Case for building pathology system

If New Zealand had a building pathology system for housing, we’d have a detailed view of defects and failures and therefore the knowledge to improve future construction to the benefit of all.

**WHAT** is building pathology? Think of it in terms of the medical model in which diseases are monitored to better understand where they occur, to whom and with what impact.

**Identifying pattern of failures**
A building pathology system monitors building defects in the same way. It identifies whether there is an emerging pattern of failures occurring, to what types of buildings, in what places, due to what combination of factors and with what impact.

A BRANZ study report, *A building pathology system in New Zealand - what is possible?*, looked at how feasible it would be to build and operate a building pathology system here.

The research showed a building pathology approach provides a framework for managing the risk of building defects through a consideration of symptoms, causes, treatment and prevention.

**Could be a prevention tool**
The key reason to investigate how a residential building pathology system might be created in New Zealand is to give us the ability to identify emerging trends in building defects. If we know where there is potential for a systemic failure, we can act to prevent it.

Could we build such a system for residential building in New Zealand? The research says yes. It could be done by using data we already have, although some new work would need to be carried out. There is a significant amount of funding put into housing research every year, and several research organisations doing the work.

BRANZ proposes using some of the data gathered by these organisations, consolidating and repurposing it and creating a system that provides an overview of defects in the housing sector. The BRANZ House Condition Survey would be an important base for this work.

**Need stakeholder buy-in**
The key to success is having buy-in from the key agencies in New Zealand who are building houses and monitoring those houses. This includes building surveyors, local and central government, builders, planners, designers and developers.

The research found that developing an effective building pathology system faces two significant challenges. Firstly, if it is to be useful, industry and researchers need to support it and input research data and findings into the system.

Secondly, the system needs to be able to be easily accessed and used by the building and construction sector. Design of outputs would need to be carefully considered so they are usable whilst preserving privacy. Utility, however, needs to be the primary driver.

**Benefit all New Zealanders**
While more work is needed to test the concept, our research shows it could be a cost-effective proposition. The benefits of this investment would be significant. A building pathology approach would be able to inform future construction. It would also increase sector-wide knowledge of building quality. This can only lead to improvements in building quality and deliver benefits for all New Zealanders.

The next step is to trial the system, hopefully in 2018/19.