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Markets or relationships? Institutional logics shaping home energy retrofit program design and delivery in Australia

Christoph Brodnik [a,*], Paris Hadfield [b], Rob Raven [a]

[a] Monash Business School, Monash University, Caulfield East, VIC, 3145, Australia
[b] Faculty of Arts, School of Social Sciences, Monash University, 20 Chancellors Walk, Clayton, VIC, 3800, Australia

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ABSTRACT

Supporting householders to retrofit their homes is becoming a key lever for many countries to achieve their energy efficiency and emission reduction targets. In Australia, retrofit programs run by national and state governments are increasingly complemented by programs from local governments and community groups. Despite this proliferation, little is known about the assumptions, values, beliefs and rules that shape how these different groups design and deliver their programs. This paper addresses this gap by investigating what program organisers in state government, local government and community organisations need in order to design and deliver home energy retrofit programs. Through interviews with 19 program organisers, we identify 20 distinct needs spanning program design and implementation. Analysing how each group articulates these needs, and the solutions they employ to address them, reveals implicit paradigms guiding their work. Using an Institutional Logics perspective, we show that these paradigms rest on two contrasting logics: a Market Logic emphasising rational choice and standardised delivery, and a Community Logic foregrounding trust building and place-based relationships. State government programs are predominantly shaped by the Market Logic, community groups by the Community Logic, and local government combines elements of both. We argue that substantial energy efficiency gains depend not only on better designed individual programs but also on conditions that allow locally led, relationship-based programs to grow in number, scale and durability.

1. Introduction

Home energy efficiency retrofitting has become an increasingly important component of climate change mitigation and adaptation strategies globally. These policies aim to transform existing building stock through upgrades and retrofits that reduce energy consumption while improving comfort and affordability for residents [1–4].

The challenge of improving existing housing quality is particularly acute in Australia, where decades of delayed action have left a legacy of poorly performing homes, contributing to high energy bills and adverse health outcomes [5]. In response, various measures have been implemented at different governance levels. These have largely focused on minimum energy performance standards and market-based approaches, involving financial incentives and information provision [6]. However, alongside this dominant market-rational approach at federal and state government level [7], an increasing number of community-driven or local government initiatives are emerging that foreground social relationships and place-based solutions [8–10]. These initiatives reflect growing recognition that retrofit decisions are deeply embedded in social practices, household dynamics, and interpersonal relationships [11–14].

While existing research has extensively documented effective program design characteristics and intervention mechanisms [1,4,15], far less attention has been paid to the underlying assumptions, values, beliefs and rules, what institutional theorists call “institutional logics” [16], that shape how program organisers translate policy aspirations into workable programs. This gap is particularly significant given that home energy transitions require different approaches than other sectors, deliberately addressing equity, intermediation, engagement with people, and place-based partnerships [17]. Recent social-relational research argues that retrofitting is heavily influenced by peer interaction, trusted relationships, and community networks [14], suggesting purely market-rational approaches may miss critical drivers of uptake [11,12,18]. Yet, we don't know to what extent program organisers' assumptions and approaches to program design reflect these social-relational insights, remain grounded in market-rational frameworks, or combine elements

* Corresponding author at: Monash Business School, Monash University, 900 Dandenong Rd, Caulfield East, VIC, 3145, Australia.
E-mail address: christoph.brodnik@monash.edu (C. Brodnik).

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of both.

We address this gap by examining the needs of home energy retrofit program organisers employed or affiliated with state government, local government and community groups in Australia. By analysing what program organisers identify as essential for effective program design and delivery, and how they articulate and address these needs, we uncover the implicit assumptions, values, beliefs and rules that shape how program organisers across these groups design and deliver retrofit programs. This paper seeks to answer two research questions:

RQ1: When designing and implementing home energy efficiency retrofit programs, what needs and requirements do state, local government and community-based program organisers have?

RQ2: What assumptions, values, beliefs and rules underpin how program organisers and their host organisations approach, conceptualise, design and deliver home energy efficiency retrofit programs?

To address these questions, we employ two complementary theoretical frameworks. The first research question is addressed through a jobs-to-be-done (JTBD) approach [19]. JTBD analysis provides a systematic method for uncovering the fundamental needs actors have when accomplishing specific goals or tasks. The second research question draws on institutional logics theory which elicits "the socially constructed, historical patterns of material practices, assumptions, values, beliefs, and rules" [20,p. 804]. While the JTBD framework allows us to identify what program organisers need, institutional logics theory reveals the assumptions, values, beliefs and rules that determine why and how they approach these needs in particular ways, thereby uncovering the implicit paradigms guiding their program design and delivery choices.

The paper is structured as follows: Section 2 reviews market-rational and social-relational approaches. Section 3 presents the Australian case study, analytical framework, and research design and methods. Section 4 presents our findings, identifying 20 distinct needs and describing the Institutional logics that emerge from these patterns. Section 5 discusses how each group navigates these logics from its organisational position, and argues for strengthening field-level conditions for locally led, social-relational programs. Section 6 concludes by setting out the paper's contributions and policy implications.

2. A review of program drivers for home energy retrofits

The literature on home energy retrofit programs reveals two distinct approaches that underpin the conceptualisation of program design and implementation: Market-Rational and Social-Relational approaches. The following sections review their key differences.

2.1. Market-rational approaches

Market rational approaches, exemplified by large-scale product rebate programs, emphasise economic considerations, information provision, and financial incentives as key drivers of retrofit adoption [11,21,22]. These approaches assume that householders make rational decisions based primarily on economic considerations, while following a predictable sequence of steps as part of their customer journey [11]. Programs designed under this paradigm typically focus on removing market barriers, providing cost-benefit information, and offering financial incentives to drive uptake [21,23–25]. Often, market segmentation studies are used to identify and target different customer groups based on economic circumstances and purchasing preferences [26,27], treating householders as a relatively homogeneous group of "customers" [11,22]. While behavioural economics has been incorporated into some of these programs to account for decision-making biases and non-financial motivations, these additions remain within a fundamentally economic understanding of householders as rational actors [12].

In terms of governance and partnerships, market rational approaches are characterised by centralised control and market-based delivery mechanisms [28,29]. Decision rights and accountability are largely centralised within government agencies, which establish the strategic direction, standardised program rules, eligibility criteria, and performance metrics [28]. Partnerships are contractual, structured through framework agreements, with financial and technical risk transferred to suppliers and delivery consortia [29]. Partnerships often involve industry bodies and professional associations to strengthen the retrofit workforce and develop the supply-side of the retrofit market [30,31]. Not actively involving supply side actors, or assuming that programs that ramp up demand will bring forth supply capacity automatically, has been identified as a key driver for program failure [26,30].

Regarding program structure and delivery, market rational approaches are usually structured as standardised, centrally coordinated offers that reduce retrofit barriers through market-based interventions [22,31] typically combining demand side financial incentives (e.g., grants, rebates, or tax incentives) with supply side workforce development [22,30]. Often, financial instruments work together with rules, standards and information provision as part of a comprehensive policy approach [22]. The delivery model follows a streamlined funnel where "the customer" moves through predictable stages that start with awareness, followed by consideration and finally action [11]. Programs emphasise streamlining this journey through information provision, removing barriers at each stage, and using financial incentives to move householders forward [11]. This standardised and funnelled model is exemplified by one-stop shops that bundle services along these stages to lower householders' search and coordination barriers [32,33].

