







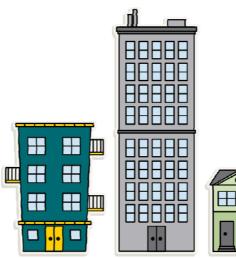




## **Delivering Sustainable Solutions for Apartments**

Final Report for the Higher Density Residential Efficiency Solutions (Hi-RES) Project

2 November 2012 City of Melbourne













#### **Disclaimer**

This project was supported with financial assistance from the Victorian Government Sustainability Fund. The Sustainability Fund is administered by Sustainability Victoria.

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## **Summary**

The Higher Density Residential Efficiency Solutions (Hi-RES) project was an 18-month initiative that sought to identify and develop solutions to the barriers currently preventing sustainability improvements from occurring in higher density residential buildings.

During this time the Hi-RES project successfully:

- Engaged with the community and industry to identify the unique needs of Victoria's existing multi-unit residential buildings;
- Delivered innovative information tools to begin building a knowledge base to support positive change in this sector;
- Partnered with industry to foster the development of a sustainability service industry specifically for multi-unit residential;
- Commenced a *national* conversation about the importance and sustainability needs of Australia's multi-unit, or strata, community;
- Undertook research to build a business case for a national tool-kit and engagement program for sustainability action in strata and successfully secured over \$1M to deliver this effort from the Commonwealth Government; and
- Defined the role for local government involvement in this sector.

Above all, Hi-RES has highlighted the increasing importance of Australia's multi-unit residential sector and the value cities can offer in supporting these communities to become more sustainable. The process followed by the Hi-RES project can also serve as a model for local government involvement across any number of sectors when developing sustainability solutions to support cities' continual evolution towards a low carbon future.

## **Background**

The Hi-RES project commenced in early 2011 with the aim of identifying and helping to overcome the barriers to sustainability in the higher density residential sector. The growing environmental impact of the sector, particularly in inner-city suburbs, and the lack of sustainability solustions available to apartment buildings relative to other building types were the key reasons behind the inception of the Hi-RES project.

In the City of Melbourne, over 70 per cent of residents live in an apartment and the sector is responsible for 9 per cent of greenhouse gas emissions, 22 per cent of the city's water usage and more than 14,000 tonnes of waste - highlighting the importance of understanding the barriers to and developing solutions for increasing sustainability performance.

The Hi-RES project was designed to make headway in this area. The project was led by the City of Melbourne in partnership with the Cities of Yarra and Port Phillip, Strata Community Australia (Vic), Moreland Energy Foundation and Yarra Energy Foundation and supported by the Victorian Government Sustainability Fund. The program involved collaboration with universities, industry, and the community to understand the barriers to sustainability from all key perspectives and encourage the development of tailored solutions for Victoria's existing multi-unit residential sector.

## **Project Outcomes**

## **Identifying the Barriers to Sustainability**

In the early phase of the Hi-RES project, a significant amount of engagement was undertaken with members of Victoria's multi-unit residential building sector. This work culminated in a collaborative workshop that was held in May 2011 that brought together sixty-four representatives from a diverse range of stakeholder groups.

### These groups included:

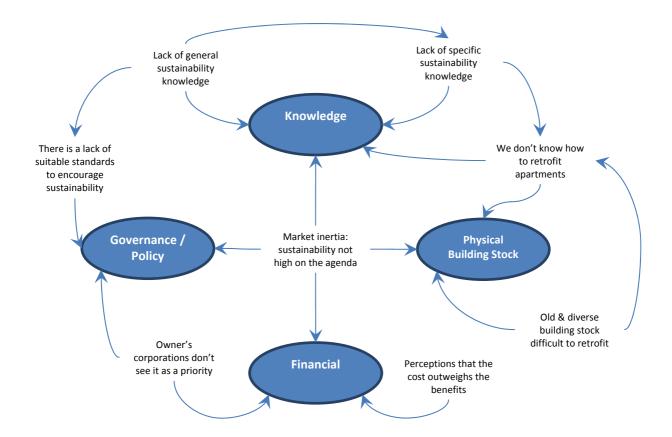
- Owner-occupiers of units
- Property investors
- Architects
- Property developers
- Real-estate agents
- Owners corporation managers Sustainability consultants
  - Building maintenance/upgrade contractors
  - Property Council
- Dept. Planning and Community Development
- Consumer Affairs Victoria
- Local governments
- Community organisations

