PINEAPPLE HOMES CONSORTIUM

A partnership blueprint to overcome market failure and scale net zero retrofits in UK social housing

THE PARTNERING INITIATIVE

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OVERVIEW

The Pineapple Homes Consortium represents an innovative partnership model for addressing one of the UK's most pressing challenges: **Retrofitting ageing, energy-inefficient housing stock to meet net zero targets and tackle fuel poverty.**

This case study examines how a B-Corp consultancy brought together major corporations, specialist firms, and social housing providers to create a scalable, transformative solution for delivering whole-house retrofits in the social housing sector.

The study explores how the Consortium overcame market fragmentation and financing barriers to create a viable commercial model, with potential access to a £1bn+ annual income stream in an emerging £100bn+ marketplace. It details the partnership's evolution from initial concept to implementation, analysing the critical success factors that enabled effective collaboration among diverse partners.

The case offers valuable insights for other multi-stakeholder partnerships, particularly highlighting the importance of independent coordination, simultaneous development of supply and demand, and building strong foundations through careful partnership development.

It concludes by examining how government policy and philanthropic support could help scale this model to address the broader challenge of retrofitting 29 million UK homes and the wider built environment, potentially providing a blueprint for similar initiatives internationally.

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About TPI: TPI was founded by the University of Cambridge and the International Business Leaders Forum in 2003 to develop and promote the theory and practice of multi-sector collaboration. With two decades of drawing out learning while supporting hundreds of partnerships and organisations and training thousands of people, TPI has been a pioneer in codifying best partnering practice standards and in developing the methodologies to build institutional partnering capability.

TPI's mission is to professionalise the practice of partnership and so unleash the power of collaboration to deliver transformational sustainable development.

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THE CHALLENGE

The United Kingdom faces a pressing challenge with its ageing and energy-inefficient housing stock, which is among the oldest and draftiest in Western Europe.

Homes are responsible for a staggering 48% of carbon emissions from the built environment[1], making the decarbonisation of housing a mission-critical task in delivering on the UK's net zero commitments. Further, energy costs are a significant contributor to the cost-of-living crisis in the UK.

There is a clear financial and social business case for retrofitting houses; with 29 million homes across the UK needing retrofitting, there is a potential £1bn+ annual income stream in an emerging £100bn+ marketplace.

However, the scale of the challenge is immense. Individual components of the solution exist, and yet the overall market is fragmented and dysfunctional.

Despite the UK's aim to achieve net zero by 2050, several barriers prevent the supply chain and the net zero housing market from functioning effectively to deliver at scale.

[1] https://ukgbc.org/policy-advocacy/domestic-retrofit/#:~:text=The%20UK%20has%20one%20of,still%20be%20inhabited%20by%202050.

Cost and finance

Energy-efficiency upgrades and retrofitting of individual houses are expensive and require a large upfront investment from homeowners or landlords; there is a lack of affordable, easily accessible financing options.

Skills

Shortage of skilled professionals and tradespeople trained in energy-efficient construction techniques and technologies.

Capacity

Limited capacity within the construction industry to handle the volume of retrofits required to meet net zero targets and deliver sufficient economy of scale.

Data

Insufficient data on the energy performance of existing housing stock, making it challenging to prioritise and target retrofit efforts effectively.

THE OPPORTUNITY

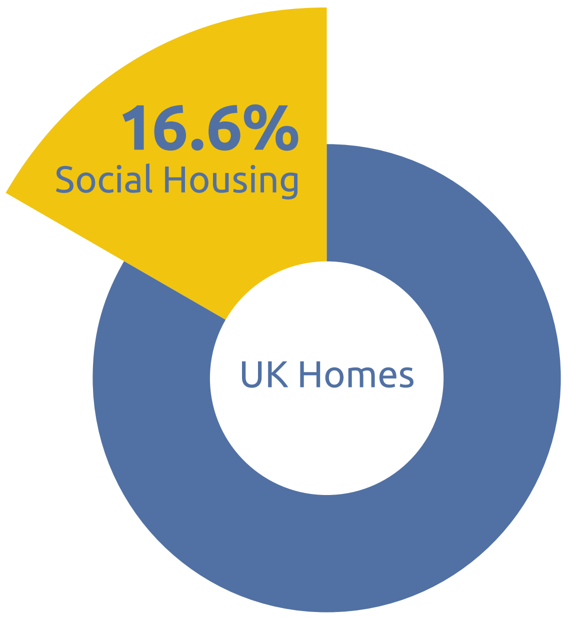
Social housing tenants are particularly vulnerable to the consequences of energy-inefficient homes. These tenants often face disproportionate financial challenges in adequately heating their homes and are more likely to experience the negative health impacts associated with cold, damp, and mouldy conditions. These problems can seriously impact both physical and mental health.

The significant proportion of social housing in the UK (16.6%) presents a unique opportunity to pilot net zero retrofit at scale. By focusing initial efforts on this sector, the industry can not only develop and refine best practices, improve supply chain efficiency, and build the necessary skills to deliver retrofit, but also deliver tangible benefits to customers.

As a result of the retrofit work, social housing tenants will experience improved living conditions and higher-quality homes.

Additionally, this effort allows social housing providers to fulfil further their core purpose of offering quality, affordable housing.

