RACE for 2030

Energy Upgrades for Australian Homes

Paving the way for scalable, locally-led energy upgrades across Australia

Accelerating energy upgrades by improving the household journey

Understanding how and why households undertake energy upgrades

January 2025



UTS

MONASH University

CLIMATEKIC Australia

The problem

Many people find it difficult and expensive to make energy upgrades to their homes.

Many Australians live in homes that are inefficient and uncomfortable, with high energy bills and poor thermal performance.

Energy upgrades—such as solar panels, batteries, insulation, draught-proofing, energy efficient hot water systems and heating and cooling—offer households a pathway to lower energy costs, improved comfort, and increased sustainability.

However, the journey to adopting these upgrades can be complex, with households encountering barriers like overwhelming information, difficulty finding installers, and insufficient technical support.





The Evidence Base

This research draws on the findings of:

- **A survey of 100 households** (primarily owner occupiers) who were considering or had completed energy saving upgrades.
- **In-depth interviews with 19 of these households**

This report provides a detailed view of the upgrade journey households take and their experience at each stage of the process.

Six key barriers and six key household needs are identified across the process. When these needs are addressed, more Australians can access the benefits of energy-efficient homes.

Research team

This research was conducted as part of the *Energy Upgrades for Australian Homes* project, a RACE for 2030 initiative to support the retrofit over 1 million homes by 2030.

This project makes an important contribution to the transition towards net zero emissions for Australian homes.

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RACE for 2030
RELIABLE AFFORDABLE CLEAN ENERGY

Lead researchers and interviewers



Jaime Comber
Institute for Sustainable Futures



Kamyar Soleimani
Faculty of Design, Architecture and Building

Expert advisors



Leena Thomas,
Faculty of Design, Architecture and Building



Nimish Biloria
Faculty of Design, Architecture and Building



Ed Langham
Institute for Sustainable Futures



Kerryn Wilmot
Institute for Sustainable Futures

Executive summary



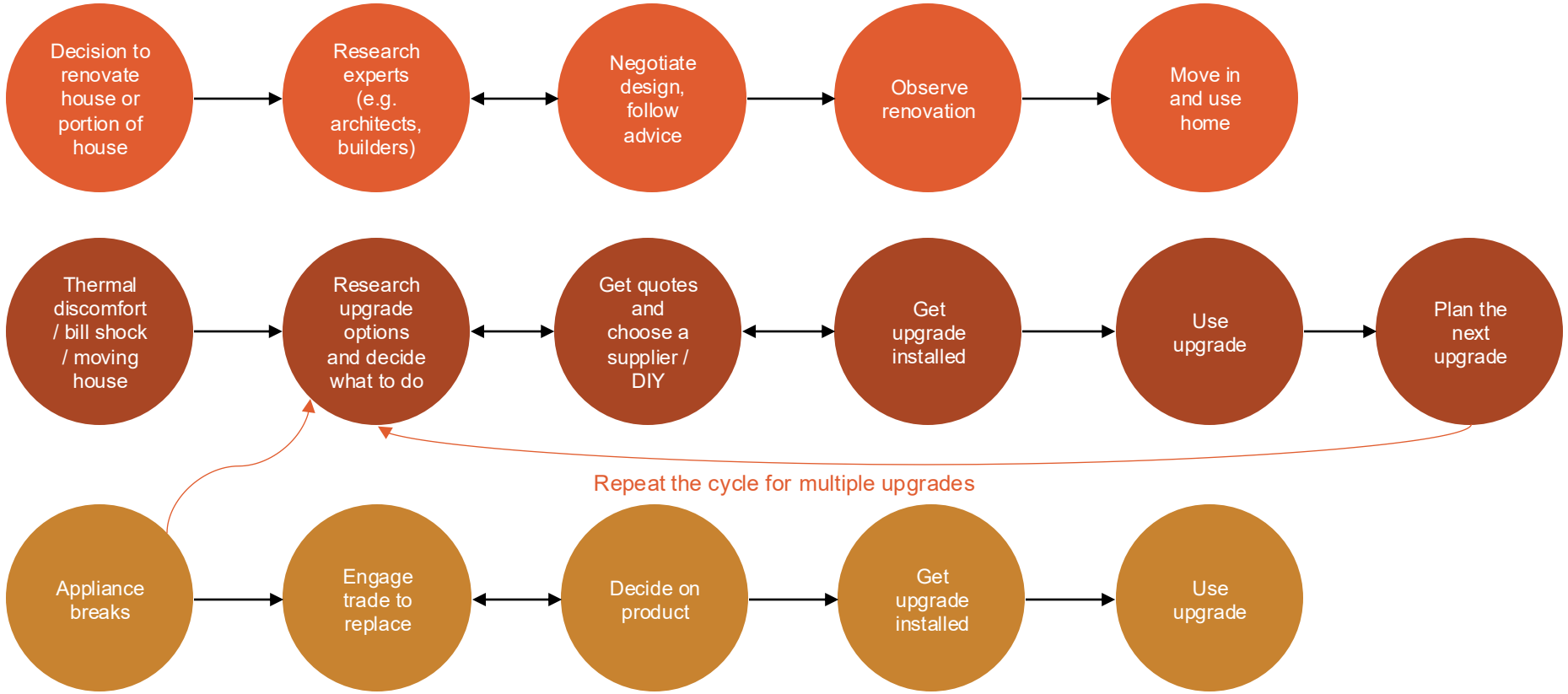
Households take different approaches to energy saving upgrades depending on their situation

Households approach the upgrade process differently depending on purpose and scale of their home upgrades. The journeys described by participants fell into three categories, each with different touchpoints requiring a different approach to encourage energy saving upgrades.

1. Major renovation
Household is doing major work to their house and incorporates energy upgrades in this work, with expert support (e.g. architects, builders, kitchen companies).

2. Home improvements
Household starts with one upgrade which then often leads to multiple upgrades over time.

3. Emergency replacement
An appliance (e.g. hot water system) breaks and the household urgently needs to replace it.



The ‘Home Improvement’ Journey Map (pathway 2)

The majority of the households we spoke to conducted a series of home improvements over time. The map below shows the process they took for each upgrade.



Awareness

Becoming concerned about climate change and linking this with home energy use.

1. TRIGGER

Event that puts home upgrades at the top of the priority list (e.g. new house, bill shock, temperature discomfort).

Barriers: Cost – can’t afford to change anything, feels difficult and complicated.

Touchpoints: family, friends, neighbours, media, colleagues

INSIGHT

Solar was most familiar and attractive to people and often the entry point to other upgrades.

2. RESEARCH

Researching what upgrades and rebates are available and what is suitable for their home. Deciding what to do first.

Barriers: Information and choice overload, difficulty of working out what to do and in what order, upfront cost, time, limitations of home.