Concerning trust and quality assurance, market-rational approaches address trust by leveraging formal structures and quality assurance mechanisms [11], such as accreditation schemes [28], standardised quality certifications or energy performance guarantees [34]. The underlying assumption is that trust can be institutionalised through formal systems that ensure accountability and protect consumer interests through compliance frameworks [11]. However, the effectiveness of formal quality assurance systems in generating trust depends on their credibility and enforcement [35], with evidence suggesting that accreditation schemes alone are insufficient without oversight and monitoring [26]. Also in this context, market-rational approaches often point to 'one-stop shops' to reduce trust barriers and help householders choose between credible service providers [32].

2.2. Social-relational approaches

Market rational approaches have been increasingly challenged by social-practice based approaches [21,36] and most recently by social-relational approaches that foreground patterns of interactions, affiliations and social relations between actors and their influence on people's actions [14]. These perspectives argue that retrofit decisions are deeply embedded in social practices, social relations, cultural norms, and local contexts, suggesting decisions about home energy retrofits are intimately connected to household dynamics, community interaction, and broader social practices of home improvement and energy use [11,18]. Rather than viewing householders as rational economic actors, social-relational approaches recognise a range of benefits of retrofits including health, wellbeing, and liveability outcomes and reflect the diverse goals and aspirations people may have for retrofitting. Engagement strategies leverage trusted local messengers and existing social networks to increase participation and reduce administrative costs, recognising the value of word-of-mouth referrals and how people often encounter advice from family, friends, neighbours, and colleagues alongside professionals and agencies [11,37,38].

In terms of governance and partnerships, social-relational approaches emphasise localised (also referred to as place-based) programs that engage households in a geographical area, including collaborative processes and structures [39–41]. These approaches are built upon local knowledge and partnerships with local institutions which lend credibility to these programs and are critical for obtaining community

support, technical expertise, volunteers, and funding [39]. Third sector actors, such as community activists, advocacy groups, charities, and religious groups, play key intermediary roles in recruiting households to programs, providing complementary social and mental health services, enabling access to government funding and programs, and mediating engagement with other organisations [42,43]. Similarly, local government schemes have employed advisers to educate and advocate for households in the retrofit process, including maintenance of standards across the installer network [44]. Project management type roles are important for assessing local potential, motivating and coordinating building owners, managing trades and other service providers involved in delivery, and upskilling local partners [44–46]. At the same time, complex actor networks can create overlapping roles and a lack of clarity around who to contact through the retrofit process, while longer term partnerships are recommended to embed ongoing local home retrofit capability [44].

Regarding program structure and delivery, social-relational approaches emphasise that one-size-fits-all programs are less likely to be successful and that program structure needs to be built upon the relationships and interactions of stakeholders in a particular place [38]. Programs are operationalised through place-based initiatives tailored to household profiles and responsive to the local context [38,40,41]. Delivery emphasises facilitation through local organisations acting as intermediaries and brokers between households, service providers, and regulators, including in sharing and translating information in relation to the household's individual circumstances, providing home energy assessments, and supporting applications for subsidies and rebates [42,47–49]. This can also involve face-to-face engagement, particularly for vulnerable households, through energy advice cafes [42] and "village contact" meetings to connect households to municipal, energy, construction, and banking services [50]. Programs are also more ready to leverage specific entry points and windows of opportunity such as major renovations, moving house, appliance breakdowns or relational trigger points such as parenthood, caregiving, or retirement [11,18,38].

Concerning trust and quality assurance, social-relational approaches recognise that householders often lack trust in organisations tasked with retrofit program design and implementation, which can lead to low uptake [18]. These approaches view trust not as an institutionally designed outcome but as emergent and co-produced in social settings including interactions in peer networks and experiential learning about retrofitting [18,38]. Community groups and local governments position themselves as intermediaries who cultivate trust through partnerships with local contractors because of their geographical ties and local accountability [38,40]. While national programs have recognised local authorities as key delivery partners who can align investment with local priorities, the outsourcing of delivery services by local authorities with capacity or procurement limitations can negatively impact trust [44,46]. The site of engagement is important. Research has found that people "responded better to store fronts" [18,p. 7] which convey both professionalism and responsiveness to individual needs and concerns. Other cases highlight the potential for household participation in program design and implementation (particularly in apartment buildings), recognising households' experiential knowledge of their homes and the benefits of household ownership of the process [43,51,52].

Market-rational and social-relational approaches represent distinct frameworks for retrofit program design and delivery, yet they share common assumptions. These approaches posit that energy efficiency retrofit is a discrete category of action that householders can be mobilised to undertake, whether through a market rational approach or a social-relational one. However, retrofitting is often not separable from the broader practice of home making in daily life [36,53] and therefore part of an ongoing process by which people maintain, adapt or modernise their homes [27]. In this perspective, energy efficiency retrofits are entangled with what is considered beautiful, desirable, or suited to a particular life stage. This suggests that on-ground program delivery must contend not only with how householders are mobilised but also whether and how programs can address the personal conditions and mundane practices of home making upon which any changes to someone's home rest. While this paper does not analyse program effectiveness from the perspective of home making, understanding market-rational and social-relational approaches to retrofit programs illuminates the extent to which programs engage with social drivers of home retrofit. There is emerging evidence that market-rational and social-relational strategies are not mutually exclusive. Hybrid program logics, in which local government provides tailored relational support alongside a loan model that promotes net cost savings for low-income households, show that these predominantly social-relational approaches can be combined with market-rational elements in response to complex household realities [13]. This paper thus aims to understand how program organisers from state government, local government and community groups in the Australian context pursue and potentially bridge these perspectives.

3. Research design and methods

3.1. Case study selection

This study employs Australia as a single case study for two reasons. First, using a single national case rather than comparing across countries keeps analytical attention on organisational differences as the source of variation. This strengthens our analysis of how institutional logics manifest through and across these groups. Second, Australia is a particularly apt case: as the following paragraphs describe, a history of federal disengagement has generated a diverse landscape of sub-national program approaches across all three organisational types within a shared national policy context. While Australia's specific energy efficiency policy history is particular to this context, the contrasting institutional logics identified reflect tensions evident in home energy retrofit programs internationally, as Section 2 suggests. However, how these logics manifest will vary with national governance structures and policy histories, a point we return to when we discuss the limitations of this research in Section 5. The remainder of this section outlines the scale of Australia's home energy retrofit challenge and the policy landscape from which the programs examined in this study emerged.

Residential buildings account for 24% of Australia's electricity usage, and 10% of total greenhouse gas emissions [54], making the retrofit challenge significant [5]. While energy efficiency has been on the government agenda since the 1980s, Australia's abundance of cheap, carbon intensive energy meant that energy efficiency advanced slowly compared to international examples [55]. Today, improving home energy efficiency is part of Australia's decarbonisation agenda with programs at all governance levels [10] and an increasing groundswell of community-led programs [5,8].

The federal government has maintained a cautious approach following the controversial "Pink Batts" scheme during the Global Financial Crisis. Hastily deployed as an economic stimulus measure, and associated with the deaths of four installers, the program resulted in significant political backlash and eroded householders' trust in government-led programs [56,57]. Federal involvement has since been minimal, though recent developments suggest a shift, with new financing schemes [58] and social housing programs [59]. This federal void led to the emergence of varied approaches by states and territories [55] showing significant discrepancies in support levels, comprehensiveness, and policy priorities [10]. Notably there is a policy focus on demand-side rather than supply-side interventions [7], consistent with international examples [25]. Many local governments are establishing home energy efficiency programs throughout Australia effectively complementing state level programs [10].

