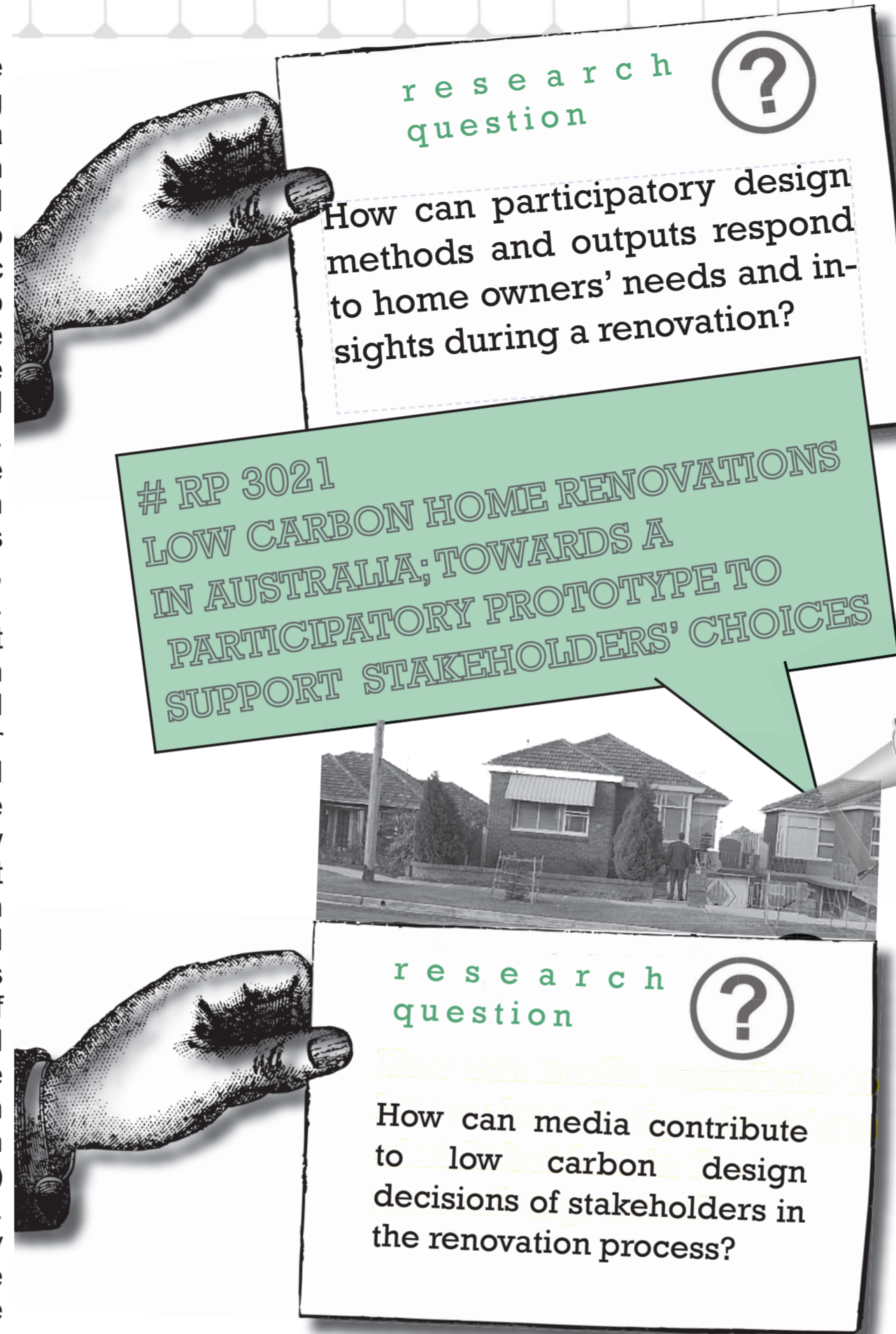


**LOW CARBON HOME RENOVATION IN AUSTRALIA: TOWARDS A PARTICIPATORY PROTOTYPE TO SUPPORT STAKEHOLDERS CHOICES**

Australia is one of the most carbon intensive economies in the world with buildings contributing approximately 20% to the greenhouse emissions of the country and households in particular contributing 10% of the total greenhouse gas emissions. Following a century of phenomenal construction of new residential homes, the maintenance and upgrade of existing ones is imperative to the challenging transition to a low /zero carbon society. The extension of the lifespan of residential buildings through renovation is much less damaging to the environment than the demolition and construction of new built homes. Adaptation to this accelerating change for the future is imperative and needs to focus in 'practices' further than the technical adjustments and energy consumption of households.

A building project involves several stakeholders each of which contributes to the decision making process; a complex process, which often involves multiple challenges. In the context of renovations, particularly low carbon ones, design, as a process of creation and selection of choices and testing of possible solutions to the challenges, is essentially a form of decision making.

Furthermore, media, since the 1990s, have been promoting renovations as part of a desirable lifestyle and in turn have aspired confidence and given control of the process to householders. This dynamic contribution of non-experts to the design process, makes the use of the collective intelligence of all stakeholders involved critical to the final outcome. Usually building projects are led by designers or construction professionals, while users adopt a more passive role, with minimal contribution. For a renovation project to succeed, collaboration between the actors involved and engagement with the wider social context of the household is needed in order to accelerate the desired change for a low carbon future. This project argues that co-design, through the active engagement and collaboration of stakeholders and the generation of participatory prototypes and scenarios, can help explore the challenges of renovation (at conception, construction & post occupancy stages) through different perspectives. It is argued that participatory design activities can create new possibilities such as the sharing of expertise, reflection, insights and provide a platform for informed and mindful decisions.