Touchpoints: internet, household, experts (e.g. architects, builders), energy assessors, friends

INSIGHT

When people started researching, they identified multiple desired upgrades. They then needed to prioritise and sequence.

DROP OFF:

- Too expensive
- Overwhelming

3. SELECT A PRODUCT OR CHOOSE DIY

Identifying tradespeople and products, getting quotes and advice, deciding whether to DIY.

Barriers: Difficult to find a tradesperson, misinformation from tradespeople, lack of available products.

Touchpoints: Tradespeople, hardware stores, product suppliers

DROP OFF:

- No available tradespeople (in some regional areas)
- Discouragement from tradespeople

4. INSTALLATION

Organising purchase and installation of product, or ordering product and installing themselves.

Barriers: Installation undertaken incorrectly, disruption caused by installation

Touchpoints: tradespeople, online forums, family and friends

5. USAGE

Learning to use upgrade, integrating into routines at home, monitoring energy use, troubleshooting issues.

Barriers: Lack of instruction on how to use and optimize, time consuming to learn to operate (for some upgrades)

Touchpoints: household, online forums, friends and family

INSIGHT

When people got solar, they were then able to monitor their energy usage and had excess power, which led to further upgrades and changing behaviour.

Advocacy

Talking to others about their positive experiences

6. PLANNING NEXT UPGRADE

Deciding which upgrade to do next, thinking about the future, monitoring available rebates.

Touchpoints: home energy assessors, household, online groups

INSIGHT

People who continue with upgrade journey often hire energy assessors to make sure they are on the right track and help sequence their journey.

What do households need to accelerate home energy upgrades?

We identified six key household needs that, if met, would make energy upgrades easier and more accessible for households.

1

Clear information about how to plan and sequence upgrades

The current process is complicated, confusing and labour-intensive for households.

2

One-stop-shop providers

People are often doing multiple upgrades and need a single, trusted supplier to help. Connection with accessible low-cost finance could increase uptake.

3

Guidance at the right time

Take advantage of times when people are open to change and investing in their home.

4

Thermal comfort and bill saving messaging

Households most frequent motivations were comfort and bill savings. They need to know that energy saving upgrades will help with this.

5

Good advice from tradespeople

Tradespeople are the most common touchpoint for upgraders. They have a big influence on household behaviour.

6

Strong supply chains and skilled workforces in regional areas

It's difficult to find energy upgrade providers and installers in regional areas.

Context



Who took part in the research?

Research activities

- We **surveyed 100 households** across Australia who were considering or had undertaken home energy upgrades.
- We conducted **deep-dive interviews** with **19 home energy upgraders** selected from the survey respondents, representative of housing types, tenure and stages of the upgrade process.
- Participants were recruited from a variety of sources, with most through energy assessors and the My Efficient Electric Home (MEEH) Facebook group.

Interview focus

- Documented participant location, home type, and the energy-saving upgrades undertaken.
- Explored the process households followed to get energy upgrades for their home.
- Identified key touchpoints in the upgrade process.
- Discussed barriers, enablers, and opportunities to enhance the upgrade experience.

Snapshot: Ownership

	Survey	Interviews
Owner-occupier	94	19
Landlord	5	1
Renter	1	0

Snapshot: Home type

	Survey	Interviews
Apartment	7	1
Semi-detached house/duplex	9	3
Stand-alone house	72	11
Townhouse/terrace/villa	12	4

Why journey mapping?

Journey maps offer practical insight into household experience

Journey maps have been used by energy researchers to understand and visualise the household experience of home energy upgrades (e.g. Sinitskaya et al, 2020; De Koning et al, 2020).

They offer a structured way to:

- Identify key motivations and barriers that households face during the upgrade process.
- Highlight touchpoints that influence decision-making and outcomes.
- Create representations that illuminate the steps, drop-offs, and opportunities for improvement.

Existing journey mapping research has has focussed on specific upgrades

Research in this area has traditionally focused on:

- Specific types of upgrades, such as solar PV or heat pumps.
- Linear paths from awareness to installation, with minimal attention to long-term impacts and advocacy.

These approaches often overlook broader contextual factors and interconnected upgrades. Instead of isolating specific upgrades, we explore how individual upgrades (e.g., solar, insulation, heat pumps) fit into a broader renovation narrative.

This approach accounts for the reality that many households undertake upgrades incrementally over time, influenced by changing needs and circumstances.

Our work provides an Australian perspective on different journeys people take to get energy upgrades

The Australian context has key differences from other countries where journey mapping has been undertaken.

We have one of the world's highest rooftop solar uptake rates. We also have a large number of residents in regional areas many hours from large cities, facing significant logistical constraints.

Identifying different types of journeys



Three different types of upgrade journeys

Based on our interviews, households' experiences with energy upgrades can be categorised into three distinct approaches: **major renovations with expert support**, **incremental home improvements over time**, and **emergency replacements** of failing appliances. These journeys were not always linear. Some participants moved between them at different times, undertaking upgrades gradually as circumstances allowed or responding to urgent needs.

Major renovation with expert support

This group consisted of households undertaking large-scale renovations to improve their homes. These households typically worked with professional architects, builders, or renovation companies. Households faced major challenges, including council approvals, extended timelines, and cost overruns.

Energy upgrades were often not a primary focus, and their inclusion depended on whether they were recommended by architects or builders.

This highlights a critical gap: improving expert knowledge and capability in energy saving upgrades, combined with increased regulation for renovations.

Home improvements over time

This group, which included the majority of our respondents, pursued energy upgrades gradually, driven by the availability of resources such as budget and time. Most were motivated by a desire to improve their home's comfort and lower their energy bills.

Most participants sought specialist help from small business or local tradespeople for specific installations, rather than large-scale renovation companies. For simpler projects, such as draught-proofing, some participants chose DIY.

Participants in this group faced challenges in navigating the complex amount of information about energy upgrades. Some found it difficult to determine which upgrades to prioritise and how to choose products. To address this, households invested significant time in researching options. They commonly identified multiple upgrades they wanted to undertake, which they completed gradually.

Emergency replacement

These households were driven by urgent circumstances, such as the failure of an essential appliance (e.g., hot water systems). The primary focus was restoring functionality as quickly as possible, with little opportunity for long-term planning.

Under time pressure, these households typically relied on advice from local suppliers or tradespeople. The urgency often meant they could not thoroughly research options or seek expert guidance on energy-efficient replacements.