Through this work, four foundational barriers were identified:

- 1. **Knowledge**: there is a lack of quality knowledge about the benefits of sustainability and why action is important as well as knowledge about how to successfully implement change within an owners corporation.
- 2. **Financial**: there is a lack of access by owners corporations to affordable and innovative financing for retrofit projects. Additionally, many owners corporations have not planned for retrofit projects and are hesitant to utilise existing funds for proactive projects in case of other emergencies (e.g. lift breakdown).
- 3. **Governance / Policy**: owners corporations are governed by their own legislation and regulations, which set out a governance framework that can make decision-making seem onerous and burdensome.
- 4. **Physical limitations to existing building stock**: many of Victoria's existing multi-unit residential buildings were not constructed with sustainability in mind and may be limited in what can be done to retrofit them to become more sustainable.

### **Exploring the connections**

It became clear that none of the barriers identified are mutually exclusive. Therefore, none of the potential solution ideas to overcome the barriers could be developed in isolation. The diagram below explores the many connections between identified barriers:



For more information on the barriers facing Victoria's multi-unit residential sector, please see *Appendix 1: Workshop Outcomes Report* or <a href="https://www.melbourne.vic.gov.au">www.melbourne.vic.gov.au</a>.

#### **Solutions to Support Transformational Change**

With a clear understanding of the barriers and obstacles facing residential owners corporations the Hi-RES project team commenced work investigating potential solutions to assist the community in overcoming them. However, it was important to define what the appropriate role for local government is in developing and delivering solutions for this sector.

Past experience at the City of Melbourne and other local governments had shown risks involved regarding local government intervention in this sector. The City of Melbourne's *Sustainable Living in the City* (SLiC) pilot project undertaken in 2008 and the City of Port Phillip's *SOCs & Blocks* program both highlighted that local government's direct investment in the delivery of sustainability assessments for owners corporations had two adverse effects:

- 1. Delivering assessments in isolation was often not sufficient to catalyse retrofit action.<sup>1</sup>
- 2. Government-funded assessments / retrofits could have the perverse effect of supporting a mindset that sustainability retrofits 'cost too much' and should not be undertaken without subsidy.

From this experience, it was recognised that the focus for Hi-RES should be two-fold:

<sup>&</sup>lt;sup>1</sup> Lindner, Elke; *Project Report: SOCs & Blocks 1 & 2 Program Evaluation*; e.ngage Now; December 2011

- Collaborating with key stakeholders to identify what it means to own, live and work within a multi-unit residential building and how this impacts successfully making sustainable change; and
- Partnering with industry to define the value proposition for why owners corporations should and can implement sustainability retrofits and supporting industry to tailor their products and services specifically for owners corporations.

#### Understanding the information requirements of apartment owners

Hi-RES sought to deliver more than just information solutions identifying what retrofit opportunities a building could undertake. Successful solutions needed to also offer information and guidance about *how* and *why* a building should implement sustainability initiatives. With this in mind, we sought to understand who was best placed to deliver this information to owners corporations and determine the current understanding of sustainability by apartment owners.

To answer these questions, Swinburne University of Technology was engaged to undertake a two-stage study of apartment owners in metropolitan Melbourne to understand the knowledge and information requirements for sustainable retrofits. In total, the study undertook 12 qualitative in-depth interviews and 130 quantitative online surveys with apartment owners in inner-Melbourne. Respondents were not required to answer every question.

