

IMAGINE A BUILT ENVIRONMENT
THAT ENABLES A HIGH QUALITY
OF LIFE FOR ALL



CO-CREATING AN AMBITIOUS NATIONAL RENOVATION STRATEGY FOR IRELAND

Workshop

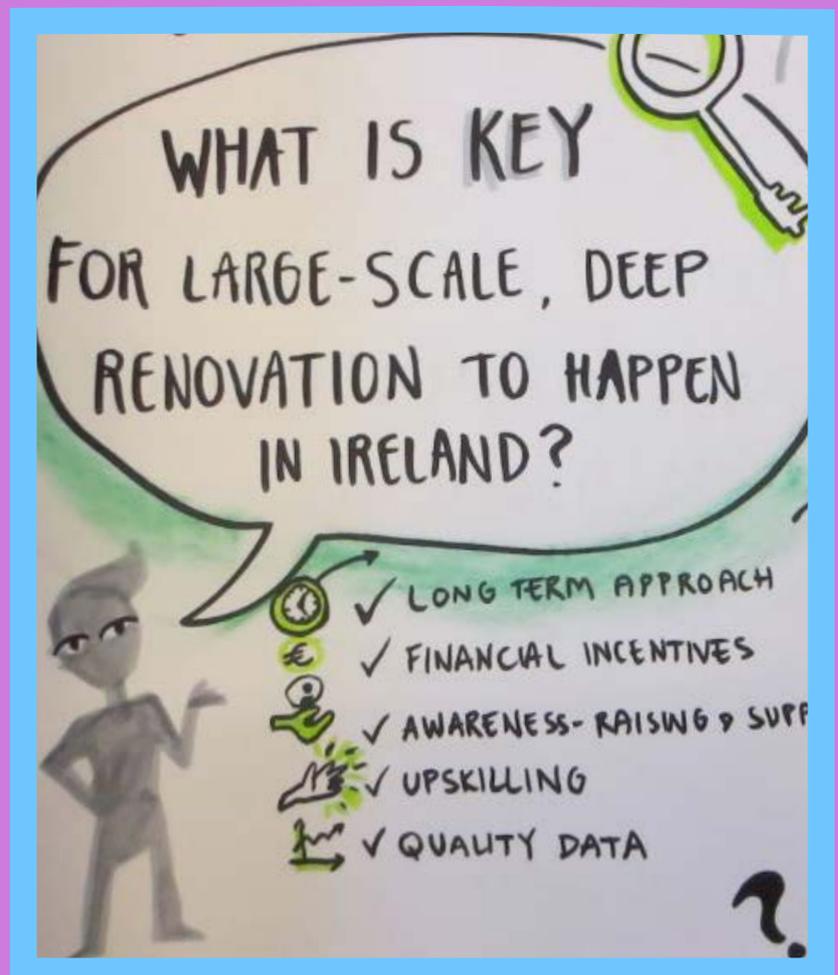
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IERC, Tyndall National
Institute – Cork

Thursday, 29th September 2016

www.buildupon.eu/ireland

#BuildUpon



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Roinn Cumarsáide, Gníomhaíochtaí
ar son na hAeráide & Comhshaoil
Department of Communications,
Climate Action & Environment

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 90 member organisations, the IGBC is working to transform the Irish construction and property sector into a global leader in quality and sustainability.

As well as leading the [Build Upon](#) project in Ireland, the IGBC has developed the [Home Performance Index \(HPI\)](#) Ireland's first national certification system for quality and sustainable residential development, and provides BREEAM, LEED and other green building education programmes.

For further information, please visit: www.igbc.ie

A special thanks to our partner.



Acknowledgements

The IGBC team would like to thank all the participants who attended and contributed to the workshop. These are listed page [15](#). In particular, we would like to thank our workshop facilitator, Chris Chapman, and our visual facilitator, Eimear McNally.

ABOUT THE VENUE: INTERNATIONAL ENERGY RESEARCH CENTRE – TYNDALL NATIONAL INSTITUTE - CORK



The workshop took place in the International Energy Research Centre (IERC), Tyndall National Institute, Cork.

The IERC leads collaborative research to meet global societal needs for secure, affordable and sustainable energy services. It is

focused on demand side energy efficiency and embedded energy generation at the building, community and city levels.

The IERC is based in Tyndall National Institute in Lee Maltings. Lee Maltings forms one of the most significant surviving industrial sites in Cork city dating back to the eighteenth century. The Lee Maltings was purchased by University College Cork (UCC) in 1968.

The Tyndall National Institute was subsequently established in 2004, under a formal agreement between the Minister for Enterprise, Trade & Innovation and UCC. Tyndall now hosts over 450 research scientists, engineers, industry personnel, students and support staff creating a critical mass of researchers with extensive state-of-the-art research facilities. The institute undertakes ground-breaking research in the areas of micro/nanoelectronics, microsystems, photonics and modelling, theory & design for applications in communications, healthcare, energy and the environment.