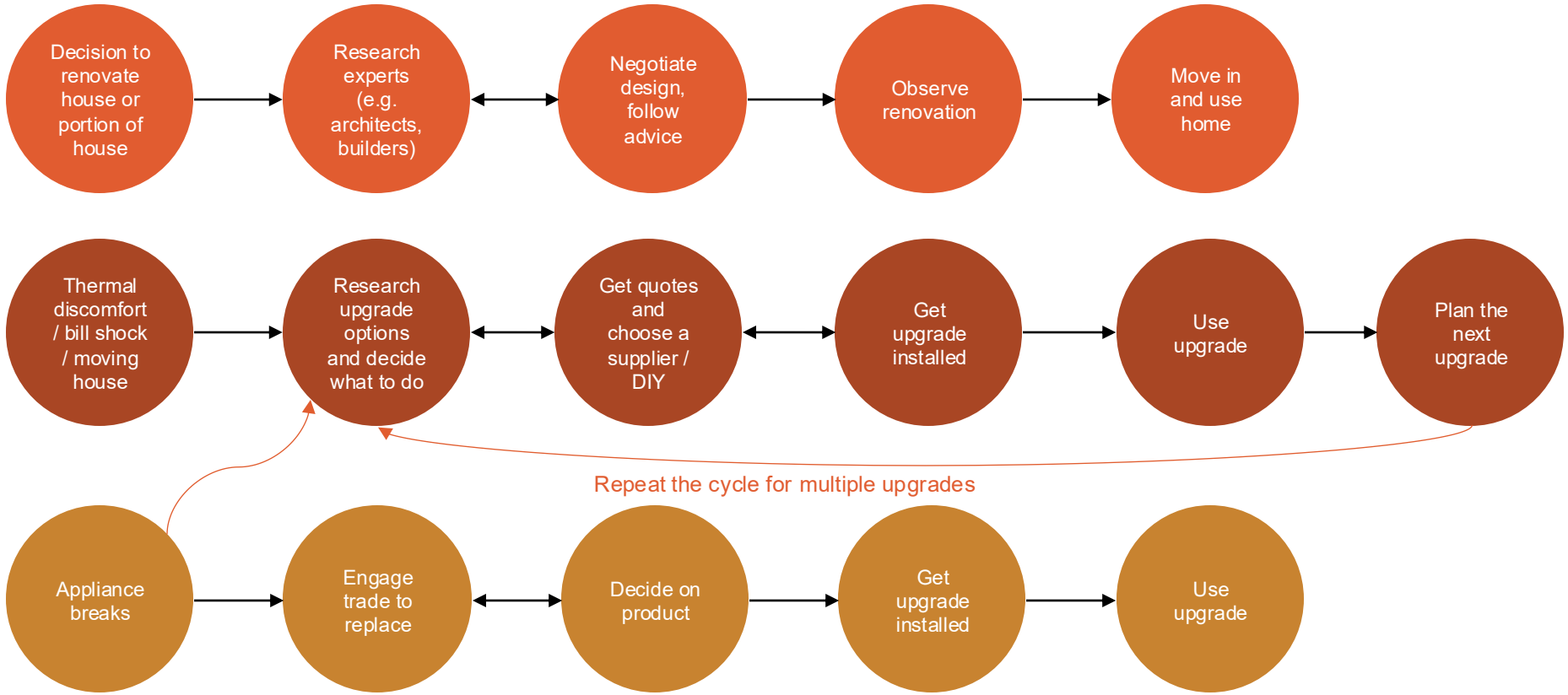
This group underscores the importance of educating people about energy upgrades, so they know what to do in an emergency when they lack time to research. It also highlights the importance of advice from tradespeople, who are often the only source of information in emergency replacement situations.

Households take different approaches to energy saving upgrades depending on their situation, with different actions and touchpoints

Major renovation with expert support
Household is doing major work to their house and incorporates energy upgrades in this work, with expert support (e.g. architects, builders, kitchen companies).

Home improvements over time
Household starts with one upgrade which then often leads to multiple upgrades over time.

3. Emergency replacement
An appliance (e.g. hot water system) breaks and the household urgently needs to replace it.



How do the journeys compare?

	Cost How much money did households spend?	**Approvals time** How long did it take to get formal approvals, where needed (e.g. council)?	**Complexity** How much research was undertaken?	**Expertise of touchpoints** How much knowledge and training did touchpoints have?
Major renovations	$$$	✓✓✓	✓✓✓	✓✓✓
Home improvements	$$	✓	✓✓✓	✓✓
Emergency replacement	$	✓	✓	✓✓

The ‘home improvement’ journey

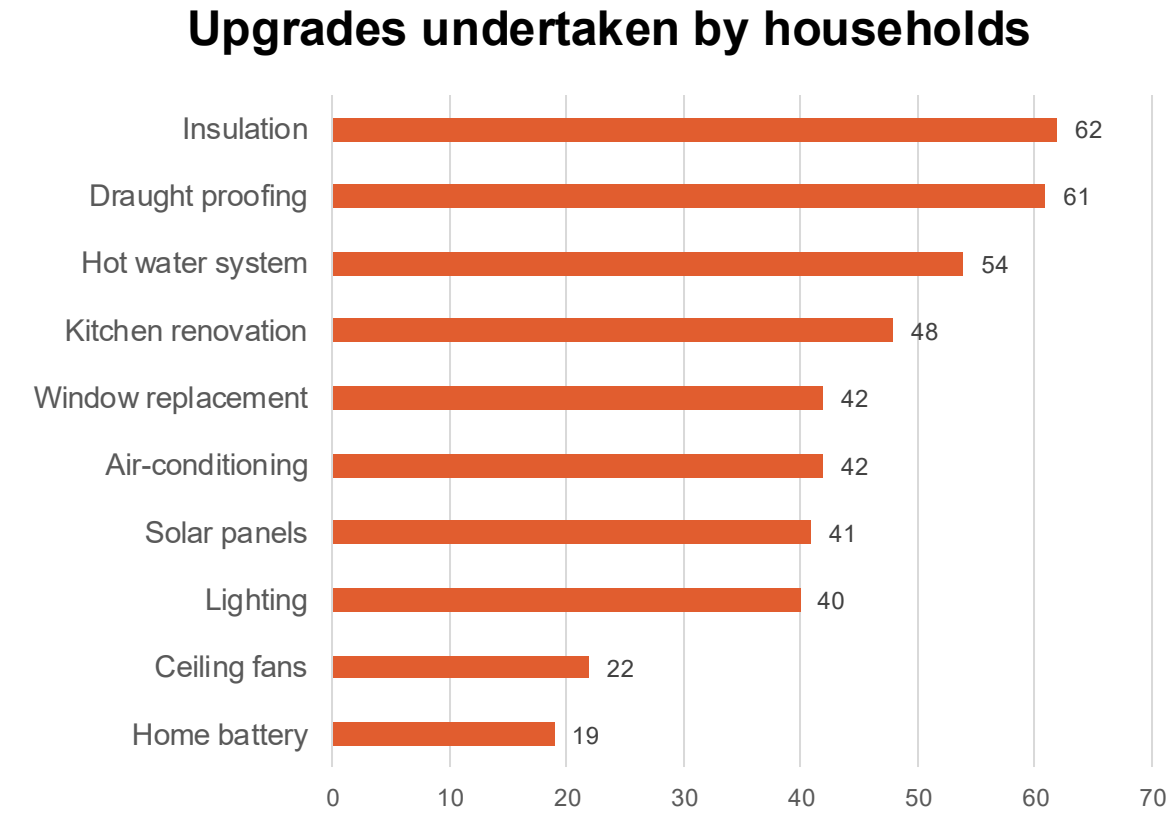


Why the ‘home improvements’ journey?