3.2. Key concepts

Throughout this paper we use two concepts repeatedly that warrant

definition. We define a home energy efficiency retrofit program as a structured intervention designed to facilitate energy efficiency improvements in existing residential buildings. Programs vary considerably in scale and implementation approaches, ranging from large-scale, formally structured state government schemes to smaller, place-based initiatives at neighbourhood level. What unifies these interventions as "programs" is their deliberate and coordinated effort to overcome barriers to retrofit adoption through structured activities and dedicated resources. We recognise that this definition imposes a programmatic boundary around activities that householders may not experience as distinct from broader practices of home maintenance and improvement [36]. However, it reflects a dominant approach to operationalising home energy efficiency policy and organisers themselves frame their work in these terms. Interrogating that framing is central to our analysis.

With the term 'program organiser,' we describe practitioners who hold direct responsibility for home energy retrofit program delivery within state government departments, local government authorities, or community organisations. It is an analytical term to describe a functional role, not a formal designation. In practice, these individuals hold a wide variety of job titles reflecting the diverse organisational contexts in which this work is embedded. In fulfilling this role, they act as intermediaries, for example by translating policy objectives into operational programs while coordinating across households, partner organisations, and available resources. This intermediary function is well established in the energy transitions literature [60] and in home energy retrofit research specifically [13,42,44].

3.3. Analytical framework

This research draws on institutional logics theory to understand the underlying assumptions, values, beliefs and rules shaping program organisers' needs and how they address these needs. Institutional logics are "the socially constructed, historical patterns of material practices, assumptions, values, beliefs, and rules" [20,p. 804] that shape how organisations understand problems and design solutions [16]. Institutional logics theory helps to understand the nature of interventions and strategies, sources of legitimacy and authority, appeals to norms, visibility, and focus shaping home energy retrofit programs.

To systematically identify program organisers' needs, we employ the jobs-to-be-done (JTBD) framework [19,61]. JTBD distinguishes between the needs actors have when trying to accomplish a specific goal or task (the job) and the varied solutions they employ to address these needs; both are analytically separate units of analysis. For example, when program organisers want to increase program participation (the task), they must find ways to mobilise their target audience (the need). How they approach this need, and the solutions they employ, will depend on their organisational context and, as we argue later, on implicitly held assumptions, values and beliefs about what is deemed acceptable and effective, commonly understood as organisational rules or constraints.

This approach offers two analytical advantages for our research questions. First, JTBD theory separates the needs related to a job from the specific solutions employed. By structuring our inquiry around the needs that must be addressed throughout program design and implementation, we can identify needs that transcend specific organisational contexts (RQ1). Second, when analysing how different groups address these needs, we can gain deeper insights into the underlying assumptions, values, beliefs and rules that select for and reinforce these choices (RQ2). How program organisers seek information, engage audiences, and approach evaluation all reveal assumptions, mental models and shared rules about what constitutes a program that they deem effective.

3.4. Data collection and analysis

Drawing on the JTBD framework's emphasis on understanding needs, we organised our semi-structured interview guide around key program phases: understanding context, planning, executing and revising programs. Questions elicited the practical challenges and requirements organisers faced, asking what they struggled with, what slowed them down, and what support they would benefit from. This approach helped surface both explicit needs that organisers readily articulated, and latent needs revealed through descriptions of struggles and challenges.

Before recruiting participants, we obtained approval from the Monash University Human Research Ethics Committee, approval number 2025-41618-131220. Participants were program organisers from state government ($n = 5$), local government ($n = 4$), and community groups ($n = 5$). Additionally, we interviewed one representative from an industry peak body, a community group peak body, and a local government peak body, plus two consultants. All 19 interviewees were directly involved in program design, implementation, or evaluation, and many spoke about multiple programs, whether overseeing several different programs or successive iterations of a single program, or working across programs as contractors or delivery partners (see Table 4, Appendix B, for a list of anonymised participants and corresponding program characteristics).

Participant sampling began with identifying high-profile home energy retrofit programs in Australia, through websites and industry reports. Participants were selected based on two criteria: direct involvement in program design or implementation decisions, and at least one year of experience with home energy efficiency programs. The first six interviewees were selected purposively and represented leading examples of substantive retrofit programs offering financial support, technical advice, or coordinated implementation across each organisation type. From these initial interviews, we conducted two rounds of snowball sampling. Our final sample of 19 interviewees was deemed sufficient as additional interviews and coding iterations no longer surfaced new needs with later interviews consolidating rather than extending the analytical categories.

Semi-structured interviews were conducted online and typically lasted 45–60 min. All interviews were recorded with participant consent and transcribed verbatim. Transcripts were imported into NVivo for coding and thematic analysis following Braun and Clarke [62]. Coding focused on identifying expressed and latent needs related to program design and implementation. Through iterative refinement across multiple rounds of coding, we consolidated these codes into 20 distinct needs (Table 3, Appendix A). For clarity of presentation in the results section, these needs were subsequently organised into thematic groupings (Table 1). Through the coding process, patterns emerged in *how* different groups articulated these needs and the solutions employed to address them. These patterns were then interpreted abductively [63], drawing iteratively on the market-rational and social-relational distinctions established in the literature review (Section 2) and on the analytical dimensions of institutional logics theory: root metaphor, sources of legitimacy and authority, basis of norms, identity, attention, and strategy [16]. These dimensions were not applied as a deductive coding scheme but served as an interpretive heuristic for identifying the underlying assumptions, values, beliefs and rules shaping how different actor groups articulated and addressed their needs.

4. Results

The following sections present our findings organised by actor group. To support the presentation, we structured the 20 needs identified through our coding into thematic clusters, shown in Table 1. Each cluster groups needs that relate to a common program goal, and the goals differ across actor groups, reflecting the patterns identified in our analysis. The descriptive text in each cell of Table 1 summarises the characteristic approach through which each group addresses the clustered needs; the full list of needs, and the specific solutions each group employs to address them, is provided in Table 3 (Appendix A).

Table 1
Thematic clusters of needs across the three groups of program organisers, with the needs (#) included in each cluster and a summary of each group's characteristic approach. See Table 3 (Appendix A) for all needs and the solutions employed to address them.

State government	Local government	Community groups
Goal 1: Understanding and engaging households as customers in a market Market analysis and quantitative methods to understand householders as rational economic actors whose decisions can be influenced through price signals. Needs: #1, #4, #5 **Goal 2: Providing financial incentives and supporting market transformation** Using financial incentives to drive uptake while sending market signals and monitoring broader market dynamics and inflationary effects. Needs: #8, #12 **Goal 3: Ensuring quality control and evaluating outcomes at market scale** Formal systems for quality control, supplier screening, robust governance, and comprehensive program evaluation through surveys and modelling. Needs: #10, #13, #17, #19 **Goal 4: Building supply chain capacity and sector partnerships** Building workforce capacity through training programs and strategic partnerships with industry, unions, and regulators. Needs: #15, #20	**Goal 1: Adapting market knowledge to local contexts** Blending market analysis with awareness of local sociodemographic contexts, cultural barriers, and personal circumstances. Needs: #1, #4 **Goal 2: Bridging standardised programs with local requirements** Tailoring programs to community needs, within formal accountability frameworks and helping householders access state-level programs. Needs: #6, #8, #18 **Goal 3: Combining trust building with quality assurance** Leveraging trust in elected officials and institutional credibility while maintaining formal boundaries around supplier recommendations. Needs: #3, #10	**Goal 1: Cultivating relationships as program foundation** Face-to-face relationship development, direct engagement, and peer learning through demonstration events and community examples. Needs: #1, #3, #4, #5 **Goal 2: Intermediating between households and services** Bridging between suppliers and vulnerable households, providing personalised support, and helping householders access financial incentives. Needs: #8, #16, #18 **Goal 3: Implementing programs collaboratively within resource constraints** Leveraging volunteers and partner organisations while acting as trusted advisors, operating within significant resource constraints. Needs: #6, #9, #10

4.1. State government: a predominantly market-rational approach

State government program organisers articulated needs emphasising quantitative analysis, economic incentives, formal quality assurance systems, and supply-side development. The following subsections examine how they expressed and addressed these needs and interpret the underlying institutional logic these patterns reveal.