SUMMARY



Co-Creating Europe's National
Renovation Strategies

WE BELIEVE THAT OUR BUILDINGS CAN BE BETTER THAN THEY ARE TODAY

BUILD UPON is the world's largest collaborative project on building renovation – bringing together over 1,000 organisations, across 13 countries, at over 80 events in 2016-17.

It aims to create a renovation revolution across Europe by helping countries to deliver strategies for renovating their existing buildings, by the 30 April 2017 EU deadline.

These strategies are critical to cutting Europe's energy use, reducing the impacts of climate change, and creating buildings that deliver a high quality of life for everyone.



BUILD UPON IN IRELAND

The Irish Green Building Council, in conjunction with the Department of Communications, Climate Action & Environment (DCCA) is working to build a community of experts and stakeholders to develop the V2.0 national renovation strategy Ireland must deliver by April 2017 under the Energy Efficiency Directive.

The details of this strategy are critical to deliver a [“fully decarbonised built environment that delivers a better quality of life for all”](#) – How will we finance the long term investment strategy required for our building stock over the next 35 years? How will we reach our climate targets? All these questions will be answered by Ireland's National Renovation Strategy.

AIMS OF THE WORKSHOP

The aim of the workshop was to explore the 10 actions suggested in the [“Declaration in 10 points for a better national renovation strategy and an effective implementation plan”](#) – as well as opportunities and challenges around them. In particular, group discussions focused on standards & incentives, the energy efficiency obligation scheme, skills & training, technology, financial models and back-casting.

[A copy of the workshop agenda is available here.](#)

KEY OUTCOMES

The aim of the event was to explore the actions suggested at previous Build Upon workshops and to define the ones that could have the highest impact.

Workshop participants reiterated their call for a more holistic national renovation strategy and for more joined-up thinking. While targets (and interim targets) are necessary, participants felt that national targets should be broken down by county or district so that ordinary citizens can relate to them. They also called for a stronger bottom-up approach and a less “aspirational” strategy.

Workshop participants expressed strong support for the following actions

- Raising awareness about the benefits of deep renovation in Irish society and using trusted local intermediaries to provide independent advice at all stages of the renovation process to end-users in the residential sector and to small businesses
- Upskilling construction professionals and tradesmen in deep retrofit and energy efficiency
- Using a “carrot and stick” approach to deep renovation: High standards are needed, but they should be complemented by enhanced incentives.

In addition, there was a general consensus that quality assurance needs to be significantly improved. Finally, participants stated that the next version of the document should clearly define deep renovation, make clearer connections between all the suggested actions and take the differences between leased-owned commercial, public and residential buildings more into account.

OUR CHALLENGE

The EU requires each country to establish a 'national renovation strategy': a long-term strategy for renovating the nation's homes and commercial buildings to high standards of energy efficiency.

This had to be done for the first time by 30 April 2014, with strengthened strategies to be delivered every three years thereafter, with the next by 30 April 2017. So, how are we doing?

Today, many of the individuals and organizations who have a stake in this challenge are not actively engaged in the national renovation strategy debate. The absence of large scale structured collaboration between renovation stakeholders and initiatives means countries are not currently delivering the renovation revolution Europe needs.

