successful. Some workshop participants felt that it should be mandatory.

Finally, some recommendations related to the content of the training to achieve certification. The importance of including courses on energy renovation of traditional buildings, post-occupancy energy performance monitoring and BIM (to encourage collaborative aspects) as part of the certification process was reiterated.

## Session I: Putting users at the centre of the transition

For this session, workshop participants were split into 4 groups: homeowners, landlords and tenants, public procurer, and large-scale private procurers. Each group was asked to think about what it would take for the system to be successful among them.

## Homeowners

Most homeowners have a relatively low level of knowledge of energy renovation and may feel overwhelmed by the process. As this may lead to inaction, the first step is to engage with homeowners, and to break down barriers to speaking to building professionals.

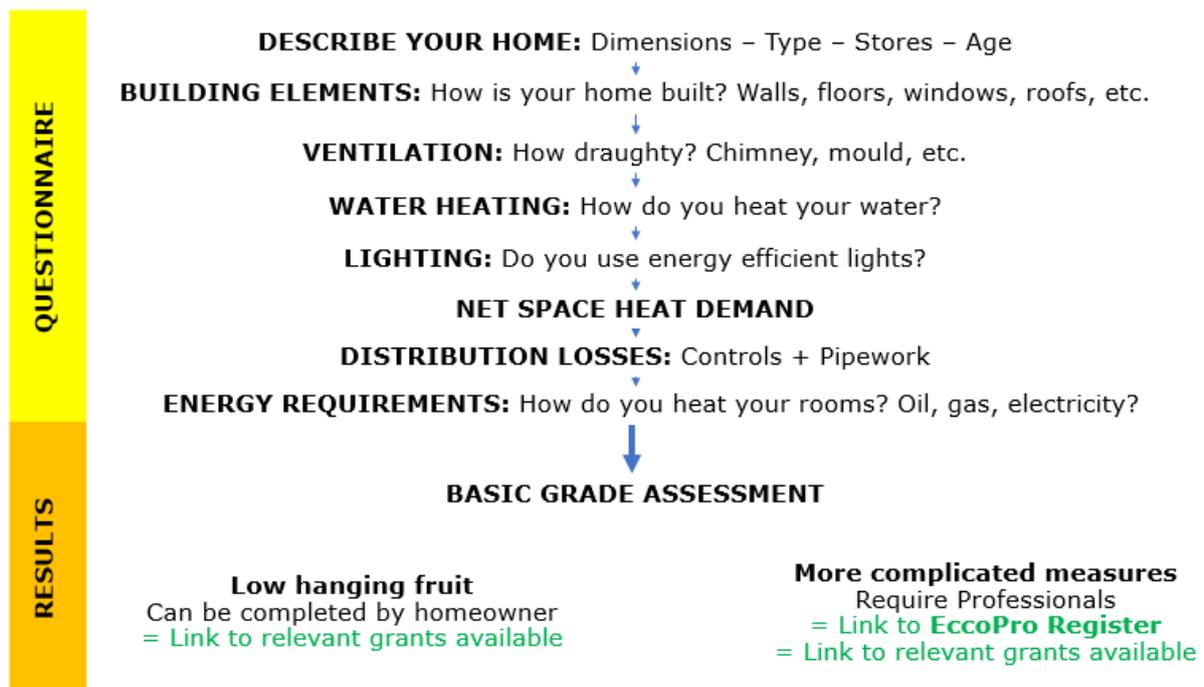
Homeowners need to be educated about the easy first steps of energy renovation before they even meet a building professional. This could be done through architecture tv shows celebrating quality and sustainability. Furthermore, the BER section on how to improve the energy efficiency of a property should redirect to an online wizard for householders, like [Warm Up Bristol](#). The platform would provide homeowners with information on the first steps to take to renovate their home, a list of questions to ask to contractors (see [Qualibuild e-Book](#)), and clear information on when they need to contact a building professional and a link to the register of ECCoPro certified professionals. To make it simpler for householders, it was suggested to consolidate other registers or at least to point users to other registers, e.g. certified passive house designer.