4.1.1. Goal 1: understanding and engaging households as customers in a market

State government program organisers articulated their need to "understand the target audience" (Need #1) through comprehensive market analysis. Their approaches to addressing this need centred on quantitative methods such as "analysing income distribution and willingness to pay," "conducting population surveys," and "identifying customer drivers", framing householders as consumers making rational economic decisions. This data-driven approach enabled market segmentation for targeted interventions. As one organiser explained:

> "*The customer drivers is really important. And so, we would do research on that, and we do things like survey a cohort of the population and ask them questions around what would be needed to move the dial in a certain way in terms of price.*"
>
> [P1*]

This insight reveals how state government uses data to help them understand householders as customers whose decisions can be influenced through calibrated price signals.

When it comes to "informing and mobilising the target audience" (Need #4), state government organisers assumed that retrofit adoption follows consumer purchasing patterns. "Multi-channel marketing" and "partnerships with installers" were used to inform householders about financial benefits. Even when acknowledging relational aspects of customer engagement through installers, state government representatives framed this relationship as primarily commercial:

> "*Customers overwhelmingly deal with the retail entity that will make the sale to them. And they receive their information through that channel.*"
>
> [P1*]

Similarly, their need to "educate target audience and support decision making" (Need #5) emphasised delivering "unambiguous messages about retrofit benefits" and "countering misinformation", while providing decision-making tools that "preserve choice" in purchase decisions. One organiser stated:

> "*We promote our program ourselves and we do a lot of work on marketing of the program and talking to customers directly through buyers guides through our website.*"
>
> [P2*]

This underscores how retrofit decisions are perceived as individual consumer choices driven by information supporting purchase decisions.

4.1.2. Goal 2: providing financial incentives and supporting market transformation

State government organisers' need for "providing financial incentives and financing options" (Need #8) clearly reflects a market-rational understanding of retrofit drivers and the role of government. They employed "financial incentives that drive uptake" while simultaneously "pursuing self-sustainability" through financing models that maintained program viability without ongoing subsidies. One interviewee highlighted financial prudence:

> "*There's intense competition for funding. So, finding ways for programs to be financially self-sustaining is all important.*"
>
> [P1*]

Beyond program sustainability, these organisers designed incentives to actively "send market signals to attract new products while ensuring price reductions over time" for broader market transformation. One participant elaborated:

> "*So we've been thinking a lot about, firstly, what technologies are available. How do we send market signals about the attractiveness of this market for new products and capabilities? How do we ensure that that price is coming down over time so that they are at parity or indeed cheaper?*"
>
> [P5*]

The clearest indicator of the state government's market-rational stance is their distinct focus on "anticipating program effects on the market" (Need #12). This need is not expressed by other groups. They voiced concern about broader market implications of their programs and required capabilities to "assess potential market dynamics and inflationary effects" of their interventions. One organiser stressed:

"*that's one of the things that I try and impress on other people who are designing programs is to really understand the market dynamics of the market you're intervening in, because it's never the same after you've intervened.*"

[P5*]

This concern extended to "monitoring industry capacity constraints and grid integration challenges," and preventing "industry cooling effects through market intelligence and stakeholder collaboration" where consumers might delay purchases in anticipation of program incentives.

4.1.3. Goal 3: ensuring quality control and evaluating outcomes at market scale

The market-rational approach was further evident in state government organisers' need to "ensure quality and suitability of products and suppliers" (Need #10) primarily through formal quality assurance and accountability systems. Their requirements included "formal product evaluation systems" and "supplier/installer screening and monitoring frameworks" with "transparent vetting processes" functioning as market regulation mechanisms. One program organiser emphasised:

"*Verification and certification of the installers and suppliers is just critical.*"

[P3*]

This emphasis on systemic control was also apparent in their needs to "establish effective governance and management processes" (Need #17) and "understand regulatory frameworks and align with policy objectives" (Need #19). Central to these needs was implementing "robust governance for risk and budget management" and "managing risks from legislative changes." One interviewee said:

"*Good governance is the critical thing. So we adopted really clear governance structures and management structures that ensured that we manage the risk, that we manage budgets, and that we could assess suppliers and installers.*"

[P3*]

This encapsulates the structured, risk-averse, and accountability-focused framework valued by state government.

In addition, their need to "evaluate program impact and participant satisfaction" (Need #13) reflects a market-rational approach. Methodologies included "comprehensive surveys, longitudinal studies and economic modelling" alongside "formal evaluations," often tied to "staying attuned to market dynamics" and to adapting program parameters within an evolving market. An interviewee articulated:

"*We've built economic modelling capability, and we essentially monitor market dynamics and then use those to continuously calibrate the model, around demand, market growth and prices.*"

[P5*]

4.1.4. Goal 4: building supply chain capacity and sector partnerships

A distinctive need expressed only by state government was to "train and support suppliers and tradespeople" (Need #20) through dedicated workforce development and industry capacity building. This highlights state government's comprehensive market-based perspective and reflects the scale at which their programs operate. One organiser detailed:

"*There's a whole lot of investing in training, for tradespeople and salespeople and business mentoring …*"

[P1*]

This involved "supporting training and apprenticeship programs" and "engaging with professional associations and training bodies" which reflected an understanding that programs needed to address both supply and demand aspects of the market. Program organisers viewed regular engagement with retailers, installers, and industry forums as essential for developing the market's capacity to deliver retrofits at scale.

Similarly, their need to "engage with stakeholders and develop partnerships" (Need #15) reflected a focus on the supply side of the retrofit market. Given the scale of state programs and their significant market effects, program organisers set up "formal reference groups for market intervention" to address industry concerns early prior to program implementation. Furthermore, "strategic partnerships with unions and regulators" were seen as critical not only to ensure quality, safety, and standards compliance but also to establish framework conditions for the market generally. One program organiser recounted concern that:

"*They didn't want us to make an announcement that would cause a hiatus in the market, because we're intervening in a market where there was already solar being installed, just not at the rates that we were incentivising.*"

[P5*]

4.1.5. Institutional logic: market logic

Shaped by the institutional contexts in which they operate, the accounts of state government program organisers reflect a Market Logic (Table 2). Under this logic's root metaphor, retrofitting is conceptualised as requiring market intervention through information and financial incentives. Legitimacy derives from market development and cost-effectiveness, driving state government's emphasis on efficient delivery and sending market signals (Section 4.1.2). Authority stems from technical expertise, formal credentials, and data and analytics capabilities, reflected in a reliance on market research, population surveys, and economic modelling to understand householder behaviour and market dynamics (Sections 4.1.1, 4.1.3). The norms guiding action centre on economic rationality, consumer choice and transactions. State government organisers provide information about economic benefits, develop decision-making support that preserves consumer choice, and view installer relationships primarily as enabling commercial transactions (Section 4.1.1). The identity conferred on householders is that of customers or market segments, defined by income distribution and willingness to pay, and requires segmentation for targeted interventions (Section 4.1.1). Attention focuses on market dynamics, supply-demand balance, and uptake rates rather than individual circumstances. State government organisers actively anticipate how programs reshape markets, monitoring industry capacity and risks of industry cooling effects (Section 4.1.2). The logic's basis of strategy centres on market

Table 2
Two institutional logics (IL) of home energy retrofit programs in ideal typical form. Dimensions of IL from [16].