The majority of the households we heard from had undertaken more than one energy saving upgrade (88%). For over half the households, they had undertaken 5 or more upgrades (57%).

This indicated the importance of looking at the experience of households who are getting multiple upgrades over time, why they choose this path and the challenges they face.

The most frequent upgrades that survey participants had undertaken were draught-proofing, insulation and upgrading their hot water systems.

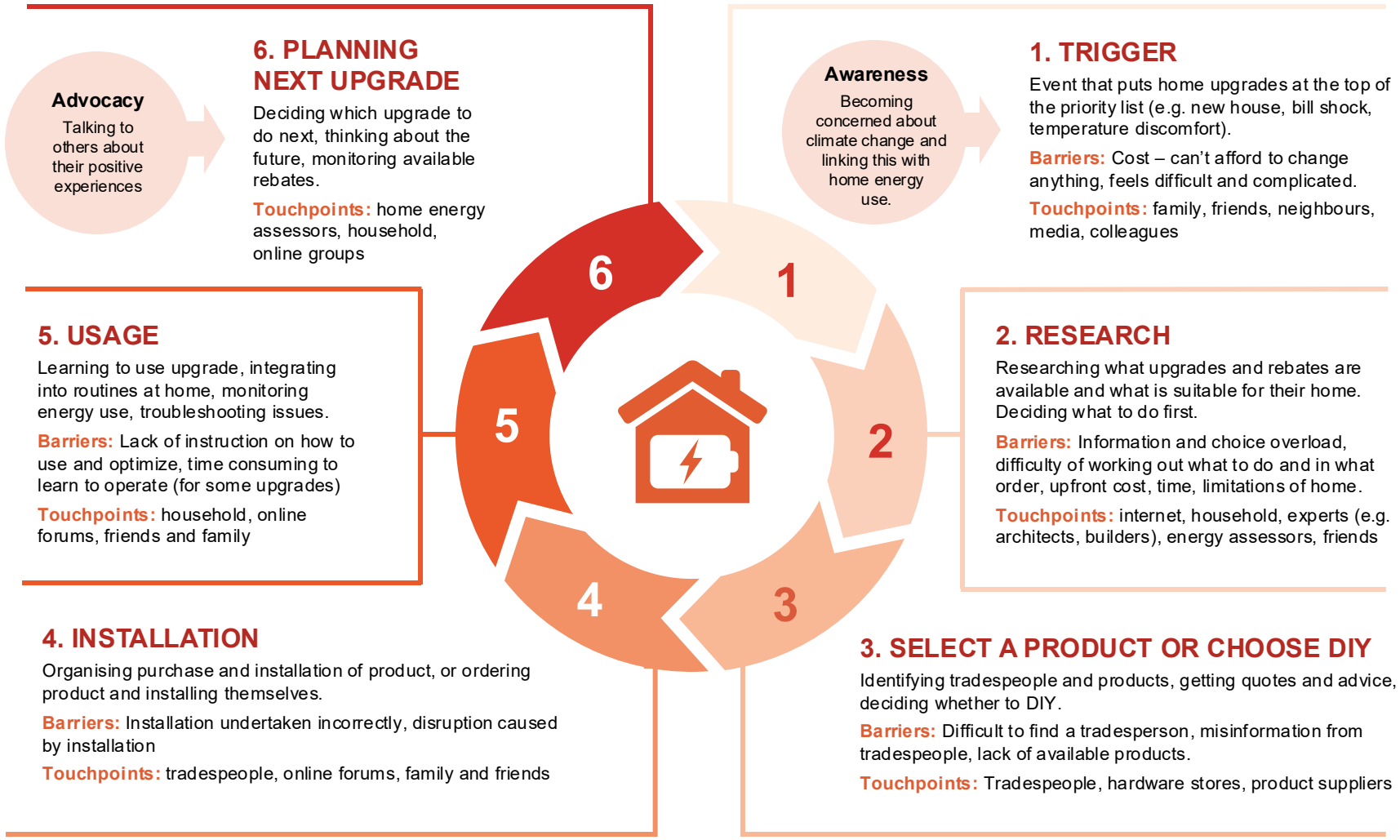


The ‘Home Improvement’ Journey Map

The majority of participants were in the middle of or had recently completed a ‘home improvement’ journey.

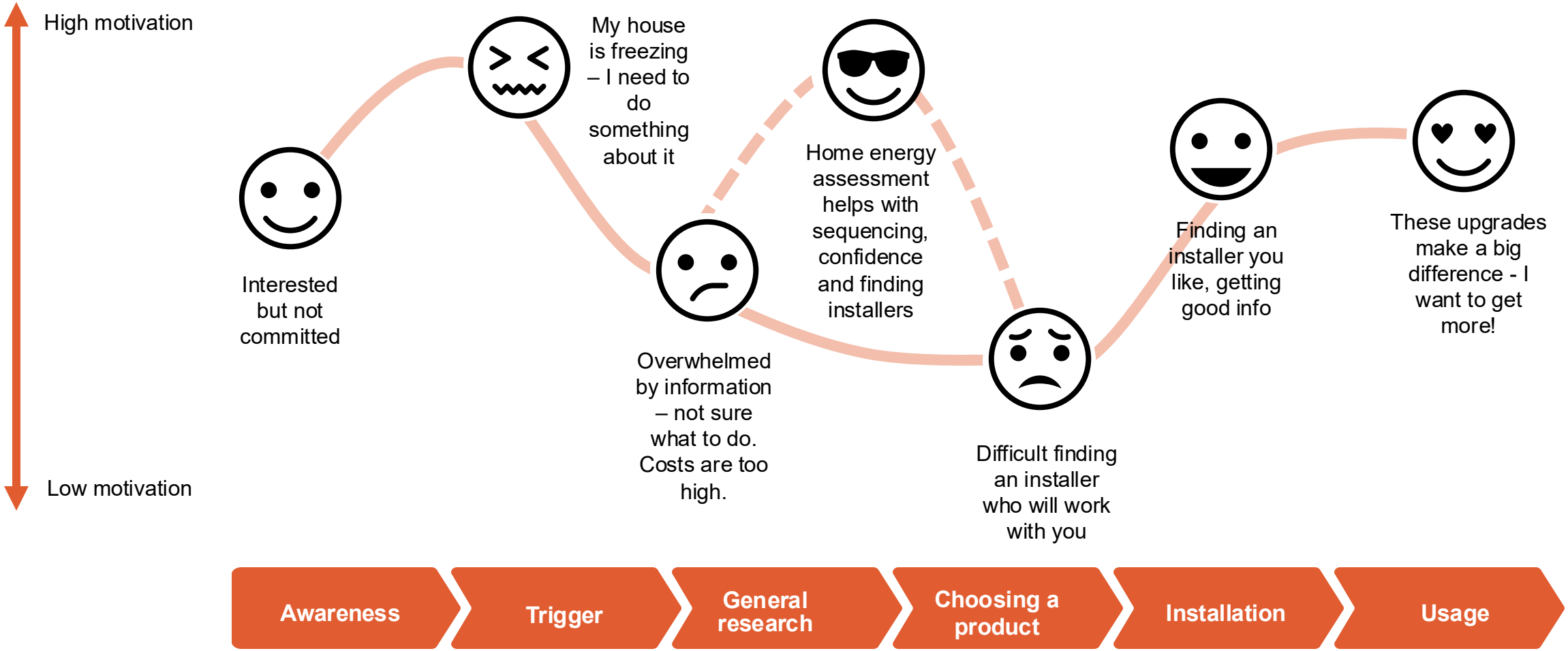
This involved undertaking a series of upgrades to their home, often over a period of years.