All certified building professionals should fully embrace energy renovation and be able to talk with homeowners with a wide range of energy awareness. As quality and certainty is key for homeowners, workshop participants felt that project examples (including actual performance) should be part of the certification process.

As many homeowners do not contact building professionals, it is key to further develop [CIRI](#) and to upskill construction workers in that area too.

Finally, all this work should be coordinated with energy renovation awareness campaigns, and grants / tax incentive available.

Based on this discussion, workshop participants worked on the skeleton of a Home Assessment Wizard App. The front screen will lead to a series of questions through simple connections as per below.



## Landlords and Tenants

The advantages of the register must be clear to all landlords if they are to use it. However, this is a very diverse group, with diverse motivations.

According to workshop participants, quality assurance is key for public bodies managing social housing. Only working with building professionals that are registered under the ECCoPro scheme should hence make sense for them when renovating – **See Public Procurer section below.**

Real Estate Investment Trusts have a keen interest in protecting the long-term value of their properties and often require certified standards. Using the register as one of the indicators to achieve certifications such as the [Home Performance Index \(HPI\)](#) could drive the demand for same.

Given the current rental market and that tenants pay the utility bills, it might be more difficult to promote the register among smaller private landlords. Workshop participants felt that a carrot and sticks approach is required to encourage private landlords to renovate and to use the register. Suggested actions included publicising underperforming properties (e.g. mould), requiring a minimum BER to rent a property / or putting a cap on rent that can be charged on properties with poor BER, better educating letting agents on the benefits of meeting standards, as well as introducing tax break, grants or [energy efficient mortgages](#) for landlords renovating. However, to access the grant/tax break or low interest loan a landlord would need to use certified building professionals and construction workers.

Finally, workshop participants felt that the current move to a long-term rental model should incentivise more and more landlords to renovate. Provisions could be included within the lease to improve BER and manuals given to tenants on how to use a specific dwelling (e.g. ventilation, pumps).

## Large-scale Private Procurers

Members of this group discussed the opportunity of introducing a certification for both individuals and the organisation they work for. Yet, many workshop participants saw this approach as problematic: A company certification does not guarantee all staff have the right skills and knowledge.

According to this group, the best way to incentivise large private procurers to use this certification is to align it with existing schemes such as LEED, BREEAM and the [HPI](#). Points could for instance be awarded based on the number of certified professionals in the design team. An alternative would be to make it a requirement as part of the planning process.

Furthermore, workshop participants said that monitoring actual projects delivery would be key in promoting the register to this group. Certified professionals should maintain a track record of projects they have worked on, covering actual outcomes in a standardised format to allow for performance comparisons. They gave the example of [Certified Passive House Designers](#) who must submit a detailed description of a project every 5 years. This group also highlighted the importance of mechanical ventilation upskilling for large-scale projects and suggested to give some consideration to offsite manufacturing as part of ECCoPro.

To promote the register to large-scale private procurers, workshop participants suggested to develop messages around the following lines:

- EccoPro delivers NZEB and HPI cost-effectively
- EccoPro delivers through the entire life cycle
- EccoPro = Good Design = Wellbeing = Increased Productivity

Finally, they suggested to develop a register of projects completed by certified professionals (including actual performance) and to launch an awareness campaign targeting large-scale private procurers. The campaign

should inform them about the range of financial benefits associated with energy renovation, and include case studies of exemplary projects completed by ECCoPro certified professionals.

### **Public Procurers**

Under current regulations, the public sector must lead by example when it comes to energy efficiency. This group should hence be interested in using the register.

Yet, one should be careful that it is not perceived as an extra hoop to jump through that will cause delay in an already complex system. In brief, if the framework is to be successful among public bodies it should make things easier for them, save money and reduce risk. The register should shorten the process of selecting the right person and facilitate high quality on budget projects delivery. This is far more likely to be achieved if certified building professionals also provide end-users with advice (e.g. manuals or videos). Furthermore, the register should be linked with other procurement frameworks (e.g. fast build). As branding is key, workshop participants also felt that alignment with professional bodies is needed if the framework is to be successful among public bodies.