Dimension of institutional logic	Market logic	Community logic
Root metaphor (= home energy retrofit as a matter of …)	Market intervention through information and financial incentives	Social process through trust and relationships
Source of legitimacy (= what confers legitimacy)	Market development, cost-effectiveness	Community connection, local embeddedness
Source of authority (= what confers authority)	Technical expertise, formal credentials, market research	Relationships, lived experience, community standing
Basis of norms (= criterion by which behaviour is driven)	Economic rationality, consumer choice, transactions	Individual support, well-being
Source of identity (= what makes the actors visible)	Customer, market segment	Peers, community member
Basis of attention (= what the logic focuses on)	Market dynamics, supply-demand balance, uptake rates	Household circumstances, relationship quality, individual needs
Basis of strategy (= main action to address the logic base of attention)	Market intervention, supply chain development, efficient and standardised delivery	Trust building, intermediation, place-based facilitation

intervention, supply chain development, and standardised delivery, reflected in organisers investing in workforce development, engaging professional associations to build market capacity, and establishing formal reference groups to manage intervention effects (Sections 4.1.2, 4.1.4).

4.2. Community groups: a predominately social-relational approach

Community group program organisers articulated needs emphasising relationship-building, intermediation between stakeholders and services, and collaborative program delivery within resource constraints. The following subsections examine how they expressed and addressed these needs and interpret the underlying institutional logic these patterns reveal.

4.2.1. Goal 1: cultivating relationships as program foundation

Program organisers from community groups expressed needs prioritising personalised engagement and relationship-building with residents. Their approach to "understand the target audience" (Need #1) emphasised "directly engaging and consulting with community" and "capturing locally specific challenges and preferences" rather than conducting market segmentation. As one organiser described:

> "*Being able to have face to face chats or other opportunities, it all kind of informs our strategy and the direction that we're going in.*"
>
> [P10*]

Their need to "build trust with the community" (Need #3) was foundational to the success of a program, requiring significant "investment in face-to-face relationship development" and personal connections. One interviewee stated:

> "*Developing a trustworthy relationship with the household is just key. Otherwise, you get very low take up, with these programs.*"
>
> [P11*]

This distinguished community groups from their state and local government counterparts who draw upon electoral mandates and established service provision for legitimacy. They recognised that relationship development required substantial time in what one community program organiser described as "social work":

> "*So there's actually a large element of kind of, you might want to even call it social work, in relation to just engaging with the householders.*"
>
> [P11*]

To "educate the target audience and support decision making" (Need #5), community groups organised "demonstration events and open home days," facilitated "peer learning opportunities," and showcased "real-world retrofit examples", understanding that retrofit decisions were often socially constructed and influenced by lived experiences and peer validation. One organiser highlighted:

> "*So your demonstrators become those people who've done it thoughtfully and learnt along the way and are keen to share what they've done.*"
>
> [P17*]

Similarly, for "informing and mobilising the target audience" (Need #4) they foregrounded the importance of "personalised information sessions" and partnerships with "trusted organisations to reach underrepresented cohorts".

4.2.2. Goal 2: intermediating between households and services

Community groups expressed a distinctive need to "intermediate between stakeholders and services" (Need #16) which was not expressed as clearly by other program organisers. This involved "bridging between suppliers and target audiences." They noted that suppliers and installers often lack experience working with vulnerable or low-income households as these demographics are typically not their primary customer segment. One organiser shared:

> "*The solar installer that we had, they obviously don't work with a lot of low-income people because they can't afford the solar. They weren't used to working with that type of audience with all of these extra layers of needs.*"
>
> [P13]

Community groups thus became vital for translating requirements between suppliers, installers, and community members, whose needs fell outside traditional customer profiles. This often meant providing "administrative support and personalised assistance" for vulnerable cohorts navigating complex retrofitting processes. One organiser acknowledged:

> "*I really had to hold people's hand through a lot of it, which is fine if you're expecting that.*"
>
> [P13]

Their need to "identify relevant programs and subsidies" (Need #18) further contributes to this intermediary role. They worked to "obtain an overview of government support programs", "provide orientation and help householders apply for existing government programs", while seeking "funding for community program implementation," for their own operational sustainability.

This bridging function, navigating between often complex state-level programs and individual capabilities of householders, was reflected in their approach to "providing financial incentives and financing options" (Need #8). They frequently "helped householders access existing financial incentives" and "connected householders with finance providers" mediating between difficult-to-access economic incentives and financing solutions, and householders who were time-poor, less capable, or facing other barriers. As one interviewee explained:

> "*Things like helping to navigate the Solar Victoria Rebate programs, that sort of thing. We've had a lot of people with maybe lower literacy levels or with English as a second language … and some of the information can be pretty high level and technical …*"
>
> [P13]

4.2.3. Goal 3: implementing programs collaboratively within resource constraints

Community group organisers articulated needs around program implementation that emphasised community-based, collaborative approaches. Their need to "design tailored program delivery models" (Need #6) focused on "consulting and working with partner organisations" and "leveraging volunteer support", driven by the intrinsic motivation and place-based connection.

Their approach to "ensuring quality and suitability of products and suppliers" (Need #10) emphasised their role as "trusted advisors", "balancing independence and recommendations to maintain trust." One organiser noted:

> "*It was a difficult one because we didn't want to be seen to be recommending certain tradesmen for fear of a conflict of interest.*"
>
> [P14]

Many community groups resolved this by establishing formal partnerships with trusted suppliers, enabling transparent program delivery through vetted, locally accountable contractors.

Throughout these activities, community groups operated within significant resource constraints. Their need to "increase human and financial resources" (Need #9) reflected ongoing tension between relational ideals and financial constraints. While they "relied on and trained volunteers," they faced "challenges in human resourcing with limited financial capacity." One organiser articulated:

> "*It's always a challenge for us of how can we fund a project officer to be able to actually run the program.*"

[P10*]

This reliance on inconsistent short-term grant funding pushed them to explore "innovative funding streams" such as crowdfunding.

4.2.4. Institutional logic: community logic

Shaped by the institutional contexts in which they operate, the accounts of community group organisers reflect a Community Logic (Table 2). Under this logic's root metaphor, retrofitting is conceptualised as a social process built on trust and relationships. Legitimacy derives from community connection and local embeddedness, reflected in the focus of community groups on face-to-face relationship building and trustworthiness as essential for program success (Section 4.2.1). Authority stems from relationships, lived experience, and community standing, positioning organisers as trusted advisors who must carefully balance providing guidance and maintaining independence (Sections 4.2.1, 4.2.3). The norms guiding action centre on individual support and well-being. Audiences are understood through direct engagement and consultation, surfacing the specific needs, challenges and preferences of householders (Section 4.2.1). The identity conferred on householders is that of peers and community members embedded in social contexts. Engagement draws on demonstration events, open home days, and peer learning opportunities that showcase real-world examples from community members (Section 4.2.1). Attention focuses on household circumstances, relationship quality, and individual needs. This manifested in community groups' intermediation role, bridging between suppliers and vulnerable households as well as difficult retrofitting processes (Sections 4.2.1, 4.2.2). The logic's basis of strategy centres on trust building, intermediation, and place-based facilitation evident in collaborations with trusted local partners and volunteer networks and helping householders navigate existing programs and policies (Sections 4.2.2, 4.2.3).