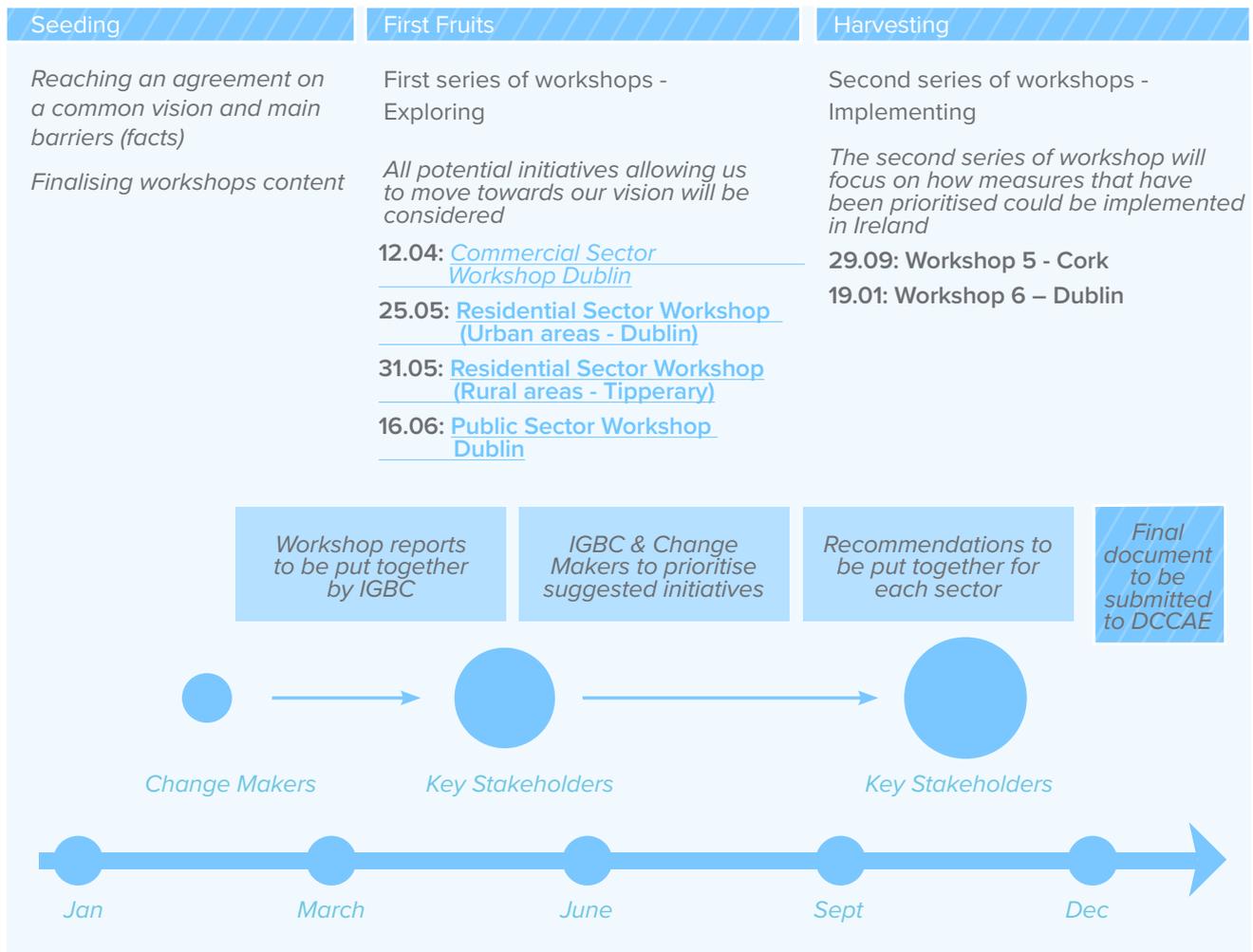
Project Overview



The European Commission in its Roadmap for moving to a competitive low carbon economy in 2050 (2011), established a long-term objective of decreasing the CO2-emission levels for the building sector by 88%-91% in 2050, compared to 1990 levels.

Since the publication of this document and the adoption of the first version of Ireland's National Renovation Strategy in April 2014, significant changes have occurred. Most notably, urban areas are now facing housing shortages and a landmark agreement to fight climate change was reached at COP21. In May 2015, the EPA highlighted that Ireland was not on track to reach its 2020 emissions' target. The goal set in Paris of limiting global warming to 1.5C puts even more pressure on the country. The construction sector is expected to compensate for the projected increases in emissions from agriculture and transport. This represents both enormous opportunities and challenges.

THE DIALOGUE JOURNEY



Ireland will host a series of workshops in 2016-17 focused on the design and delivery of the national renovation strategy. These will be a mixture of national, local and European events connecting national leaders with other European leaders working on their national renovation strategies.

In addition, a series of smaller and more specialised meetings will be organised by the IGBC between October and December 2016 around the following topics:

- Backcasting
- The Co-Benefits of Deep Renovation

- The Importance of Data
- Grants & Tax Incentives
- Awareness & Support
- Private Finance
- Standards
- Skills & Training

If you are interested in learning more about the Build Upon process, please contact Marion@igbc.ie

EXPLORING BUILD-UPON 10 INITIAL RECOMMENDATIONS FOR A BETTER NATIONAL RENOVATION STRATEGY

Tony Day, Executive Director, IERC welcomed guests and reflected on his experience of the [Build Upon European Leaders' Summit](#) he attended in Madrid a week before. According to Mr. Day our vision of a decarbonised building stock and our challenges are shared across Europe. In the wake of Brexit, Mr Day concluded his remarks by encouraging participants to pay specific attention to strategic issues that may inhibit market uptake of the framework.

Pat Barry, Chief Executive Officer at the IGBC subsequently introduced Ireland's National Renovation Strategy V.2. and the Build Upon process.

FROM YOUR PERSPECTIVE, WHAT IS KEY FOR LARGE SCALE DEEP RENOVATION TO HAPPEN IN IRELAND?

To start the day, participants were asked to explain, from their perspective, what is key for deep renovation to happen in Ireland. While many responses reinforced the views expressed in the "Declaration in 10 points for a better national renovation strategy", new points were also made.