Finally, workshop participants highlighted that under EU law public procurement must be competitive and that contracting authorities must treat economic operators equally and without discrimination. As such, some legal advice may be required to see how the register could be used, along equivalent qualifications from other member states by public bodies.

## **Session II: Making it work for building professionals**

For the second part of the morning, workshop participants examined the framework from the building professionals' point of view and discussed how this could potentially work for all, from the laggards to the early-adopters.

### **Laggards**

Laggards will require more time to get involved in the process. It should be easy for them to engage with the certification process. Free support and training may initially be offered to them. This should be combined with an awareness raising campaign, so that consumers asked for certified professionals. Ideally, only people who use certified building professionals should be eligible for SEAI grants and public bodies should require it for all public works. The "laggards" will only get involved if they trust the system. High quality assurance (including tight audit controls) are key in giving the system credibility and in undermining the laggards' arguments against the register.

### **Middle majority**

The middle majority will follow and upskill in that area if they see it gives them recognition and if it makes financial sense. The system must be transparent to ensure their efforts are fully recognised. Branding and exposure are key. If procurers and investors ask for the certification, it will encourage them to upskill to grow and future proof their business.

However, if the system is to give them recognition and credibility, it requires strong quality assurance and strong quality control. A minimum number of CPDs per year should for instance be required to retain certification.

Furthermore, it should be easy for building professionals to engage with the system. The pathway to reach certification should be transparent and straightforward. Prior learning and existing accreditations should be fully recognised, and links with other schemes (e.g. LEAN construction) created.

Finally, workshop participants felt that it would be extremely helpful for the middle majority to interact with the early-adopters. This could be done through an online platform, events, or social media.

### **Early-adopters**

Early-adopters were described as both rule-breakers and rule-makers. They can transmit a new standard to a wider group. Building professionals taking initiatives should be rewarded and promoted. However, proof of good practice is only given by time and mistakes may be made. On the one hand, the state needs to underwrite risks that are necessary to take (latent defects insurance). On the other hand, we need to learn from mistakes to ensure the system constantly improve. This requires post-occupancy evaluation (e.g. [Retrofit for the future](#)) and robust research to feedback loop. This would be further enhanced if the system was set by the professional bodies and backed by an independent body such as SEAI. Early-adopters could then be used to advertise the framework, so it is seen as the done thing.

### **Final Recommendations**

At the end of the event, workshop participants were asked to provide one key recommendation on what it would take for the ECCoPro framework to work. These recommendations are listed below.

*Keep it simple!*

*Make it simple and transparent: Describe what is required for entry level.*

*Make the process easy in all aspects, from flexible training courses to fair monitoring and policing.*

*Initial certification must be based on submitting a number of quality projects.*

*Maybe the "owner" of this should be a new custom designed national "agency" with the various key players/institutions onboard.*

*RIAI and Engineers Ireland (possibly with NSAI) must get together to formulate a form of structure for a certifying body for individuals.*

*This must be backed by an authority like SEAI. They must be more involved in the process!*

*Ensure professional bodies fully support the process and make relevant CPDs available to their members.*

*Do not forget post-occupancy evaluation: Exemplar performance is key in promoting the framework.*

*Quality insurance is key!*

*Need to be clearer on how ECCoPro certification would improve professional delivery.*

*Mandate the register into public procurement, social housing procurement, grants and other home renovation incentives as soon as possible.*

*Retire any other obsolete list. This must be at the centre of any other register out there.*

*Explore if and where organisations store micro-badges, certificates or credentials. Any good international case study?*

*From a vocabulary point of view, chartered engineers should be changed to chartered construction related engineers, and chartered surveyors to registered surveyors.*

*The Department of Education and the Department of Housing must be fully onboard.*

Quality and Qualifications Ireland (QQI) must engage with the process. How do they recognise qualifications?

Try to involve insurance representative bodies so they are fully informed of this process. The research sector of universities should also be more engaged.

Get more landlords onboard.

