

Building homes that work

Why does the industry treat the New Zealand Building Code as a performance target rather than trying to do better? A recent BRANZ-supported study explored this question.

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NEW ZEALAND'S new homes have attracted persistent but diverse criticism over the last decade.

Is industry out of step with society?

The price of new homes and problems of unaffordability have been at the centre of public as well as political anxiety. The concentration on production of dwellings in the highest quartiles of value has reduced housing access for lower-income households.

The divergence between dwelling and household size has been cited as indicative of a building and development industry out of step with New Zealand's ageing society.

The poor accessibility and functionality of typical new builds for an ageing population and for the many people living in the community with compromised mobility or other disabilities has also been a long-standing issue.

Code was meant to raise standards

A common thread has been the role of the Building Code in setting performance

standards, which many in the industry take as goals, rather than minimum expectations.

The Building Act 2004 and New Zealand Building Code were intended to provide a flexible framework that would allow the industry to achieve more. It removed the previous prescribed design-and-build rules and focused instead on performance.

Research asked why Code not exceeded

The 'doing better' research asked why the potential for doing better than Code has largely been unfulfilled. In particular, it asked whether the hesitancy to go beyond Code is related to a lack of evidence-based performance standards that have credibility beyond the minimum standards embedded in the Code.

The research focused on two aspects of dwelling performance as examples:

- Energy efficiency related to thermal performance.
- The functionality of residential buildings associated with accessibility.

In both areas, there is significant value to be generated by performance improvement. Furthermore, both areas have a long history of unmet consumer demand.

This dual focus immediately raises the scope and nature of the Code itself. While energy efficiency is included in the Building Act and is associated with performance standards in the Code, accessibility and functionality for private dwellings are excluded.

Limited uptake when no minimum

When a performance standard is not specified in the Code, the minimum is effectively zero. This depresses the building industry's take-up of accessibility standards such as those found in the Lifemark accreditation. The lack of requirements is also associated with low research investment into and research activity around net benefits, appropriate measurement and technical and product solutions.

There is limited published New Zealand research on issues of accessibility relative ➤

to that for energy efficiency (see Figure 1). Even when a broad definition of accessibility is taken to include papers with a variety of topics and fire respectively, there are more than four times the number of energy efficiency-related papers.

Lack of recognition of a dimension of building performance, underinvestment in research and low industry take-up may establish a vicious cycle where lack of research is cited as a reason not to incorporate requirements into legislation.

Concerted, multi-pronged approach needed to exceed minimums

A well established body of New Zealand research already exists that would help the industry to push performance in energy efficiency and accessibility. There is also a

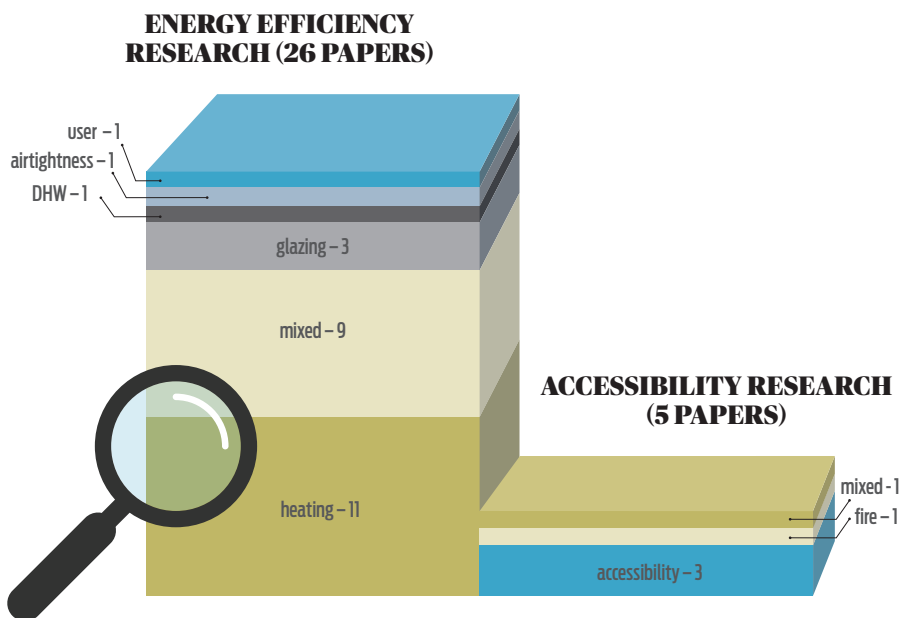


Figure 1: There has been far greater research on energy efficiency than accessibility.

range of research-based accreditation tools that, while in the public arena, are largely ignored by industry.

Similarly, the view that the industry is set in its ways and cannot be innovative is false. New Zealand and international research into take-up of building performance-enhancing solutions consistently shows a concerted and multi-pronged approach is necessary to achieve outcomes that exceed minimum performance requirements.

Solutions to improve take-up

Research alone is not enough. Also important are an active regulatory framework, industry incentives, consumer education and accreditation as well as industry development.

To improve take-up, the 'doing better' programme suggests that we need to do

different types of research. As part of this we need to:

- establish net benefits associated with adopting higher performance standards in both energy and thermal performance as well as the improved future accessibility and functionality of homes
- identify and develop effective strategies to dismantle barriers to transformation and take-up
- develop plug-and-play solutions that are attractive to the building industry and easy to adopt.

These research themes can be applied to any area of building performance. They are, however, particularly necessary for accessibility and functionality where the legislation fails to incorporate performance requirements for dwellings.

Improving building legislation

There needs to be strategic research into the nature and operation of building legislation. The dynamics of what is and is not included in building legislation merit research into the:

- institutional and procedural aspects of Code review and specification
- conditions that prompt certain performance dimensions to be recognised in legislation related to building performance
- extent to which current building legislation is adequate in the context of housing needs in an ageing society.

The Code has proved to be effective in focusing industry activity on the issues it includes. The question is now how to deal with the many issues not included. ◀

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