More joined-up thinking across the board

Framework for deep collaboration across actors in the industry and between all agencies (from the boots on the ground to the heads of departments) are needed.

Upskilling the industry

Low standards have often led to a lack of energy retrofit in practice. Participants called for more training for construction workers (through programmes such as [Qualibuild Foundation Energy Skills](#)) and architects (e.g. in NZEB, BPS tools and Passive House Standard). A lack of support and investment in skilled trades could be highly detrimental to the implementation of the strategy.



Raising Awareness

There is a need to embed energy efficiency and deep-retrofit co-benefits knowledge in Irish society as large scale deep renovation cannot happen without full end-users' buy-in. How can the disinterested masses be incentivised? How can we make the dissatisfied acceptance of the status quo of poor houses unacceptable to the general public? While, end-users need to be better informed on deep renovation and its benefits (incl. health benefits), it probably won't be enough to make large scale deep renovation happen.

Making deep renovation as easy as possible

In the residential sector and for small businesses deep renovation needs to be made easy. At local level, trusted intermediary organisations could provide information in simple terms about renovation and building materials.

EXPLORING BUILD-UPON 10 INITIAL RECOMMENDATIONS FOR A BETTER NATIONAL RENOVATION STRATEGY

Finance

Deep renovation can only be made easy if the right funding and financing mechanisms are in place. Long-term targeted tax incentives and adequate grants are required. One participant suggested to introduce a pay-as-you-save model and to tie financial incentives to the building as opposed to a person.

The Business Case for Deep Renovation

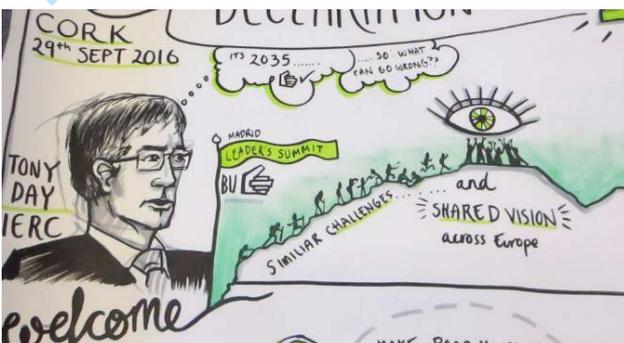
As decision makers need to see the value in making the investment, further work is required on the business case for deep renovation. This should encompass energy savings, property/rent value, but also other co-benefits such as health & wellbeing.

Quality Data

The importance of good quality data was mentioned again. Beyond BER data, a suggestion was to collect data on actual building performances. All data available should be used to inform decision making (e.g. through building and demographic simulations), and open monitoring should subsequently be used to inform future solutions.

The Need for Localised Solutions

Deep renovation incentives should be better linked to building location. Based on demographic projections, support should first target buildings in areas where they are needed or where they will be needed in future.



Quality is key

Stronger performance controls are needed.

Energy efficiency vs. Decarbonisation

In line with our climate targets, the national renovation strategy should promote decarbonisation of the building sector and not only energy efficiency.

Empowering Society to Change

The national renovation strategy must empower people and make them feel part of the solution. There is a clear need to move from a top-down to a bottom-up approach.

Deep renovation stages

A three stages strategic process was suggested whereby, we should focus first on behavioural changes, secondly on “soft” measures with a 6 to 7 years payback, and finally on deep retrofit for targeted buildings.

GROUP DISCUSSION - 1

Which measures suggested in the [“Declaration in 10 points for a Better National Renovation Strategy”](#), could have the highest impact? Which ones are easy/difficult to implement?