# RP 3021  
 LOW CARBON HOME RENOVATIONS IN AUSTRALIA; TOWARDS A PARTICIPATORY PROTOTYPE TO SUPPORT STAKEHOLDERS' CHOICES



**OBJECTIVES**

Identify appropriate opportunities for stakeholder collaboration in the renovation process

Analyse the contribution of design in the renovation process

**POSSIBLE INTERVENTION**

Identify appropriate opportunities for co-creation across the different stages of renovation using new media platforms

Contextmapping of existing issues and experiences

Media is an important actor in the construction of public discourses as a platform for debate, information and meaning making  
 The normalising of low carbon housing is an emerging theme in media discourses  
 The new social media ecology is turning expertise into a distributed kind of community commons  
 Collaborative media content is trending towards becoming the main source of information for many consumers

**OBJECTIVES**

Analyse the influence of media and its representation of design in the decision making process of low carbon renovation

Support the capturing of the stakeholders' experience of the renovation process using co-design

**POSSIBLE INTERVENTION**

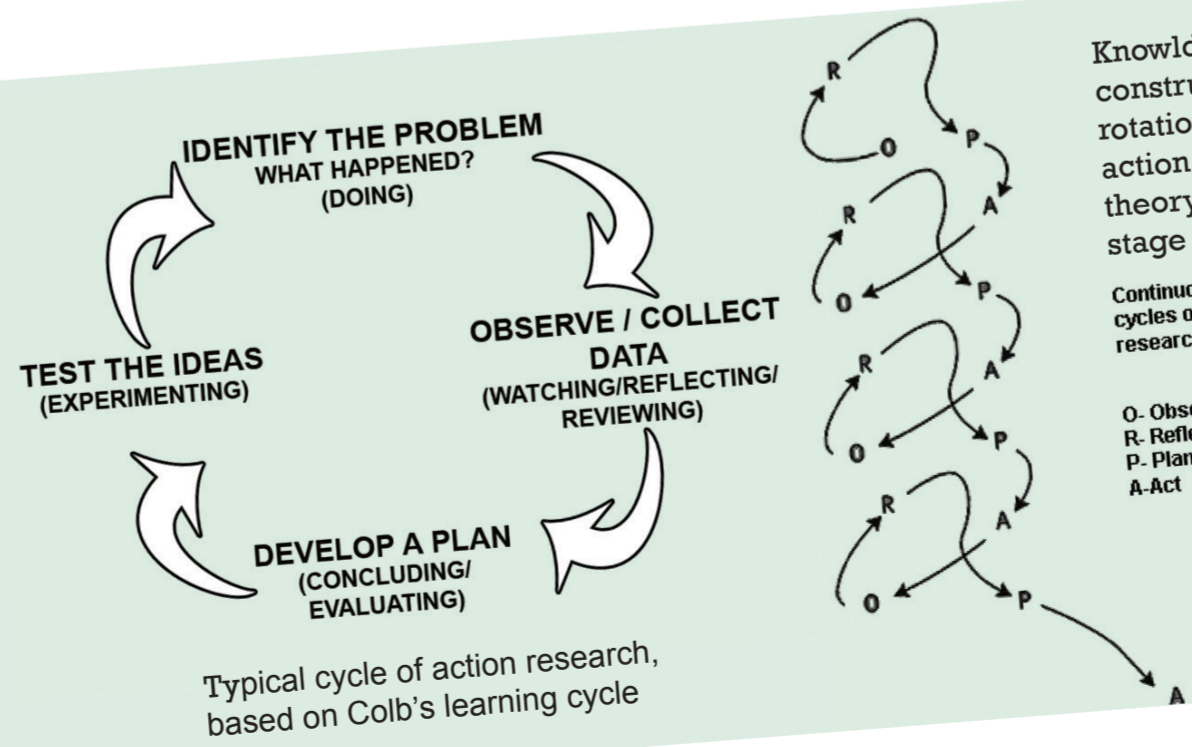
Map use of participatory (media) platforms relevant to the distribution of information, knowledge and expertise in the renovation process

Construct scenarios and personas based on typical

**METHODOLOGY**

The project will involve stakeholders throughout its course, in a participatory action research model, in the form of participatory design. The research conducted will be based on an iterative-inductive process, moving between theory and data collection, followed by a qualitative analysis. Typical

data collection will involve ethnographic observations and interviews as well as participatory, interactive workshops which will engage stakeholders in the making and evaluation of scenarios and co-created low carbon visions for change.



**ANTICIPATED IMPACT**

This interdisciplinary research will contribute to the strengthening of the link between design and the social sciences. The sociological study will allow for a conceptual, analytical framework to analyse information, whereas the design methods will allow for a creative, problem-solving oriented approach turning sociological

ideas into tangible prototypes. This collaboration of disciplines will lead towards a better understanding of how products and communication influence renovation practices, as well as support the development of appropriate toolkits, accessible to people, which can facilitate social change, towards a low carbon future.