Over that time they took a number of distinct steps, pictured in this journey map.



Highs and lows in the journey

Over the course of their journey, householder level of motivation to get energy saving upgrades varied. This often depended on how easy it was to understand information and connect with installers and could lead people to drop out of the journey.



Step: Awareness

For many upgraders interviewed, their journey began with a growing concern about climate change and an awareness of how home energy use contributes to this.*

Findings

- **Common household actions:** observing and learning from what others were doing, joining community groups and participating in talks, reading news articles and listening to podcasts.
- **Insights:**
  - Participants were motivated by helping the environment, planning for their future and increasing self-sufficiency. Those who cared about climate change were looking for opportunities to take action to reduce their own carbon footprint.
  - Homeownership is often a long-term aspiration, and several of the people we interviewed had been dreaming about their perfect home well before they purchased it. This included making plans for energy efficiency (e.g. getting solar).



Barriers

- **Status quo bias**: People tend to stick with their current setup unless a strong trigger disrupts this inertia.
- **Perceived inefficacy**: Some people believe that individual actions won't make a difference or that upgrades are not feasible.



Touchpoints

Social networks: friends, family, colleagues, community groups and local initiatives, media: news outlets, podcasts, and other informational resources.

> *You keep seeing all these headlines doom and gloom, planet completely exhausted … And it's like nice to feel like at least you can try and make things a bit better.*
>
> **Interviewee**

**In part, this reflects how participants were recruited (predominantly through a Facebook group about energy efficient homes) and mass market will likely have lower awareness.*

Step: Trigger

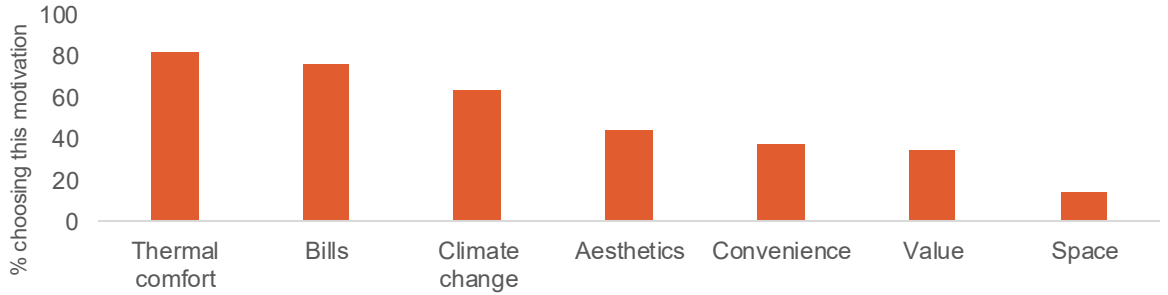
Awareness translated into action when triggered by specific events such as high bills.

Findings

- **Common actions:** checking energy bills, moving house, feeling uncomfortable in the home, working out how much money is available for upgrades, talking to others and observing their homes.
- **Insights:**
  - Thermal comfort and bill shock were consistently the strongest motivations for upgrades. Another related occurrence was purchasing a new house. These 'fresh start' times of transition are when people are more open to new ideas and making change.
  - For people who had already done an upgrade, triggers were often in response to previous upgrades, e.g. making the most of a solar system or moving to the next upgrade on the list.

> *Two years ago, the energy bill kept going up. We were paying $1500-2000 quarterly. We thought the sun is free so we have to do it, but we wanted to do it right.*
>
> **Interviewee**

Motivation for upgrades (from survey responses)



Barriers

- **Preconceived ideas about cost and feasibility**: Many households believe upgrades are expensive, difficult or ineffective and choose not to explore them.
- **Social proof gaps**: If others in their social circle haven't done upgrades, households may not know they exist or can make a difference.

Touchpoints

Friends, family, neighbours who had done upgrades, colleagues, other household members

Step: General research

After deciding it is worth exploring upgrades, the person researches what is available and suitable for their home.

Findings

- **Common actions:** Researching upgrade options, calculating available finances and payback periods, prioritising upgrades (trade-offs) and in which order to do them (sequencing).
- **Insights:**
  - In this phase, people were considering what their options were. They often came to this phase with an idea of what upgrade they wanted, but when they started researching they realised there were many different options. They then began a process of educating themselves about upgrades and their homes.
  - One important consideration was what would work in their home. They began to get to know their home and what kinds of upgrades might work. Knowledge of their home and of home improvement (e.g. insulation) increased the likelihood of doing upgrades.
  - Landlords were considering how upgrades would impact their property value and income.
  - Most households reported being overloaded by the amount of information out there and unsure of what to trust. Trusted information sources like Solar Quotes helped overcome this barrier.



Barriers

- **Complexity and choice overload**: Too many options make it difficult to decide what's right for the home. It's hard to know which information sources are reliable.
- **Cost:** if upgrades appear to cost more than the allocated budget, people are unlikely to explore further.
- **Time-consuming**: Often the longest and most resource-intensive stage of the journey.
- **Hidden prerequisites**: Realising that additional upgrades (e.g., rewiring) may be needed before energy upgrades adds cost, time, and effort.