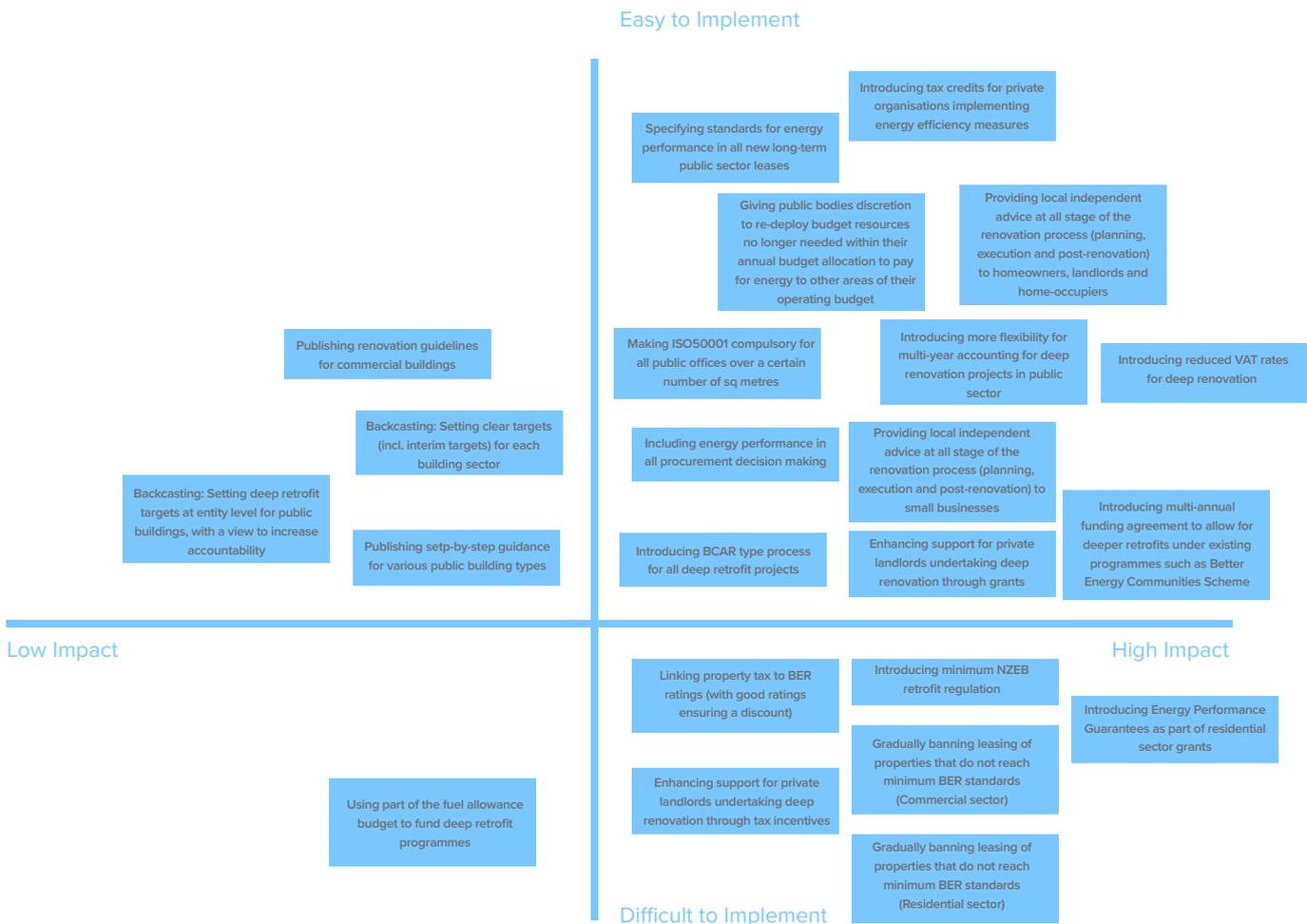
Working in small groups, participants were asked to look at the 23 recommendations made in the “Declaration in 10 points for a better national renovation strategy and an effective action plan” and to display them on a two axis graph representing impact and implementation difficulty.

Significant divergences emerged between groups, but the below graph represents the overall result:

Twelve actions were perceived as easy to implement and

potentially having a high impact:

- Introducing tax credits for private organisations implementing energy efficiency measures
- Specifying standards for energy performance in all new long-term public sector leases
- Providing local independent advice at all stage of the renovation process (planning, execution and post-renovation) to homeowners, landlords and home-occupiers
- Giving public bodies discretion to re-deploy budget resources no longer needed within their annual budget allocation to pay for energy to other areas of their operating budget
- Introducing reduced VAT rates for deep renovation





- Introducing multi-annual funding agreement to allow for deeper retrofits under existing programmes such as Better Energy Homes and Communities
- Making ISO50001 compulsory for all public offices over a certain number of sq metres
- Introducing more flexibility for multi-year accounting for deep renovation projects in public sector
- Including energy performance in all procurement decision making
- Providing local independent advice at all stage of the renovation process (planning, execution and post-renovation) to small businesses
- Introducing BCAR type process for all deep retrofit projects
- Enhancing support for private landlords undertaking deep renovation through grants

Six actions were listed as having a high impact, but being far more difficult to implement:

- Introducing Energy Performance Guarantees as part of residential sector grants
- Gradually banning leasing of properties that do not reach minimum BER standards in both the residential and commercial sectors
- Introducing minimum NZEB retrofit regulation
- Enhancing support for private landlords undertaking deep renovation through tax incentives
- Linking property tax to BER ratings (with good ratings ensuring a discount)

Among the five actions listed as having a low impact:

- **Four were listed as easy to implement...**
 - Publishing renovation guidelines for commercial buildings
 - Setting clear targets, including interim targets, for each building sector
 - Setting deep retrofit targets at entity level (e.g. each university) for public buildings, with a view to increase accountability
 - Publishing step-by-step guidance for various public building types

... And one as difficult to implement

- Using part of the fuel allowance budget to fund deep retrofit programmes

More specifically, more than 66% of participants believed the following actions could have a high impacts....



