Efficient encouragement

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Surveyors must identify why owner-occupiers are making energy efficiency refurbishments to ensure that these improvements meet their expectations

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The Intergovernmental Panel on Climate Change?s October 2018 report highlights the necessity of limiting global warming to 1.5?C. This will require significant action across society ? and clearly has implications for building surveyors, whose skills will be needed in improving UK buildings? energy efficiency and resilience to climate change.

In order to predict the energy efficiency of a building or a proposed improvement ahead of construction or installation and to produce an energy performance certificate (EPC), a calculation is carried out using the Standard Assessment Procedure (SAP). Building Regulations require submission of an SAP calculation and a predicted EPC for new dwellings before any work commences.

When looking at the average SAP rating, some of the most inefficient housing can be found in the private rental sector, although this is likely to have shifted since the introduction of the Minimum Energy Efficiency Standards in April 2018 . With social housing representing some of the more efficient buildings overall ? as found by the English Housing Survey: Energy efficiency, 2016 ? it is owner-occupied housing that remains the biggest challenge.

We need substantial energy efficiency refurbishments to reduce domestic carbon emissions sufficiently

Past research has shown that we need substantial energy efficiency refurbishments to reduce domestic carbon emissions sufficiently. Ideally, these would take a whole-house approach, but piecemeal improvements can be effective.

Housing in the UK is predominantly owner-occupied , and has the greatest potential for larger carbon reductions. The original Green Deal, scrapped in 2015, was one attempt to reduce the finance barrier for improving homes. But while earlier research has shown that an all-measures approach is needed to meet carbon reduction targets for housing, the Green Deal did not take such an approach, so even where it was adopted it did not sufficiently increase home energy efficiency.

The abrupt end of the deal also represents a missed opportunity to make additional improvements: previous research suggests refurbishments that fail to incorporate adequate energy efficiency improvements prevent further such measures for 2 or more decades.

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Other incentives have been attempting to encourage improved efficiency, such as the scheme run by Uttlesford District Council , the Kirklees Warm Zone project , and consequential improvement programmes in Berkeley, California . Yet so far, none of these has resulted in the extensive improvements necessary as the adoption of energy efficiency measures relies very much on the motivation of individual owner-occupiers, particularly where more significant measures are called for.

Four types of motivation

Individuals will typically be motivated by wanting to ensure their home is sufficiently functional: that is, the opportunity to improve a property?s energy efficiency is clearer where it is necessary to address malfunctioning technology, building defects or building condition.

There are various barriers to action, though, from cost to competing priorities. It is now understood that simply giving individuals information will not result in action, although it improves their awareness of the issues and the steps they might take.

Looking at 25 owner-occupied houses across Bristol that had adopted, or planned to adopt, energy-efficiency measures, my own research has shown that motivations are multiple and complex. People will not act without a reason; any action taken must result in the desired outcome, and not be perceived as a waste of time, money, energy or other resources.

What an owner-occupier desires depends on their personal values. These, along with other factors such as their sense of responsibility, perception of self and social norms, contribute to the motivation type. The research identified 4 such types, and owner-occupiers will typically experience 2 or more of these at one time.

- **Economic motivation** includes being driven to save money on utility bills.
- **Social motivation** includes improving comfort and giving a platform for positive social interaction; that is, creating a welcoming environment in which occupants can receive their visitors.
- **Waste motivation** relates to action taken to reduce energy, material, money or other forms of waste.
- **Environmental motivation** concerns an individual seeking to be a good citizen, helping safeguard or improve the local or global environment.

The latter 2 are grounded in individuals? childhood and life experiences, and regular interaction with the local environment.

Motivations are dynamic as well, and can change type between and within projects. While they are shaped by internal factors, they alone do not shape the course of action adopted. This is also influenced by external factors such as available finance, grants and incentives, costs, physical building constraints and the owner-occupier?s awareness of the options.

In my research, motivations did not significantly differ according to neighbourhood deprivation levels or between socio-demographic categories. There was in fact a greater level of action among those in more deprived neighbourhoods, resulting in a higher instance of energy efficiency measures. This was not because these areas had received more incentives, rather that in such neighbourhoods owner-occupiers were particularly conscious of their ability to afford the desired levels of comfort.

The research found that the adoption or decision to adopt energy efficiency measures by these households often coincided with transitions such as house moves, retirement and changes to the family. This highlights the opportunity to undertake energy efficiency work at

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these key life points.

There are barriers that inhibit or attenuate owner-occupiers? motivations for making energy efficiency refurbishments, or demotivate them entirely. These include:

- economic barriers such as the cost of work and the availability of finance;
- the inconvenience to occupants;
- conflicting messages about products, services and policies, in particular abrupt changes to the latter; and
- loss aversion.

Individuals are loss-averse, typically favouring the status quo. Potential losses will be overestimated and gains underestimated. However, this provides us with the opportunity to reframe information given to owner-occupiers, highlighting the threat to the affordability of their comfort, and therefore to home functionality, that would follow from not making improvements.

Emotional response

Emotions are important and ensuring a positive emotional experience will increase the likelihood of owner-occupiers adopting further energy efficiency measures in the future. Crucial to owner-occupier emotions in this regard are RICS? principles to provide a high standard of service and promote trust in the profession.

Negative emotional experiences reduce the likelihood of future action and thus emphasise the importance of providing a good experience of improvement works. Building surveyors are in a strong position to ensure this by using their knowledge and understanding to specify suitable responses and provide project management skills.

We can recognise that work is opportunistic and we can use planned improvements as a foot in the door to highlight potential energy efficiency measures to owner-occupiers. Any information we offer must therefore be clear and trustworthy. When presenting opportunities, we should frame these according to the 4 motivation types identified, appealing particularly to the economic, waste and social themes, which are the owner-occupier motivations that are more consistently held across different types of neighbourhood.

We need to ensure the measures and processes used to improve the energy efficiency of owner-occupied housing are not only appropriate to the building but are also relevant to the owner-occupier?s needs and context. Improvements should enhance a home?s functionality and be suitable for occupiers? daily lives and local environment, so we need to engage with them to better understand their concept of a functional home. Helping identify relevant incentives and grants will also lower the cost barrier, while our project management skills can limit the inconvenience experienced by owner-occupiers during any works.

Improving owner-occupied housing?s energy efficiency is a huge task and needs careful consideration to avoid resulting in future defects. Building surveyors are in a strong position to provide advice and services to owner-occupiers, after early engagement with them to identify their motivations and desired outcomes as well as energy efficiency opportunities and other improvement works.

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Further information

- Related competencies include: Conduct rules, ethics and professional practice , Sustainability
- This feature is taken from the RICS Built Environment Journal (April/May 2019)
- Related categories: Residential EPCs and DEAs , Climate change: adaptation and mitigation

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