4.3. Local government: navigating between market-rational and social-relational approaches

Local government program organisers articulated needs combining market analysis with local understanding, standardised design with customised implementation, and formal quality assurance with community trust-building. The following subsections examine how they expressed and addressed these needs and interpret the underlying institutional logics these patterns reveal.

4.3.1. Goal 1: adapting market knowledge to local contexts

Local government organisers also articulated the need to "understand their target audience" (Need #1), but they blended market analysis with contextual awareness. While they recognised the importance of "assessing existing population data", they emphasised the importance of understanding "specific barriers within sociodemographic and cultural contexts" as well as "personal circumstances that impede adoption". This approach extended beyond broad market segmentation, seeking to consider the lived realities of community members. One organiser articulated the importance of local tailoring:

> "*…really looking at the local context and thinking about what design features does this program need that works with what's going on in this community and that also relates to our cultural context.*"
>
> [P7*]

For "informing the target audience about the program and mobilising them to act" (Need #4) local government employed multi-channel marketing but also highlighted "targeted outreach considering cultural/technological barriers", providing "timely, accessible advice" responsive to diverse community circumstances. Local government organisers recognised their role in "guiding households throughout the upgrade journey" in ways that accounted for differing levels of knowledge, language barriers, and digital literacy. One interviewee said:

> "*… you had to provide the right information, the right advice, the right support, the right nudges at the right time on that journey.*"
>
> [P7*]

Their approach acknowledges the limitations of purely formal, information-based marketing strategies, recognising that information often flows through social networks. One interviewee observed:

> "*I remember running a couple of social media campaigns, but also word got around. It took a bit of time in the community for word to get around through the relevant groups and the neighbours and the parents talking at school and stuff like this happening.*"
>
> [P6]

4.3.2. Goal 2: bridging standardised programs with local requirements

Local government organisers articulated the need to "design tailored program delivery models" (Need #6) that "deliver tangible benefits to householders", "balanced quality with affordability", and tailored financial incentives to community segments. One program organiser described tailoring existing programs:

> "*We are going to do a formal review of the program and look at how we can tailor the grants program to specifically meet the needs particularly for different groups of residents.*"
>
> [P9]

This reveals how local government translated market-based approaches into program modalities attuned to specific sub-groups within their local community.

Their approach to financial incentives (Need #8) demonstrated this bridging function, with aspirations to "reduce upfront costs for lower-income households" through advance payments rather than reimbursement models. One interviewee explained the challenge:

> "*We have a lot of residents struggling with financing their home energy upgrades. So a lot of residents, are in a situation where they're asking for advance funding in order to undertake that upgrade. Unfortunately, the way that we've structured the grants, we're only really able to reimburse residents after they've made a spend.*"
>
> [P9]

While local governments often recognised the limitations of rebates for lower-income households, they operated within formal accountability frameworks that mandated a reimbursement model.

Their approach to financial incentives also incorporated elements of market-rational thinking. For instance, the importance of co-investment from program participants was recognised to ensure that services were valued and that retrofits were utilised. One program organiser said:

> "*I think that there should be something where they can say, you need to have some kind of co-payment. This is where I find that most householders value what they've got.*"
>
> [P18*]

In situations where local government did not design and tailor programs themselves, referring households to existing programs, they expressed the need to "identify relevant programs and subsidies" (Need #18) that householders could access. They performed a vital bridging function acting as a first contact point by "helping householders access programs" administered by state government, including "assisting with applications."

4.3.3. Goal 3: combining trust building with quality assurance

Local government program organisers expressed distinctive needs around building trust that combined formal quality assurance mechanisms with relationship-based approaches. Unlike state government's focus on formal vetting and quality control systems, local governments articulated a need to "build trust with the community" (Need #3) often "involving trusted leaders to vouch for program legitimacy and quality"

such as elected officials. As one participant noted:

> "*councillors add, as a trusted third party, a lot to these programs. And knowing that councillors have done the due diligence on both the supplier and the proposed system or product, can go a long way for people.*"
>
> [P8]

At the same time, these organisers were acutely aware of the necessity to maintain formal boundaries concerning the "quality and suitability of products and suppliers" (Need #10). This included "providing guidance on supplier/product selection" while "maintaining impartiality when making recommendations", carefully navigating between offering useful advice and avoiding conflicts of interest or perceived endorsements. One interviewee commented:

> "*We don't recommend providers and we're not allowed to recommend providers. But I can give you a list of 3 or 4 companies in Melbourne that we know are good at this stuff. Contact them, get quotes from all of them. Choose who you're comfortable with.*"
>
> [P18*]

This illustrated the challenge of providing enough guidance to help households trust the retrofitting process while adhering to formal impartiality. It is worth noting that councils do partner with retrofit service providers to deliver programs but there is variation across the sector in comfort or reputational risk tolerance around limiting household choice to single suppliers compared with a panel of options.

4.3.4. Institutional logic: hybrid between market and community logic

Shaped by the institutional contexts in which they operate, the accounts of local government program organisers reflect a hybrid position with elements of both logics (Table 2). Rather than adhering to one logic, they demonstrated institutional ambidexterity which refers to the capacity to operate within multiple institutional logics [64]. They combined market analysis with local contextual understanding drawing on population data while also involving trusted councillors to vouch for program legitimacy and quality (Sections 4.3.1, 4.3.3). They recognised the importance of economic rationality and co-investment from participants to ensure retrofits were valued, yet simultaneously attended to barriers within specific sociodemographic and cultural contexts (Sections 4.3.1, 4.3.2). Engagement strategies blend multi-channel marketing and information campaigns with targeted outreach that considers cultural and technological barriers (Section 4.3.1), and they tailor standardised grant programs to specific resident groups or help householders access state-level subsidies, acting as a trusted first contact point (Section 4.3.2).

5. Discussion

This paper examined the needs of program organisers from state government, local government, and community groups when designing and implementing home energy efficiency retrofit programs in Australia. Our analysis identified 20 needs (Table 3, Appendix A) and distinctive patterns in how the groups articulated and addressed them. To identify these patterns, we draw on institutional logics theory [16], which has previously been applied in home energy retrofit research [65,66] and offers a productive lens for understanding the assumptions, values, beliefs and rules shaping organisational practice. To interpret the institutional logics, we draw on the literature review insights framing retrofit program orientations. We identify two such logics: a Market Logic and a Community Logic, presented in their ideal-typical form in Table 2. We treat these logics as analytical contrasts that help clarify divergent paradigms, not as descriptions of programs in pure form. Program organisers across actor types articulated orientations reflecting both logics, but differed in emphasis and how the logics were operationalised.

The contrast between the two logics should not obscure the substantial common ground across the three groups. The majority of needs were shared, articulated by all three groups or at least two (Table 3, Appendix A). This common ground supports the JTBD premise that needs are more stable across organisational contexts than the solutions used to meet them: what differentiates the groups is less what they need than how those needs are interpreted and addressed. Explaining that divergence is where an institutional logics perspective becomes useful. If the groups converge on what must be done yet diverge on how they understand and pursue it, the source of that difference lies in the belief systems, norms and assumptions through which each group makes sense of the same task. The following paragraphs examine how each actor group is pulled toward and away from each logic by its organisational position and by the relative strength of each logic in the field.