There were four objectives for the study. These were to understand issues associated with:

- Living in and maintaining apartment blocks;
- Opinions of property sustainability assessments;
- Knowledge and opinions of sustainable retrofits; and
- Information needs for sustainable retrofits.

Three quarters of the sample believed it was *not* easy to find information about implementing sustainable retrofits. When looking for information, they relied heavily on 'Google' (i.e. web searching), their property and strata managers, the owners corporation committee, and local government as sources of information.

When asked about who was the *one most trusted* information provider to provide reliable and useful information about undertaking sustainable retrofits, their local council (23%) was mentioned most often. This was followed by their owners corporation manager (15%) and non-profit organisations (14%) – see Table 1 below. <sup>2</sup>

Table 1: Most important sources of information identified by 130 survey respondents

	Total %
Local Council	23
Owners corporation manager	15
Non-profit organisations	14
Industry association	14
State government	9
Building manager	3
No answer provided	22

<sup>&</sup>lt;sup>2</sup> Rex, Dr. Judy and Dr. Rebecca Leshinsky; Understanding the knowledge and information requirements for sustainable retrofits: A two stage study of apartment owners in Melbourne, Australia; Swinburne University; June 2012.

This research highlighted the opportunity for local government to work collaboratively with the owners corporation and facilities management industries and non-profit organisations to develop and deliver simple, innovative information tools about successfully implementing sustainable retrofits within a residential owners corporation.

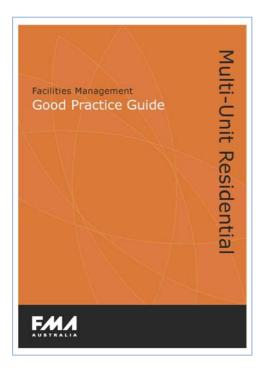
Key stakeholders from the multi-unit residential sector were identified as the target audience to receive this information. They include all unit owners, owners corporation committee members, owners corporation managers, property/facilities managers, contractors and all levels of government.

The full research report can be found online at www.melbourne.vic.gov.au.

### Knowledge is Power – information tools for change

Armed with an understanding of the information needs of owners corporations and the value of local government intervention, the project team commenced work developing information tools that were tailored to these needs; guides that would support all stakeholders within the multi-unit residential sector to understand *how* to implement and manage sustainable change successfully.

A working group, led by the Facilities Management Association of Australia (FMA), was established to develop a *Facilities Management Good Practice Guide for Multi-unit Residential* and service design firm, Huddle Design, was engaged to assist in the development of innovative 'infographics' that would illustrate the What, Who, Why, and How of successfully implementing sustainable change within an owners corporation.





Both of these guides are a first of their kind in Australia and can be freely accessed online at <a href="https://www.melbourne.vic.gov.au">www.melbourne.vic.gov.au</a>.

### Forging Partnerships – supporting industry to deliver change

The experience gained through both the *SLiC* and *SOCs & Blocks* programs illustrated that the status quo for local government intervention in this sector required review. Simply funding sustainability assessments for owners corporations in isolation was not catalysing the kind of retrofit action on the ground as anticipated.

Through the City of Port Phillip's *SOCs and Blocks* program rounds 1 and 2 a total of 29 owners corporations were assessed, identifying 106 possible sustainability retrofit initiatives across all buildings. However, at the time of a program evaluation in December 2011, only 7 of these initiatives had been implemented.

The lack of action was not for lack of uncovering potential benefits to the buildings that participated. In many cases, the assessments offered participants the opportunity to save up to 20-30 per cent in energy costs through simple retrofit activities that could pay for themselves within 3-5 years. And yet, little action was occurring even in these circumstances.

Owners engaged through Hi-RES identified not only a need for more information on how to implement actions within their owners corporations (see info tools in section above), but they also identified a need for more support and guidance from industry. Many service providers specialised in delivering sustainability services to either commercial properties or singlefamily homes, and had not tailored their services for delivery to residential owners corporations, or strata.

