

# Theoretical framework mapping barriers of passive house adoption in Australia

## Abstract

Adopting an appropriate Passive House solution is not only an essential task of its climatic sustainable ambition, but also a key process in the successful adoption among consumers. The fundamental challenge is to recognise the possible barriers in the process of Passive House transition and adoption, which leads to a full understanding of the supporting resources required to overcome these obstacles and facilitates decision-making on adoption among consumers. This work aims to establish a comprehensive barrier identification framework for Passive House at the consumer level. The framework consists of two dimensions, including user characteristics and Passive House features, which are derived from the innovation diffusion theory and technology acceptance model. The proposed framework argues that indicators such as complexity, visibility, triability, awareness and knowledge are deemed as obstacles to Passive House adoption. The model will be tested via 535 questionnaires with existing and potential building consumers across all Australian states and territories to identify factors which influence housing attitudes and behaviours in relation to the adoption of high-performance buildings. The proposed framework will provide a systematic starting point for answering critical questions about factors shaping consumer Passive House adoption decisions, thereby developing effective strategies towards sustainable housing decisions.