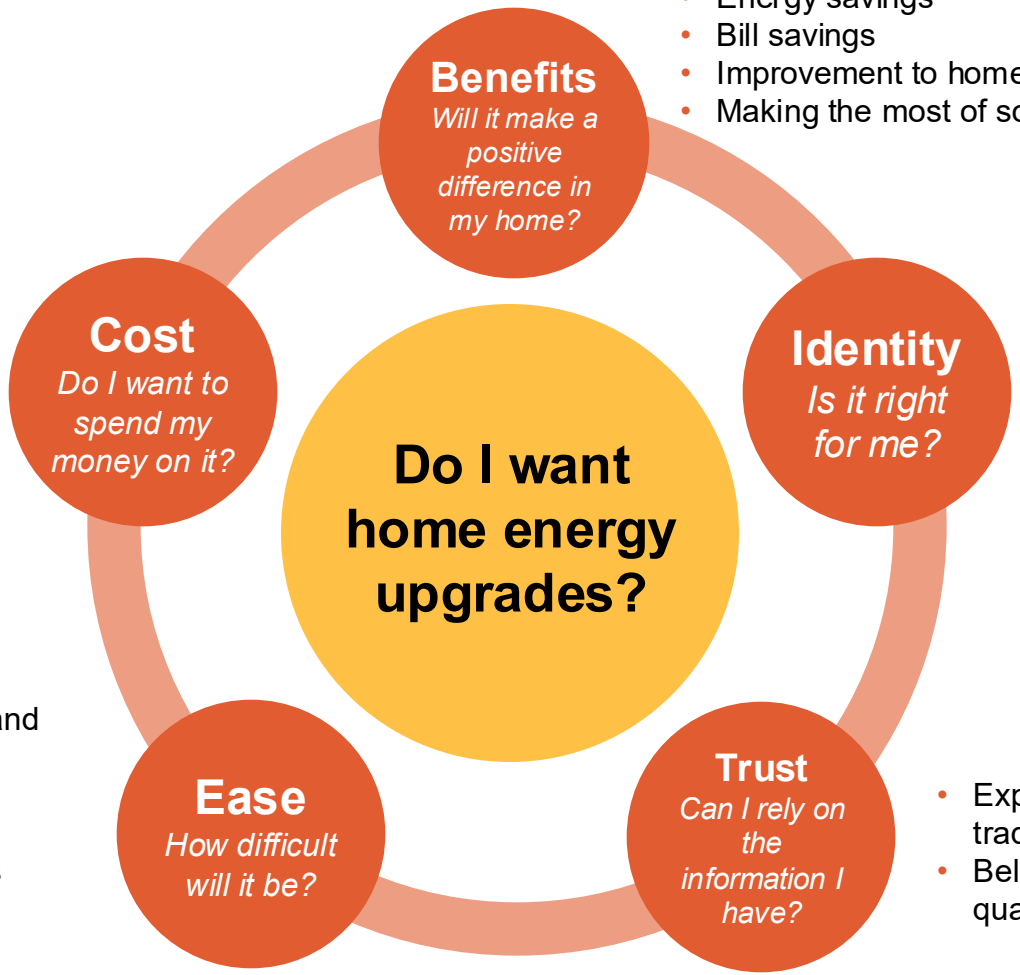


Touchpoints

Internet (e.g. MEEH Facebook group), household, bank, architects/building designers for major renovations, energy assessors, friends, product suppliers and tradespeople.

> *All the research to make a well-informed decision is very time consuming.*
>
> **Interviewee**

How people make decisions about upgrades



- Energy savings
- Bill savings
- Improvement to home comfort
- Making the most of solar

- Appropriateness for home
- Concern about climate change
- Self-efficacy

- Experience with tradespeople
- Beliefs about product quality and longevity

- Knowledge of how it works and how to get it
- Other household member preferences
- Seeing / hearing from others
- Availability of tradespeople

- Available finances
- Cost of upgrades
- Payback period
- Trade-offs with other upgrades / expenses
- Rebates / incentives

Trade-offs and sequencing

A common pain point for participants was how to decide which upgrades to get and which order to get them in.

They reported an overwhelming amount of information about different upgrades available, but participants found it challenging to determine what was right for them and how to order them (sequencing). Making these choices required considerable knowledge and expertise.

The choice involved consideration of:

- What the options were and how effective they would be
- What was the best fit for their home
- What they could afford

People found Residential Efficiency Scorecard home assessments helpful in assisting with this, as they provided a plan and rationale for what to do and how to sequence upgrades.

> *Solar, heat pump hot water and electric stove upgrades present multiple barriers that must first be addressed, including wiring upgrades, removal of old hot water system from roof, and moving of AC unit*

Survey respondent

Interviewee

> *[A] sustainability consultant was crucial for us to know where to start and what we had to do.*

Step: Choosing a solution/product or learning to DIY

After participants have chosen the first upgrade they want to go ahead with, they reach out to suppliers and research specific products or ways to DIY. They may return to the previous step as they gather more information.

Findings

- **Common actions:** Reaching out to tradespeople, comparing quotes and products, considering advice, researching rebates, researching DIY options, reading reviews, working out best fit for the house (e.g. heat pump sizing).
- **Insights:**
  - Choice of quote was based on more than just price – households valued knowledgeableness, responsiveness and perceived trustworthiness. They had their own rules of thumb to work out trustworthiness (e.g. inclusions in quotations, listing on government websites, longevity of brand, local supplier).
  - Participants were reassured by seeing things in person, whether in a store or at a friend's house. For example, one participant walked down the street to look at a heat pump they'd heard about in another apartment block.



Barriers

- **Effort-intensive and fragmented process**: Obtaining, replying to, and comparing quotes is time-consuming. Different experts are needed for each aspect, adding complexity and confusion.
- **Misinformation**: Bad or contradictory advice from tradies and suppliers can discourage or derail upgrades.
- **Trust**: Hard to identify reliable suppliers or reasonable prices.



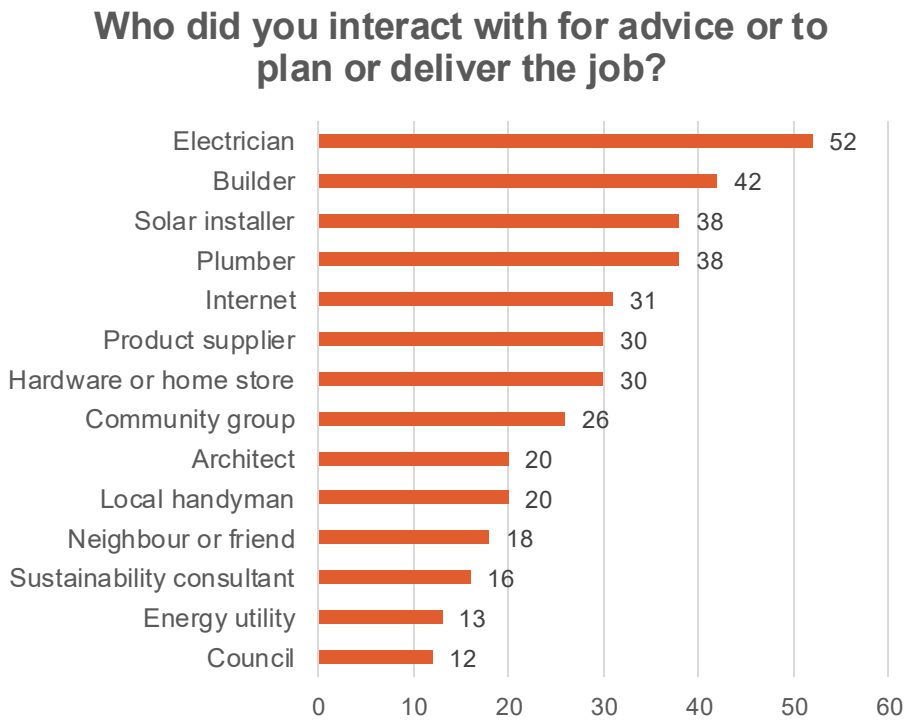
Touchpoints

Tradespeople, hardware stores, product suppliers.