In response to this issue, the Hi-RES project undertook a public call for expressions of interest (EOI) from industry bodies and private organisations interested in developing and testing new solutions that would deliver sustainability projects in residential owners corporations.

As a trusted source of information and guidance, local government was well-placed to partner with private industry to:

- Identify the market potential for engaging with the multi-unit residential sector;
- Educate industry on the unique needs of the sector and co-develop new services and delivery models; and
- Connect those service providers to the community to test new services.

A number of organisations submitted EOIs, including:



















Work to support these organisations to develop and deliver new services to this sector began in early 2012 and will continue through the 2012/13 financial year. No funding was provided by the Hi-RES project to these organisations. Instead, each organisation became engaged on the merits of the opportunity to collaborate with Hi-RES partners to better understand and engage this growing sector of the built environment.

This also meant that the outcomes were dependent on each partner organisation's individual business plans and timeframes. Progress can be slower, but the solutions – when developed – are long-term and have industry ownership. Through this process, a number of successes have been achieved to date and should be noted.

Origin Energy tailored their On-bill Financing solution to be applicable to owners corporations. This product allows owners corporation to undertake a retrofit project without any upfront capital impost. The savings from the retrofit can be guaranteed and repayments are tied to the savings achieved allowing for a project that is cash neutral to the owners corporation. At the time of this report, a number of apartment buildings in metropolitan Melbourne had been assessed and proposals for work were being considered by the owners corporations.

AGL and Ecovantage both reviewed the opportunity to deliver VEET-accredited<sup>3</sup> lighting retrofits to residential owners corporations and are in the final stages of developing proposals to test in the market.

Macquarie Bank and Green Invest have partnered to develop an end-to-end service offering for owners corporations. Green Invest can manage and deliver everything from assessment to implementation and evaluation of a sustainable retrofit. The offering can also finance the project through Macquarie Bank's *Strata Improvement Loan*.

Bankmecu and Bendigo Bank did not have previous experience lending to owners corporations. Both organisations underwent a review of the legal implications of entering this new market. Bankmecu has recently launched an owners corporation lending product and are ready to pilot the solution.

#### **Next Steps**

Through the Hi-RES project, a number of targeted solutions have been developed that will support the multi-unit residential community to make their existing buildings more sustainable. However, the ultimate effectiveness of these solutions depends largely on the proactive dissemination of these tools to the four key stakeholders in this sector:

- Apartment owners
- Owners corporation managers
- Facilities / Building managers
- Contractors

The research undertaken by Swinburne University has shown that local government has a large role to play in engaging with strata communities to educate about sustainable change. It also highlighted a desire from the community for interactive tools that can assist stakeholders to successfully deliver sustainability projects within an owners corporation.

<sup>&</sup>lt;sup>3</sup> Victorian Energy Efficiency Target, <u>www.veet.vic.gov.au</u>.

In response to this, the City of Melbourne partnered with Strata Community Australia, City of Sydney, Green Strata, and Owners Corporation Network to leverage off the outcomes from Hi-RES and propose a national approach to develop an interactive 'tool-kit' and engagement program.

#### Building a National Engagement Program through Sustainable Strata

In May 2012, the Commonwealth Department of Climate Change and Energy Efficiency announced that Strata Community Australia, in partnership with the City of Melbourne, City of Sydney, Green Strata, and Owners Corporation Network was successful in receiving over \$1M from the Energy Efficiency Information Grants (EEIG) Program to develop and deliver a national energy efficiency tool-kit and engagement program for residential owners corporations through a project called *Sustainable Strata*.

The purpose of this project is to build capability in Australia's residential strata sector to drive change, create engaged communities and improve energy efficiency. This will be achieved by taking the insights and solutions created through Hi-RES and further developing, collating and delivering meaningful information and tools that support and encourage strata communities across Australia to make informed decisions about energy efficiency. These tools will be open to all communities and local governments in Australia to access and utilise.