Each group operates within an organisational field in which both logics are present. Their organisational position relative to both logics and the institutional constraints and affordances that come with that position shape how the logics are operationalised. State government's market-rational orientation reflects the scale and supply-chain imperatives of its position, but where relational principles appeared, organisers framed them through commercial sales channels. Community group organisers' social-relational orientation operates through, not outside, the financial incentives and market infrastructure they depend on and actively utilise. Local government is the most revealing case from this perspective. Their position holds the two logics together, producing the hybrid approach documented in Section 4.3. These findings demonstrate that institutional logics are not blueprints for program design and delivery for any of these groups, but orientations that each program organiser negotiates from their particular organisational position.

Organisational position is one influencing factor. A second is the relative dominance of each logic within the field, which shapes how strongly organisations orient toward it and what they treat as legitimate choices and actions [67]. The strength of a Community Logic matters because the energy transitions and community energy literatures have increasingly recognised social-relational interventions, typically through local programs, as key levers for home decarbonisation [38,68,69]. A strong Community Logic orients retrofit governance toward relational ends and confers legitimacy on locally-led programs, whose expertise in building trust, engaging diverse households, and fostering peer-to-peer learning is critical for retrofit adoption [11,18,38]. Fuenfschilling and Truffer [70] argue that institutional logics in a field vary in their degree of institutionalisation, with the dominant logic determining common organisational practices and alternative logics manifesting at lower levels of influence. While this research did not assess the degree of institutionalisation of each logic, recent mapping shows that the number of locally-led programs differs substantially between Australian states and territories [10,71]. This variation may reflect the Community Logic being more strongly institutionalised in some states than others. For example, Larkin et al. [10] highlight policy variation across jurisdictions, which suggests that the resourcing of local sectors and home energy policy more broadly will likely play a role in this process.

The implication for retrofit policy is that strengthening social-relational approaches is not only a question of program design but of creating the field-level conditions under which a Community Logic can become a stronger orienting force for organisational practices. Levers for creating these conditions include accountability frameworks that legitimise relational and place-based work [11,72], governance arrangements that recognise community organisations and local government as credible retrofit deliverers rather than peripheral actors [38,46], the facilitation and resourcing from higher levels of government that allow social-relational work to develop beyond short term funding cycles [13], and building up support and peer-learning infrastructure across locally led programs that support the diffusion of effective approaches in resource-constrained settings [69]. Comparative analysis of how these conditions vary, and how they shape both the strength of the

Community Logic and the number or durability of locally-led approaches, is a valuable direction for further research.

Several limitations of this study warrant acknowledgement. First, our findings are based on interviews with 19 program organisers in Australia. How Market and Community Logics manifest may vary in countries with different governance structures, policy histories, and cultural norms around housing retrofit. However, Australia's polycentric governance arrangement, where federal withdrawal created space for diverse programs to emerge, provides an instructive case for countries grappling with institutional logic plurality in retrofit ecosystems [65,66]. Second, this research focused exclusively on program organiser perspectives. Householder or supply-side actor experiences with market-rationally oriented versus social-relationally oriented programs would extend our findings and provide a richer picture of how institutional logics manifest across the retrofit ecosystem. A further limitation concerns the conceptual boundaries of our analysis. As noted in Section 2, both market-rational and social-relational approaches share an assumption that energy efficiency retrofit constitutes a discrete category of action. By examining program organisers' needs, we take this programmatic framing as a starting point for our analysis. Yet social-practice-informed housing scholarship suggests that retrofit is experienced by householders as part of broader practices of homemaking, entangled with considerations of tenure, dwelling type, life stage, aesthetics, and the alignment of circumstances that shape when, how and why people modify their homes [3,36,53]. This scholarship argues that the currently prevailing approach to expedite retrofitting through programs, and therefore treating retrofits as distinct from these practices, is conceptually problematic [27,53]. Further research could examine how the institutional logics identified in this paper enable or constrain program organisers in engaging with retrofit as part of everyday homemaking. A related question is how their roles might evolve when energy efficiency becomes embedded in home improvement practices more generally rather than pursued through dedicated programs.

6. Conclusions

This paper asked what state government, local government, and community group program organisers in Australia need when designing and delivering home energy retrofit programs, and what those needs reveal about the assumptions, values, beliefs and rules guiding their work. To answer both research questions, this paper combines a jobs-to-be-done analysis with an institutional logics perspective. We identified 20 distinct needs across program design and implementation, and showed how each group articulates, prioritises and addresses them differently. Two contrasting institutional logics shape these patterns: a Market Logic, predicated on rational-choice assumptions and standardised delivery, and a Community Logic, predicated on trust building, place-based relationships and locally negotiated solutions. Both logics exert an influence on these groups, although to varying degrees. State government is predominantly oriented toward a Market Logic, community groups toward a Community Logic, and local government most clearly reflects elements of both.

This study makes three contributions to the home energy retrofit literature. Empirically, it provides the first systematic catalogue of program organiser needs across state government, local government, and community group settings in the Australian retrofit context. Conceptually, it applies an institutional logics perspective from the program organiser standpoint, a vantage point not previously taken in retrofit research, providing evidence of how the logics shape concrete program design and delivery choices. Methodologically, it shows that a jobs-to-be-done analysis can serve as a productive route into examining institutional logics.

The paper's empirical finding that community groups and local government actors are most clearly oriented toward a Community Logic, combined with research that identifies these actors as central to the energy transition, carries a clear policy implication. Achieving substantial energy efficiency gains through home energy retrofit programs depends not only on designing better stand-alone programs but also on building the field-level conditions under which a Community Logic can become stronger such that locally led, social-relational programs can grow in number, scale and durability. Three avenues follow: establishing governance arrangements that recognise local government and community organisations as legitimate retrofit deliverers and resource the relational and intermediation work they perform; developing evaluation frameworks that make relational outcomes visible and treat them as legitimate measures of program success; and building both support and peer-learning infrastructures to facilitate the diffusion of effective approaches, particularly across resource-constrained organisations. Variation in these conditions across Australian states and territories may help explain why locally led programs have proliferated in some contexts more than others, and offers a pathway for further comparative research.

CRediT authorship contribution statement

Christoph Brodnik: Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **Paris Hadfield:** Writing – review & editing, Conceptualization. **Rob Raven:** Writing – review & editing, Conceptualization.

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Declaration of competing interest

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Appendix A

Table 3
Needs of home energy retrofit program organisers and the solutions employed to address them. Following JTBD logic, each need represents what program organisers require to pursue a specific program goal or task; the solutions employed to address a need vary by organisational context and, as the paper argues, reflect the institutional logic underpinning each actor group's approach.