... And would be easy to implement

- Introducing multi-annual funding agreement to allow for deeper retrofits under existing programmes such as the better energy communities scheme
- Enhancing support for private landlords undertaking deep renovation through grants
- Introducing tax credits for private organisations implementing energy efficiency measures
- Specifying standards for energy performance in all new long term public sector leases

... And would be difficult to implement

- Introducing Energy Performance Guarantees as part of residential sector grants
- Gradually banning leasing of properties that do not reach minimum BER standards in the residential sector
- Introducing NZEB retrofit regulation

To help us in improving the content of the “Declaration in 10 points for a better national renovation strategy and an effective action plan”, participants were also asked to comment on specific measures.

Participants reiterated the importance of agreeing on a destination (including interim targets) and a time for each building sector. However, they added that national targets should be broken down by county or district so that ordinary citizens relate to them. They also called for a stronger bottom-up approach and a less “aspirational” renovation strategy: “At the end of the day, it’s PEOPLE who will make this happen”. With that regard, energy efficiency champions and trusted local intermediaries have a key role to play.

Other participants suggested to focus more on access to capital, and on the relationship between measures listed under different heading. For instance, linking property tax to BER ratings (with good ratings ensuring a discount) could work if support for homeowners and landlords undertaking deep renovation is enhanced. Enhanced support for homeowners and landlords undertaking deep renovation could be introduced as long as the support is tied to the property, only available in the right locations and a real quality monitoring system is in place. Finally, existing grant schemes should better support deep retrofit.

While there was a strong consensus around the necessity of introducing more flexibility for multi-year accounting for deep renovation projects in the public sector, recommendation number 8 (set the right standard) was by far the more commented:

- Suggested action: Gradually banning leasing of both residential and commercial properties that do not reach minimum BER standards

Some participants felt that there is no need for such regulation in the commercial sector and that progress should be market driven. Others felt that introducing such a measure in the residential sector (without any specific support for landlords) could lead to an increase in housing shortage as many landlords would choose not to renovate and let the property vacant. More generally, several participants objected the use of BER in its current form (open to abuse) and suggested to use measured data instead where possible or as a minimum to subject the measure to intense monitoring.

- Suggested action: Introducing BCAR type process for all deep retrofit projects and minimum NZEB retrofit regulation

The level of support for these measures was relatively high, but several participants mentioned that the same result could be achieved through better monitoring and improved quality assurance.

While workshop participants agreed on the importance of quality data, some of them felt frustrated by the current “analysis paralysis” and expressed their concerns that action could not wait further. Other participants stated that utilities’ data should be used as our backbone to collect energy, comfort and air quality data for all buildings. It could also be useful for benchmarking and emulating the retrofit market.

Some participants felt that the current document does not take the differences between leased-owned commercial, public and residential buildings enough into account. They also believe that more work needs to be done on social housing as social housing owners have different sources of funding and different responsibilities.

Others said that the role of technology, and more specifically the role of wireless intelligent controls, should be better integrated into the strategy.

Finally, some participants insisted on the need to clearly define deep renovation in the next version of the document.

GROUP DISCUSSION - 2

Marion Jammet, Business Development Manager at the IGBC opened the second session with a short presentation on the first result of the consultation on the “Declaration in 10 points for a better national renovation strategy and an effective implementation plan”.

Based on these findings participants were asked to propose topics they wished to explore further. Six working groups were subsequently set up.

Standards & Incentives

When promoting deep renovation, a “carrot & stick” approach should be used.

Lively discussions took place on the opportunity of linking the property tax to BER rating. While the measure was supported by the majority, some concerns were raised. One participant said that such a measure on its own would be dramatic: “Think of the optics. Those who can afford top rated houses could escape the tax”. More generally, the general consensus was that we should move towards actual energy performance (as opposed to BER) per building user to rate buildings. In addition, one participant suggested to make indoor air quality standards (e.g. EN 15251) compulsory in buildings. Participants also called for the introduction of NZEB retrofit standards, better construction product regulations and proper quality assurance.

On the incentives side, participants highlighted the need for credits, as well as tax rebates and grants for deep renovation (as opposed to the current grants that primarily support shallow retrofit). From that point of view, banks, credit unions and other financial institution need to be more involved in the design of the National Renovation strategy. It’s also important to develop quality data on energy efficiency and property values to make sure the market can function properly.

Finally, the group concluded that these measures will only work if the general public is better informed on deep

renovation and its co-benefits. They reiterated the importance of having trusted independent deep renovation advisors at local level and suggested to include infographics on energy uses (in comparison to similar dwellings in the area) in monthly electricity / gas bills.