In addition to the development on a national online tool-kit, Sustainable Strata will also develop and deliver a national engagement program that will ensure the Hi-RES solutions can reach as wide an audience as possible. The engagement program will include public seminars and professional training for managers. Sustainable Strata will be delivered from August 2012 until June 2015.

For more information on Sustainable Strata, please visit www.melbourne.vic.gov.au.

#### Policy Advocacy - further research opportunities

It is important to note that Hi-RES has focused on the creation of solutions that support the multi-unit residential sector to make sustainable change within the existing policy framework in Victoria. The project team deliberately made this choice as the legislation governing owners corporations is controlled by state government.

However, Hi-RES has highlighted that the existing governance and policy framework for owners corporation is one barrier preventing sustainable change in this sector. There is potential that amendments to the legislation could support owners corporations to more easily make sustainable change within their buildings.

Such legislative amendments have been made in other jurisdictions, including the Australian Capital Territory, which could act as a model for Victoria. More research is needed to understand the value these amendments have had in other jurisdictions and define the opportunity facing Victoria in undertaking similar legislative changes.

It is recommended that a strategic review of the *Owners Corporation Act 2006* and *Owners Corporation Regulations 2007* is undertaken to ensure that these policies do not act as inhibitors to sustainable change in Victoria's multi-unit residential sector. A robust review would also identify any opportunities to amend these policies to actively support and potentially incentivise sustainable change.

## **Appendices**

## Appendix 1 – Workshop Outcomes Report













# **Developing Sustainable Solutions for Apartments Workshop Outcomes**

18<sup>th</sup> May 2011

City of Melbourne

The Developing Sustainable Solutions for Apartments workshop was run as part of the **Hi-RES** (Higher density Residential Efficiency Solutions) project, which aims to develop and test solutions to help transform Victoria's apartment buildings to become more sustainable.

The Hi-RES project is an initiative of the City of Melbourne, Owners Corporations Victoria, Yarra Energy Foundation, Moreland Energy Foundation, and Cities of Yarra and Port Phillip and is supported by the Victorian Government Sustainability Fund, managed by Sustainability Victoria.







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#### Summary

On 18<sup>th</sup> May 2011 the City of Melbourne convened a workshop to discuss the important issue of increasing the sustainability of the higher density residential building stock in Greater Melbourne. Sixty-four representatives from a diverse range of stakeholder groups attended. These groups included:

- owners corporation managers
- owner-occupiers of units
- property investors
- architects
- property developers
- real-estate agents
- sustainability consultants
- building maintenance/upgrade contractors
- Property Council
- Dept. of Planning and Community Development
- Consumer Affairs Victoria
- local governments
- community organisations

The outcomes of the workshop were:

- I. The identification of the major issues inhibiting the move to sustainability within higher-density (i.e. multi-unit) residential buildings.
- II. The engagement of the different stakeholder groups in participating in the Hi-RES project to develop solutions to those issues.

Whilst a variety of issues were identified as contributing causes to the inaction within the area of sustainability, seven major issues were selected for further discussion (a number of which were connected). These issues were:

- Lack of quality knowledge in the area of sustainability and apartment buildings
- Physical limitations of the existing building stock
- Owners corporations don't see sustainability as a priority
- Lack of standards to encourage the retrofit of apartment buildings
- Perception that costs of sustainability outweigh the benefits
- Split incentives between owner-occupiers, tenants and investors
- Sustainability is not high enough on the agenda

The group examined each of these major issues and identified the key contributing factors to those issues. Whilst the causes and *potential* solutions discussed on that day are explored in more detail in the body of this document, some significant themes for possible solutions were identified:

- Development of best practice/case studies to demonstrate how sustainability can be achieved and the positive benefits that result from investing in upgrades
- Workable tools to assist building owners/owners corporations to become more sustainable and compare sustainability performance between buildings
- Development of a database which identifies good quality sources of information
- Use of media to demonstrate the importance and benefit of sustainability
- Financial support to help building owners transition to sustainable solutions
- Financial support to develop economies of scale to make sustainability more affordable.