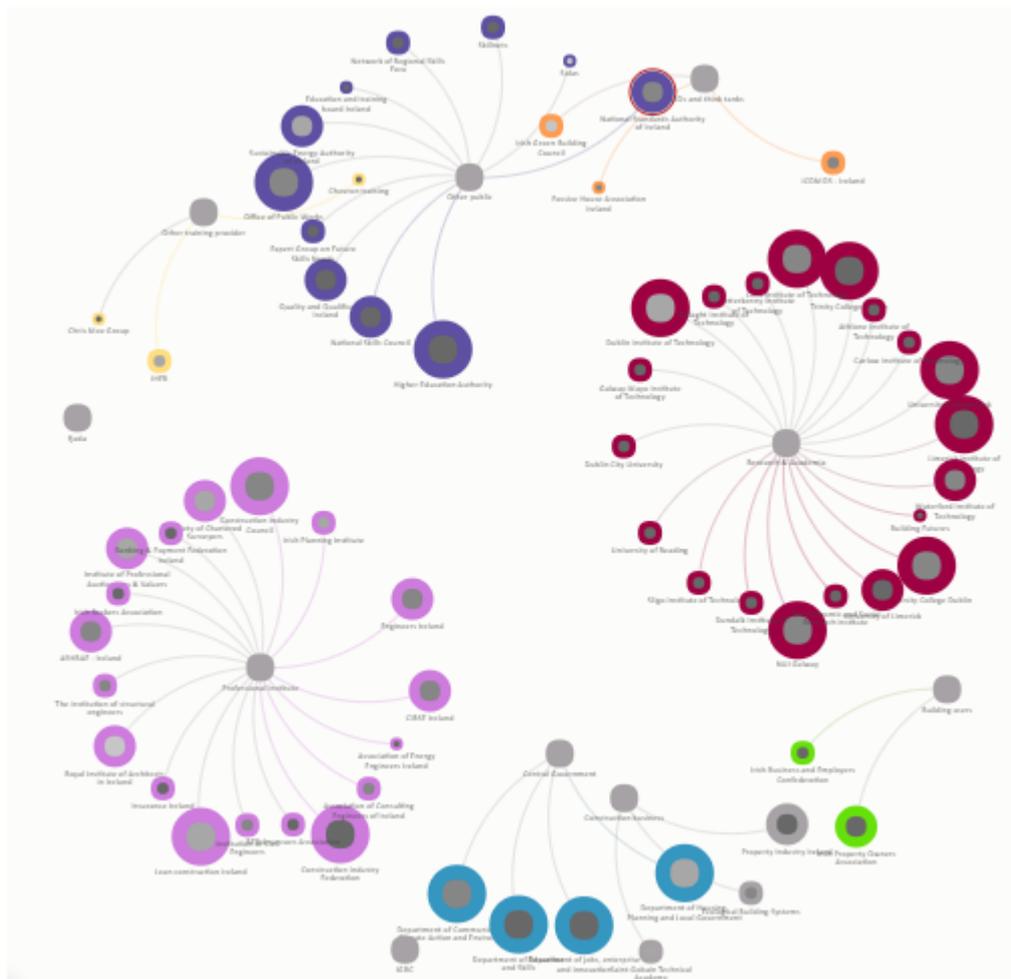
Organise a larger forum (online?) to inform the public and to encourage building professionals to learn more about the process.

What will encourage early-adopters to keep going so the herd will follow? Probably a mix of incentives (e.g. grants), penalties (e.g. legislation), peer pressure and the willingness to be a good citizen.

How can we leverage the better quality associated with off-site construction?

## Stakeholders

Check out who's who in [our interactive stakeholder map](#) and send your feedback to [Marion@igbc.ie](mailto:Marion@igbc.ie).



## **Collaborating on Workshops and events**

A series of 4 workshops will bring key stakeholders together during the project. The workshops are supported by the Sustainable Energy Authority of Ireland (SEAI) and are a must for anyone interested in large scale energy renovation and building professionals upskilling in Ireland.

Organisations and individuals interested in getting involved in this process should contact Marion - [Marion@igbc.ie](mailto:Marion@igbc.ie).

Website: [www.igbc.ie](http://www.igbc.ie)

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