> *It took a long time to decide exactly what to get cause my plumbers were like, "don't get a hot water pump. We have to go fix them all the time."*
>
> Interviewee

Who are people talking to?

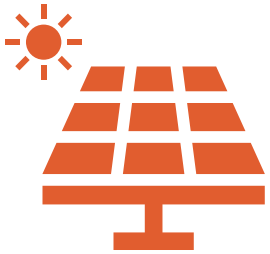
We asked people who they interacted with on their upgrade journeys. They were most likely to have talked to tradespeople (electricians, builders, plumbers) and product suppliers and installers. However, they encountered consistent barriers when finding a tradesperson to work with.



Barriers to finding a tradesperson

- **Too few available:** *"Because we just weren't really able to find tradespeople."*
- **Not open to energy saving upgrades:** *"Trying to convince builders to make energy efficient choices - even when it was no extra work for them - was excruciatingly difficult and stressful."*
- **Lack of knowledge about upgrades:** *"Long, difficult, builders and trades unaware of home energy efficient options and solutions."*
- **Cautiousness about unfamiliar tech:** *"They like to do things in the way they're familiar with, otherwise they don't want to do it because it's harder."*

Insights about specific upgrades



SOLAR

- **Social proof and gateway upgrade**: Solar installations were seen as a socially acceptable and desirable upgrade, thanks to their visibility, familiarity, and "wow factor." These attributes make solar an appealing choice, even for those who are less motivated.
- **Behavioural feedback loops**: Installing solar alters energy consumption behaviour. By providing real-time feedback on energy generation and usage, households develop a heightened awareness of their energy habits.
- **The endowment effect**: Once households begin generating their own power, they develop a psychological attachment to the energy they produce. This creates a reluctance to see it "go to waste," leading to behaviours like electrifying appliances and purchasing electric vehicles.



INSULATION

- **Knowledge gaps and decision complexity**: Many households lack a clear understanding of what insulation they currently have and where improvements are needed. The process of getting to know their home and its requirements can be difficult to do.
- **Vendor accessibility**: Participants had particular difficulty finding trustworthy insulation providers.



HOT WATER HEAT PUMPS

- **Trade resistance and familiarity bias**: Several participants reported tradespeople discouraged the installation of hot water heat pumps. This preference for traditional systems reflects a bias toward what is known and comfortable and aversions developed in response to issues with earlier technology.

The role of rebates

- Rebates increased the timeliness of upgrades and influenced installer choice
- In interviews, we found rebates played an important role in encouraging people to do upgrades sooner to take advantage of the rebate.
- Rebates were generally well-liked, with about half of interviewees identifying them up as a positive in their experience.
- Rebates influenced the selection of installers, as households tended to choose installers who were on approved lists or could provide rebates.
- Negative feedback emerged for certain rebate-covered upgrades (e.g., draught-proofing, showerhead replacements), where free services were linked to poor-quality work by installers.

> *"Selected installer because they could get rebates, because of quietness of the heat pump and because of good reviews and knowledgeableness."*

> *I'll probably end up [replacing the hot water] before the end of life for the tank and having the rebate definitely makes that decision easier."*

Step: Purchase and installation

At this stage participants are focussed on getting the upgrade done through professional installation or DIY.

Findings

- **Common actions:** Liaising with installers, purchasing products, figuring out and conducting the installation (if DIY), checking quality of installation.
- **Insights:**
  - Challenges at this point were the need to liaise and line up multiple different trades, unforeseen barriers to installation leading to increased time and expense (e.g. unstable roof), product unavailability and delays, and issues with contract negotiations.
  - Householders often needed to check the work for quality and request rectifications if needed.
- **Touchpoints:** Tradespeople, online forums, family and friends, hardware stores.



Barriers

- **Delays and unavailability**: Limited access to products or skilled tradespeople, especially in regional areas.
- **Knowledge gaps**: Some experts are unfamiliar with new products or advanced installation techniques.

> *The process of needing both plumber and electrician to change to Induction cooking was frustrating, to coordinate availability times and appliance delivery*
>
> **Interviewee**

When do people choose DIY?

- Draught-proofing and ceiling insulation were the most common upgrades done as DIY.
- People were motivated to do DIY when they had existing skills or limited budget. People who were looking to save money did what they could themselves.
- Most people were happy with their DIY outcomes. However, in some cases people did not have the required expertise and found out later through friends or online communities that they had not optimally install upgrades (e.g. tightly packed ceiling insulation).
- People mentioned sources such as YouTube, supplier videos, and friends and family for advice and instructions on doing DIY.
- Several participants did a mix of hiring tradespeople and doing DIY, depending on what the upgrade was.

> *He didn't really understand the benefit of draught proofing until I actually did the draught proofing like, put the stoppers on the door jams, and did the windows and doors around the whole frames."*

> *So at that point we did a lot of draught proofing. That's what we should have done at the beginning. Knowing what I know now, we should have started there because it was really cheap and easy, and it made such a huge difference.*

Step: Use of upgrade

After the upgrades are installed, households then worked out how to use the upgrades and, in some cases, modified their behaviour to optimise energy efficiency.

Findings

- **Common actions:** Testing out upgrade (e.g. changing heat pump settings), actively monitoring energy usage and bills, changing behaviour in response to upgrades (e.g. shifting appliance usage to daytime hours with solar),
- **Insights:**
  - Most households we spoke to were very happy with the outcomes of their upgrades.
  - However, it was rare for installers to take the time to explain how to use the upgrades. Households often found the instructions with upgrades difficult to understand and so did not change settings to suit themselves.
  - For those with solar, their new inverter provided more detailed energy monitoring than they had previously. Several householders reported adapting their daily routines in response, such as shifting appliance usage to daytime hours.
  - The satisfaction gained from a successful upgrade often motivated individuals to pursue additional improvements.



Barriers

- **Lack of information**: Many householders reported insufficient guidance on how to use upgrades, particularly for systems like hot water heaters.
- **Knowledge gaps**: Some experts are unfamiliar with new products or advanced installation techniques.



Touchpoints

Household, online forums, friends and family.

> *I enjoy seeing that we're decreasing our energy usage yet still having a really comfortable house.*

Step: Planning next upgrade

Most householders we spoke to undertook multiple upgrades, planning the next stage after a satisfactory outcome from an earlier upgrades.