Energy Efficiency Obligation Scheme (EEOS)



Participants generally perceived the EEOS as a successful initiative driving activity in the energy efficient renovation sector. However, they suggested to:

- Raise awareness about the scheme and how it works;
- Improve the quality assurance for the energy saving measures - All retrofit measures eligible for credits should operate to the same standards of quality assurance including, contractor registration, construction worker registration and NSAI Code of Practice for Retrofit SR 54;
- Target deeper renovation measures over shallow measures

Although the view wasn’t shared by the all participants, the majority of participants felt that many of the energy credits banked by the obligated parties were too easy to reach.

In addition, they suggested to widen the base to incorporate more utilities, as well as organisations such as coal importers, in the obligated parties list. It was also suggested that energy credits could be allocated by electrical retailers for providing more energy efficient goods. This could allow them to subsidise the more expensive A+++ rated goods over less energy efficient goods and raise awareness with customers.



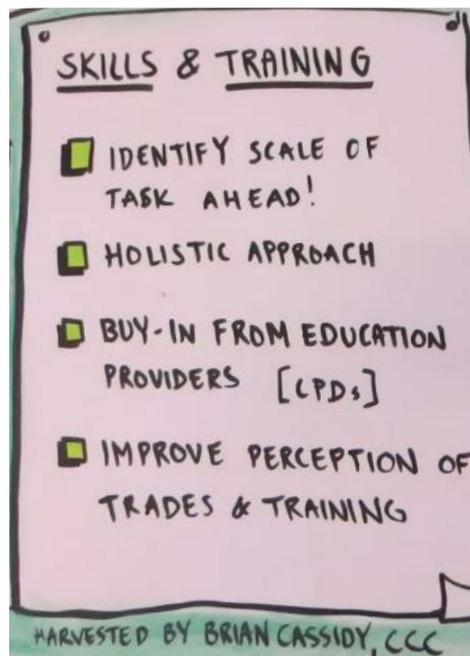
To enhance the impact on deep renovation, quota of investment for key sectors such as those in energy poverty in private sector accommodation could be set. In fact, most of the energy credits provided by utilities to meet the energy poverty targets are currently accessed from local authorities and housing associations meaning that a large segment in energy poverty is not being tackled.

Finally, participants suggested to create an energy credit trading platform for quality assured credits. This would eliminate large discrepancies in what is paid for credits.

Skills & Training

According to workshop participants the size and scope of the task must be better quantified. The full buy-in of educational providers and regulatory bodies in designing and implementing the strategy is also required.

There is a need to upskill the whole construction chain through a more holistic approach to training. Closer alignments of trades and professionals is required, as well as greater overlap in training between trades. Yet, this should lead to greater recognition of tradesmen and professionals qualified in energy efficiency and deep renovation. This could be done through minimum CPD and Certification requirements (e.g. the Qualibuild - [Foundation Energy Skill](#) training programme) and other market drivers. As better informed end-users are likely to ask for greater quality, participants believe that enhancing end-users retrofit and building management awareness is key.



Internet of Things

A small group looked at how the Internet of Things (IoT) can inform and facilitate buildings' renovation. According to



them for energy savings, indoor environmental quality and lighting mature technologies exist. However, business models remain to be developed. One participant suggested to focus first on public buildings such as schools and hospitals where information on air quality is highly valuable.

Participants agreed that existing Building Management Systems (BMS) should be retune to better promote deep renovation. More specifically, they called for better training in BMS use and software maintenance as a way to optimise energy saving. Training programmes combining software and building knowledge would also be useful. In addition, participants called for stronger standards for interoperability. They also believe that the commercial value of captured building knowledge should be developed as a product for grid services.

Finally, the systematic public availability and use of anonymised big data to inform policy was suggested.



Financial Models

According to this group, funding should be linked to the property itself not to the occupier or owner. Likewise, savings made should be linked to that loan and property. There is also a clear need for long term consistent support to send the right signal to economic players. This makes sense as greater financial support will bring its own economies of scale.

Useful financial actions include green mortgages and loans, tax incentives, grants, ESCOs and pay as you save schemes. However, buildings location and, perhaps more importantly, quality and performance guarantees are also key.

Back-casting

Workshop participants said that the target should be the full decarbonisation of Ireland's building stock by 2050. However, the target should consider CO2 emission per building user and account for long term operational energy of a building as well as the asset performance. The main challenge in this exercise is to know where we are now. For this reason, participants called for mandatory big data disclosure for energy suppliers and public sector (including local authorities).

Once the target is set, we need to look at what are the right solutions for different scenarios, locations, demographics and time, and to explore intermediate steps.

While high level targets are useful, they do not connect with people. Top down targets must happen from bottom up. National targets must thus be articulated in terms of local action plans, benefits and communication. Other intermediary measures may include a short term kWh/m² target for renovated properties, better implementation of existing regulations and national awareness campaigns.