Need	State government	Local government	Community group
1) Understand the target audience	• Conduct population surveys • Analyse income distribution and willingness to pay • Identify customer drivers and willingness to pay	• Assess existing population data • Understand specific barriers within sociodemographic and cultural contexts • Recognise personal circumstances that impede adoption	• Directly engage and consult with community • Capture locally specific challenges and preferences of community
2) Define Target audience through eligibility and suitability criteria	• Balance equity and practicality • Consider household energy consumption and performance metrics	• Tailor eligibility criteria for equitable outcomes • Avoid random selection processes	• Collaborate with partner organisations to define and apply eligibility criteria
3) Build trust with the community	• Not explicitly mentioned but related to formal quality/governance systems (see Need #10, #17)	• Involve trusted leaders to vouch for program legitimacy and quality	• Invest in face-to-face relationship development • Conduct extensive "social work"
4) Inform and mobilise the target audience	• Uses multi-channel marketing approach • Partner with installers	• Implement targeted outreach considering cultural/technological barriers • Provide timely, accessible advice • Guide households throughout the upgrade journey	• Create personalised information sessions • Partner with trusted organisations to reach underrepresented cohorts
5) Educate target audience and support decision making	• Deliver unambiguous messages about retrofit benefits • Counteract misinformation • Provide decision-making tools while preserving choice	• Conduct information sessions at local government events • Create accessible educational material	• Organise demonstration events and open home days • Facilitate peer learning opportunities • Show real-world retrofit examples
6) Design program delivery models	• Balance risk tolerance and government involvement • Offer product choice	• Deliver tangible benefits to householders • Balance quality with affordability of retrofit options • Tailor to segments of a community	• Consult and work with partner organisations to design program • Leverage volunteer support • Design within funding constraints
7) Design flexible, scalable and secure programs	• Adjust to market changes and demand shifts • Prioritise initial program features and expand later • Prevent exploitation and implement safeguards	• Ensure quality control while balancing administration costs • Prevent exploitation and implement safeguards	• Not explicitly mentioned
8) Provide financial incentives and financing options	• Offer financial incentives that drive uptake • Pursue self-sustainability of program • Send market signals to attract new products and price reductions	• Reduce upfront costs for lower-income households • Pursue co-investments by householders	• Help householders access existing financial incentives • Connect householders with finance providers
9) Increase human and financial resources	• Address scarcity of experienced personnel • Facilitate on-job learning • Draw expertise from other sectors	• Secure full-time staff and financing • Navigate challenges of increasingly tight budgets and diverse priorities	• Address challenges in human resourcing with limited financial capacity • Rely on and train volunteers • Secure consistent funding and try innovative funding streams
10) Ensure quality and suitability of products and suppliers	• Establish formal product evaluation systems • Establish supplier/installer screening and monitoring frameworks • Implement transparent vetting processes	• Provide guidance on supplier/product selection • Maintain impartiality when making recommendations	• Act as trusted advisors for selecting products/suppliers • Coordinate and simplify retrofit options and upgrade process • Balance independence and recommendations to maintain trust
11) Identify success stories, best practices and lessons learned	Establish formal collaboration and knowledge sharing processes between departments and stakeholders	• Support informal officer connections as primary learning channel • Establish peer networks and council alliances	• Rely on informal peer knowledge sharing • Establish university partnerships for knowledge transfer and guidance materials
12) Anticipate program effects on the market	• Assess potential market dynamics and inflationary effects • Monitor industry capacity constraints and grid integration challenges • Prevent "industry cooling effects" through market intelligence and stakeholder collaboration	• Not explicitly mentioned	• Not explicitly mentioned
13) Evaluate program impact and participant satisfaction	• Implement comprehensive surveys and longitudinal studies • Conduct formal evaluations with external partners • Staying attuned to market dynamics	• Manage evaluations with limited resource and expertise • Obtain evaluative support • Obtain energy data (challenge)	• Seek resources for formal assessment (challenge) • Gather informal participant feedback (limitation) • Obtain energy data (challenge)
14) Adapt and improve program implementation	• Prioritise key program features at launch and extend iteratively • Expand based on operational learnings	• Build on previous program knowledge and adapt based on staff expertise	• Leverage organisational agility for quick adjustment
15) Engage with stakeholders and develop partnerships	• Establish formal reference groups for market intervention	• Collaborate with third-party experts to complement in-house expertise and extend program capabilities	• Develop partnerships to increase program legitimacy and reach

(*continued on next page*)

Table 3 (*continued*)

Need	State government	Local government	Community group
	• Develop strategic partnerships with unions and regulators • Focus on partnerships that support quality, safety and standards compliance		• Collaborate with trusted organisations to access vulnerable communities
16) Intermediate between stakeholders and services	• Not explicitly mentioned	• Not explicitly mentioned but related to navigating/accessing other government programs and application assistance (see need #18)	• Bridge and translate between suppliers and target audience • Provide administrative support and personalised assistance for vulnerable cohorts
17) Establish effective governance and management processes	• Implement robust governance for risk and budget management	• Implement robust governance for stakeholder collaboration	• Set up committees and utilise diverse community leadership experience • Implement robust governance as tool for effective decision-making
18) Identify relevant programs and subsidies	• Not explicitly mentioned	• Help householders access existing state government programs • Assist with applications and provide first contact	• Obtain overview of government support program • Provide orientation and help householders apply for existing government programs • Access funding for community program implementation
19) Understand regulatory frameworks and align with policy objectives	• Assess regulatory landscape • Manage risks from legislative changes	• Align with higher-level policy objectives and preferences of authorising environment	• Not explicitly mentioned
20) Train and support suppliers and tradespeople	• Support training and apprenticeship programs • Engage with professional associations and training bodies • Engage with retailers, installers, and industry forums	• Not explicitly mentioned	• Not explicitly mentioned

Appendix B

Table 4
Profiles of the 19 interview participants. Columns summarise attributes for organisational type, program scale, housing tenure focus, services offered, and target population. Participants marked with * discussed multiple programs; labels reflect the combined portfolio rather than any single program.

Participant	Organisational type	Program scale	Housing tenure focus	Services offered	Target population
P1*	State government	State (Victoria)	Owner-occupier, Renter	Rebates/grants, Interest-free loans, Workforce development, Policy design/advocacy	General population, Low-income households
P2*	State government	State (New South Wales)	Owner-occupier, Renter, Social housing	Direct retrofit delivery, Rebates/grants, Policy design/advocacy	General population, Low-income households
P3*	State government	State (New South Wales)	Owner-occupier	Rebates/grants, Direct retrofit delivery, Advisory	General population, Low-income households
P4*	State government	State (Victoria)	Owner-occupier	Direct retrofit delivery, Rebates/grants, Workforce development	General population, Low-income households
P5*	State government	State (Victoria)	Owner-occupier, Renter	Rebates/grants, Interest-free loans, Workforce development, Policy design/advocacy	General population, Low-income households
P6	Local government	Local (Victoria)	Owner-occupier	Assessments, Advisory	General population, Vulnerable households
P7*	Local government	Local (Victoria)	Owner-occupier	Rebates/grants, Concierge services	General population, Low-income households
P8	Local government	Local (Victoria)	Owner-occupier, Renter	Direct retrofit delivery	Low-income households, Vulnerable households
P9	Local government	Local (Victoria)	Owner-occupier, Renter	Rebates/grants, Assessments, Advisory, Education	General population
P10*	Community group	Regional & Local (Victoria)	Owner-occupier	Bulk-buy, Concierge services, Education, Advisory	General population, Vulnerable households
P11*	Community group	Regional (Victoria)	Owner-occupier	Direct retrofit delivery, Assessments	Low-income households
P12*	Community group	Local (Queensland)	Owner-occupier	Direct retrofit delivery, Assessments, Advisory, Education	Low-income households
P13	Community group	Local (Victoria)	Owner-occupier	Direct retrofit delivery, Concierge services, Education, Assessments	Low-income households, CALD communities
P14	Community group	Local (Victoria)	Owner-occupier	Assessments, Advisory	General population
P15*	Industry Peak Body	State (multiple)	All tenure	Policy design/advocacy	General population
P16*	Local Government Peak Body	Regional (Victoria)	Owner-occupier	Advisory, Concierge services, Policy design/advocacy, Education	General population, Low-income households, CALD communities
P17*	Community Group Peak Body	Regional (multiple)	Owner-occupier, Renter	Policy design/advocacy, Advisory	General population, Low-income households
P18*	Consultant	Regional (Victoria)	Owner-occupier	Assessments, Advisory	General population, Low-income households
P19*	Consultant	Local (multiple)	Owner-occupier	Bulk-buy, Concierge services, Education	General population

Data availability

The data that has been used is confidential.

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