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#### Obstacles to sustainability

During a general discussion about the barriers to implementing sustainability in existing higher density residential buildings, the following obstacles emerged. These were then grouped into the major obstacles discussed in more detail in the next section.

#### **Financial**

- The expense of retrofitting
- Split incentives between investors, owner-occupiers and tenants
- Access to funds by owners corporations for retrofitting projects

#### Other priorities

- Profits driven, decision making
- Differing parties with differing priorities

#### Governance

- Subdivision issues (i.e. ownership boundaries within buildings)
- Owners corporations decision making and funding requirements
- Gaps in legislation and policy supporting and incentivising sustainability in Class 2 buildings

#### Knowledge

- Lack of clear communication, and therefore lack of understanding, of the benefits and process for retrofits
- Lack of education about owners corporations and owning in strata
- Confusion about available technology and best practice for retrofitting
- Inability to verify information due to the sheer multitude of it

#### Behavioural

- Sustainability is often outside people's comfort zone
- People can be change resistant if they don't perceive a genuine personal benefit
- Absentee ownership means disconnection with the issues



A group mapping out the causes to a major barrier

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## Removing the major obstacles

During the workshop, attendees were grouped and asked to map the causes of each major obstacle and brainstorm potential solutions to those causes. Attendees were told to be as creative and open minded as possible in devising solutions. For this process attendees were encouraged to think 'outside the box'. The following are the results:

#### 1. Knowledge Barrier

#### Causes

- There is a lack of national leadership in the area of sustainability and strata
  - Sustainability is an emotional issue
  - The political cycle
  - No one wants to be the first (perceived cost impost)
- There is a lack of quality knowledge of good sustainable practice (the destination)
  - Lack of agreement about quality sources
  - Lack of agreement between sources
  - Lack of real and comprehensive examples
  - The sheer quantity of information makes it difficult to determine the quality of the information
- There is a lack of quality knowledge of how to become more sustainable (the journey)
  - We need good knowledge about the current state of our buildings in order to develop a strategy for sustainability
  - There is a lack of skill in the area of sustainability and strata
- There is a lack of motivation to learn about sustainability
  - Lack of perceived benefit/incentives by owners and investors

#### Solutions

- Develop case studies to demonstrate good practice
  - Sustainability leadership acknowledged and promoted
  - Quantify the benefits of sustainability
  - Action plans for implementing sustainability
- Develop a database of reputable sources
  - Academic
  - Industrial
- Strategy Development
  - Audits of current buildings from a sustainability perspective
  - Action plans for becoming more sustainable
  - Free consultants to guide/manage the strategy development process

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#### 2. Physical limitations of existing building stock

- Lack of tools for existing buildings
  - Focus on new builds
  - Lack of consensus on how to move forward
- Buildings aren't adaptable
  - They are old
  - They were designed for functionality, not sustainability (built for profit)
- Improvements are expensive
  - Not enough players in the game
  - No focus on existing stock
  - No economies of scale
  - No standardisation in sustainability assessments
- Buildings are very different
  - Not built to a bigger plan
  - No standard solution i.e. limitation in building-based case studies for this sector

### **Solutions**

- Developers
  - Developers accountable for their building defects (from a sustainability perspective) for two years (or more)
- Owners corporations
  - · Compulsory sustainability training for all committee members
  - Time to become sustainable or else mandatory standards implemented
  - Responsibility for the footprint of the building (all sustainability measures)
- Tools for sustainability
  - Re-invest carbon tax in retrofitting programs
  - Ethical standards for buildings
  - TV show with a sustainability slant (The Green Block)

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#### 3. Owners corporations don't see sustainability as a priority