“The interaction of views and ideas on the day provide some hope that we can deliver an ambitious national renovation strategy for Ireland”

Marc Ó Riain,
Lecturer, Cork
Institute of
Technology



“People need to feel empowered that they are part of the solution, that deep renovation will benefit them, their community and the environment. The benefit needs to be clear, generating a “hell yeah” response from people”

Ed O'Donoghue, Founder & CEO, PastZero



“An ambitious national renovation strategy can improve people’s quality of life. This is not only about saving energy or reducing our carbon emissions”

Tony Day, Executive
Director, IERC



“I really enjoyed participating to the Build Upon workshop in Cork and to engage with all the key stakeholders to explore the critical issues. The workshop facilitation really

helped tapping into participants’ knowledge and experience, in a well-structured way encouraging everybody to contribute”

Xavier Dubuisson, Managing Director, XD Consulting



“I was very impressed by the desire to come together and to collaborate to design a more ambitious national renovation strategy for Ireland expressed by all participants. We need to increase our effort in disseminating knowledge regarding retrofit”

Katherine Keane, Head of Department,
Architect & Architectural Technologist, Cork
Institute of Technology



“The National Renovation Strategy should leave no one behind. We must take everyone on the journey, making sure the strategy appeals to all sectors of society”

Timmy Mullins, Business Development &
Marketing Manager, Firebird Heating Solutions

THANK YOU TO ALL OUR WORKSHOP PARTICIPANTS

WORKSHOP PARTICIPANT ANALYSIS

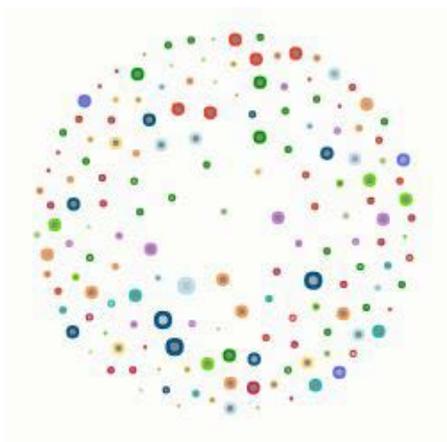
The majority of the participants were from the energy and construction industries, research and academia, as well as public bodies. In comparison to previous workshops, there was an increase in the number of building users (domestic) representatives. However, the financial sector remains under represented.

WS5 Attendees



STAKEHOLDERS

Discover who's who in renovation with our interactive map.



ARUP

BOLECTION



HOW CAN YOU ENGAGE?

Key areas where stakeholders are able to engage and input during the BUILD UPON process include:

Renovation stakeholder systems maps: Over 1,000 individual key stakeholder organisations have been mapped across the project countries. Your input is welcome to help ensure they are a representative picture of the key organisations that need to collaborate on Ireland's National Renovation Strategy V.2.

"RenoWiki" is a groundbreaking online portal which allows individuals to upload real-life initiatives on building renovations in Europe in order to share best practice and successful initiatives. To date, there are more than 550 initiatives (including 59 Irish initiatives) on the RenoWiki. Examples include Latvia's 'Lets Live Warmer', an award-winning awareness raising campaign that has led to greater uptake of housing insulation, and Ireland's "QualiBuild", a training programme to ensure a construction force capable of delivering quality energy efficient renovation.

COLLABORATING ON WORKSHOPS AND EVENTS:

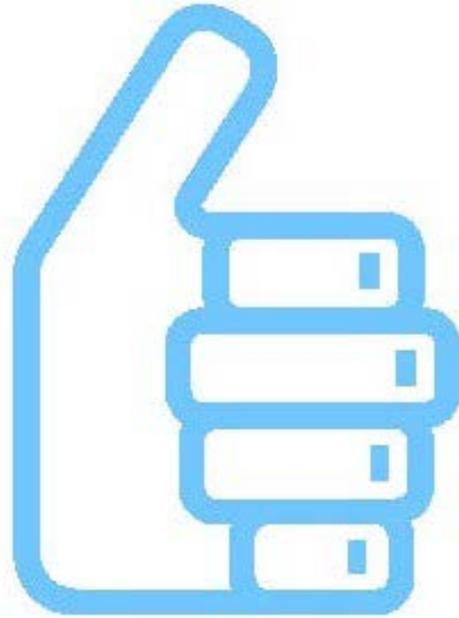
A series of over 80 events in the 13 project countries will bring stakeholders together during the project. As part of this process, six high level Building Renovation Workshops will be organized across Ireland by the Irish Green Building Council. The workshops are supported by the Department of Communications, Climate Action and Environment and are a must for anyone who wants to ensure their voice and views are heard in Ireland's the national renovation strategy process. If you have any comments on the content of this report, please contact us.

 Email Us: Marion@igbc.ie

 #BuildUpon

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