Findings

- **Common actions:** Deciding which upgrade to get next, thinking about the future, monitoring available rebates.
- **Insights:**
  - Households getting multiple upgrades may wait as they save up money for the next upgrade or wait until they're ready to continue.
  - At this point, some people decided to get a home assessment. They had learned enough about home upgrades to understand the variety of upgrade choices available and saw the value of expert advice in helping them plan.
  - One upgrade often encouraged another, particularly in the case of solar. Households who got solar then often had excess energy being sold back to the grid at low prices, which motivated further electrification to use this energy.



Touchpoints

Home energy assessors, household, online groups

> *So there's a lot of different things going on, and it's just like sort of a slow march over time."*

Step: Advocacy

Most households we talked to said they would highly recommend their upgrades to others, and some described how others now sought their advice.

Findings

- **Common actions:** Providing advice to others
- **Insights:**
  - Upgraders had significant knowledge and expertise from the research they had done. Some described becoming the ‘go-to’ person for advice in their circles.
  - This varied depending on the person’s relationships and personality. Occasionally an upgrader said they had not talked to anyone about what they’d done.
  - People who have undergone upgrades are strong influencers on others in their circle. Many of our upgraders described seeing what friends had done and how this influenced their choices.
  - People with visible upgrades (like solar) tended to receive more questions from their communities.



Touchpoints

Neighbours, friends and family, online groups

> *I told her, you need to insulate this roof once you've got that sheeting off! the best time to do it! Put in your blanket insulation!*

Recommendations



What do households need to accelerate home energy upgrades?

We identified six key household needs that, if met, would make energy upgrades easier and more accessible for households.

1

Clear information about how to plan and sequence upgrades

The current process is complicated, confusing and labour-intensive for households.

2

One-stop-shop providers

People are often doing multiple upgrades and need a single, trusted supplier to help. Connection with accessible low-cost finance could increase uptake.

3

Guidance at the right time

Take advantage of times when people are open to change and investing in their home.

4

Thermal comfort and bill saving messaging

Households most frequent motivations were comfort and bill savings. They need to know that energy saving upgrades will help with this.

5

Good advice from tradespeople

Tradespeople are the most common touchpoint for upgraders. They have a big influence on household behaviour.

6

Strong supply chains and skilled workforces in regional areas

It's difficult to find energy upgrade providers and installers in regional areas.

1 Clear information about how to plan and sequence upgrades

What do households need?

- Simple, trusted information sources to make energy upgrades more approachable and reduce barriers to action.
- Easy to access decision tools to work out which upgrades are best for your home and which order to do them in. This will reduce the time, energy and knowledge needed to choose and sequence upgrades.

Why?

- **Combat information overload**: Households face overwhelming and fragmented information, leading to confusion and inaction.
- **Reduce decision fatigue:** Once households identify they want to make upgrades, they encounter a complex decision-making process of what works for their house and what order to do it in.

2 One-stop-shop providers

What do households need?

- People are often doing multiple upgrades and need a single, trusted supplier to help. This would allow households to easily make multiple upgrades to their homes.
- Examples include end-to-end support (from assessments to installation), a single contact coordinating suppliers and installers to reduce disruption, or a centralised user-friendly platform to provide tailored upgrade plans.

Why?

- **Reduce effort, time and disruption:** Homeowners can access all the support they need in one place, streamlining the journey from planning to completion.
- **Encourage action:** By eliminating barriers like confusion, misinformation, and fragmented services, one-stop shops make energy upgrades more approachable and actionable.

> *[There's a] lack of information on steps that could be taken for strata complexes to perform energy efficiency improvements, install electric appliances and manage PV and battery installation.*

3 Guidance at the right time

What do households need?

- At certain times households are more open to change and to investing in energy saving upgrades, including when they move house and when they are doing major renovations.
- Households need information that comes at these key times, for example energy assessments as part of development applications for renovations or during the home loan process.

Why?

- **Leverage decision windows**: Life events like buying a home or renovating heighten motivation and focus, making these ideal times to encourage action.
- **Embed upgrades in existing processes**: Integrating energy advice into property purchase or loan processes means people get the best information during critical decision-making moments.

4 Thermal comfort and bill saving messaging

What do households need?

- Households were most frequently motivated to upgrade to improve the thermal comfort of their home and to save on their bills.
- Messaging about energy saving upgrades needs to focus on the top priority issues for households and demonstrate the immediate benefits upgrades can bring.

Why?

- **Make upgrades attractive:** Communicating to households about how upgrades will improve their comfort at home and reduce their bills shows the tangible benefits of upgrades and will attract a broader range of households.

5 Good advice from tradespeople

What do households need?

- Tradespeople are the main contact point for most households undergoing energy upgrades. They need to know that trades people will provide good, accurate advice on energy upgrades.
- Initiatives to help tradespeople become advocates for energy upgrades could be improved training and qualifications, increasing exposure to new technology and sharing the experience of tradespeople leading the way in energy saving upgrades.

Why?

- **Utilise trusted messengers:** Well-trained tradespeople can actively educate households, driving interest and trust in energy upgrades.
- **Reduce drop-offs:** A common drop-off point in the journey was households who were not able to find a tradesperson who was knowledgeable and prepared to undertake energy saving upgrades.

6 Strong supply chains and skilled workforces in regional areas

What do households need?

- Households in regional areas face challenges getting installers and products for energy saving upgrades. These households need access to services to be able to upgrade their homes.
- Supply chains and installers could be increased by initiatives like providing grants or subsidies to increase the upgrade market size or encouraging government-run upgrade programs.

Why?

- **Reduce delays**: Gaps in supply chains and installer availability lead to long wait times, discouraging households from completing upgrades.
- **Enhance convenience**: Streamlined delivery and services make the upgrade process easier and more appealing for regional households.

RACE for 2030

Energy Upgrades for Australian Homes

Paving the way for scalable, locally-led energy upgrades across Australia

Why energy upgrades? Australia's ageing housing stock, volatile energy costs, and increasing climate extremes are placing pressure on households and communities alike. Most homes were not built for the conditions we face today—or those ahead. But targeted, energy efficient upgrades can change that.

Energy Upgrades for Australian Homes (EUAH) is a national collaboration led by research, government and industry partners to develop the tools, evidence, and guidance that enable councils and community organisations to deliver energy upgrades that are tailored, scalable, and effective.

This research report is part of Work Package 2 of EUAH: Community Implementation Models. Led by Monash Sustainable Development Institute (MSDI) and UTS, this work package identifies success factors and scalable delivery models for locally-tailored upgrade programs.

EUAH is funded by the RACE for 2030 Cooperative Research Centre, and led by Climate-KIC Australia and Monash University.

www.racefor2030.com.au/project/energy-upgrades-for-Australian-homes