#### Causes

- The role of the chair of committee does not contribute to action on sustainability
- The owners corporations have a responsibility to owners which can be seen as a conflict
- The owners corporation decision making process is complex and contributes to a failure to make decisions around sustainability
- There is a lack of knowledge around sustainability, particularly around what is possible, the associated costs, and the return on investment
- The owners corporation committee members do not have the skill to deal with complex issues such as sustainability effectively
- Owners corporation legislation requires a quorum to act on decisions
- A few 'blockers' can block the entire process
- There is a lack of incentive for investment in sustainability
  - "Better things to spend money on"

### **Solutions**

- People who buy into an owners corporation must complete mandatory training in order to be eligible to participate
- The chair of the owners corporation must be rotated (as with committee membership) in order to ensure balance in decision making
- Develop a database to share information between owners corporations
  - Promotes best practice
  - Educational capacity
- A failure to respond is considered assent

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## 4. There is a lack of suitable standards to encourage the retrofit of apartment buildings

#### Causes

- Inconsistency with government policy/programs
  - Duplication
  - Mixed messages
- The stakeholders are not equal in a strata plan environment

  - Eligibility to receive funding
- Current building stock is diverse and complex
  - Hard to have a "standard" when there is not standard stock
- Lack of funding to retrofit
  - It is expensive
  - There is a perception it is expensive
- Government lacks the technical competence to set standards
  - Complex task
  - Industrial expertise required
- There is a focus on new builds because they are easier

#### Solutions

- Make politicians personally and financially responsible
- Benchmark the industry & recommended kWh usage per person or apartment e.g. Target 155
- Penalise people/apartments which over use electricity (increased cost/shut off)
- Real time capture of usage i.e. In-home displays (IHD)
- Star rating for the greenness of apartments affects rates/rent discounts
- Identify best practice in other countries and then educate in Australia

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## 6. Inertia in the market - sustainability is not high enough on the agenda Causes

- People don't know enough
- Lack of exemplars
- There is a perception that sustainability costs a lot
- The market doesn't sufficiently value sustainable buildings
- The time and effort required is too hard and complex for the ROI

#### Solutions

- Giant apartment building on wheels showcase best practice
- Health professionals making the business case for 'green' buildings
  - Savings on health costs
  - People understand broad benefits, not just about the environment
- Pre-fabricated products to allow cheaper retrofits (like IKEA)
- Multi-media campaign



Workshop attendees brainstorming solutions

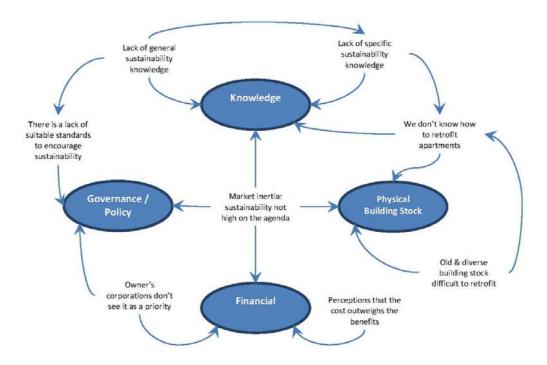
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#### **Exploring the connections**

It is clear none of the key obstacles, or barriers, identified during the workshop are mutually exclusive. Therefore, no idea for a solution to overcome any one of the barriers should be developed in isolation.

The diagram below explores the many connections between identified barriers.



## Next steps

The Hi-RES project team is now moving focus from barriers to solutions. It is our aim that the suite of solutions ideas brainstormed during the workshop and over the course of the first phase of this project will be further developed and refined into a short-listed group of robust, practical and scalable solutions that can be tested in the field.

We want to work with interested stakeholders within government, the community and private sector to help co-create solutions that deliver sustainable change to this sector.

Please contact the Hi-RES project manager, Brenden Carriker, at Brenden.Carriker@melbourne.vic.gov.au or (03) 9658 8406 to find out more.

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