Successful implementation of net zero retrofits in the social housing sector can serve as a catalyst for market transformation, paving the way for wider adoption in privately owned properties and accelerating progress towards the UK's net zero targets.



MARKET FAILURE TO MARKET SOLUTION

The Pineapple Homes Consortium was initiated by Pineapple Partnerships (PP), a B-Corp, mission-driven consultancy that partners with businesses to accelerate their transition to a sustainable future.

Pineapple Partnerships recognised the commercial opportunity but also the degree to which the net zero retrofit market was highly fragmented and poorly functioning. They appreciated that only through a collaborative approach could the problem be tackled at a sufficient scale to make the numbers work from both a supply and a demand side.

Pineapple Partnerships assembled the Consortium that represented the essential components of the retrofitting landscape: landlords, lenders, and the supply chain. While conversations began in 2017, the project gained significant momentum in June 2021 and progressed through the following phases:

2021 2022 2023 2024

Feasibility/ Playbook

June — March

Undertaking a study that established a model and playbook theoretically proving that a collaborative approach could address market failure in net zero social housing retrofit.

Capacity Building

June — March

Building the product set and processes, supply chain connections and contracting frameworks that allow the model to move from theory to a scalable solution available in the market.

Scale-up

April

Market education and development of a large-scale pilot project as a proof point, while also seeking new opportunities and becoming more visible in the market.

Roll-out

August

Completion of the first detailed commercial business case ahead of deployment.

The Consortium-developed model offers a comprehensive approach to retrofitting social housing, from initial assessments and retrofit plans to installing energy-efficient fabric, generation & storage and electrification measures. External financing of up to 70% is available to support these interventions, which can be repaid through various methods, including on bill mechanisms to fairly distribute the cost savings of solar generation & storage utilising time-of-use tariffs, as well as leveraging retrofit credits.

The model allows social housing providers to upgrade their properties' energy efficiency with limited upfront costs, making the transition to net zero more financially viable and streamlined.

From the start, the Consortium aimed to create a business model that could serve as a blueprint for the market. Rather than forming an exclusive partnership to compete in this space, the Consortium sought to involve partners who could demonstrate and validate the feasibility of this model for retrofitting the 29 million UK homes in need of energy efficiency upgrades. The goal was to establish a proven concept that could be adopted and replicated by other players in the market, ultimately driving the large-scale transformation required to achieve net zero targets in the housing sector.

CONSORTIUM PARTNERS AND THEIR ROLES

The partners in the Consortium bring together key supply-side resources, skills, capabilities, and knowledge to retrofit social housing at scale.

British Gas – coordination and preferred delivery partner of housing retrofit (insulation, draft proofing, and installing heat pumps and solar panels & batteries), undertaken directly or through contracting specialist partners.

Tallarna – a specialist insurance and finance broker: brings the ability to include insurance coverage as part of the overall deal to the customer, including energy supply contracts and project deliverables. They have access to funders who can provide equity capital into off-balance sheet vehicles. It makes the entire package more reliable and less risky to potential investors.

NatWest – innovative, sustainable finance: provide the funding for the housing associations and debt finance.

Sero – net zero homes specialist: Sero supports the Social Housing sector in retrofitting their homes to Net Zero and delivering valuable outcomes for both landlords and residents. They act as the Energy-as-a-Service provider, facilitating the funding payback mechanism through billing residents, while optimising the energy system. Their customer-centric approach enables residents to make the most of the technologies installed in their homes, maximise their renewable energy consumption, ensuring they can heat and power their homes more affordably.

Pineapple Partnerships – Consortium lead and project office: serves as the coordinator of the Consortium, overseeing the partnership's activities with a non-partisan perspective. Their responsibilities include:

- **Coordination and convening:** bringing the partners together and ensuring consistent communication.
- **Supply-side management:** focusing on consolidating the supply side of the partnership and developing a sustainable business model for the partners.
- **Demand side development:** educating the social housing sector about retrofit opportunities, developing scalable procurement routes and mechanisms, and building capacity among potential clients.
- **Sales and market outreach:** taking the Consortium's proposition to the market and co-selling with partners.
- **Delivery and ongoing management:** working with partners to structure the sales process.

The programme's initial phases required financial contributions from supply-side partners to develop the partnership model, create business plans and commercial strategies, and define a go-to-market approach, using Pineapple's 'Imagine' and 'Build' methodology for developing partnerships with impact. Now that the partnership is in the delivery phase, the goal is to achieve financial sustainability for the project office within 18 months through project and delivery fees.

In addition to supply side actors, the partnership addressed the demand side by collaborating throughout the development process with Places for People, a leading UK social housing provider. Places for People manages a 200,000-home social housing portfolio, serving a diverse range of tenants. By working closely with this organisation, the Consortium gained a deep understanding of social housing providers' specific needs and challenges. It could ensure that the product was tailored to the market requirements.

HOW DOES THE PARTNERSHIP DELIVER MORE THAN THE SUM OF ITS PARTS?

The Consortium has the potential to revolutionise the UK housing retrofit market. By building up the demand side and supply side simultaneously and by finding a collaborative commercial model that is attractive to both sides, the Consortium has the potential to deliver directly at scale and, essentially, spark others to deliver at increasing scale. As a result, it can contribute significantly towards net zero targets, to reduce bills to millions of customers and improve their living conditions.

The Consortium exemplifies the ability for partnerships to deliver more than the sum of its parts and deliver transformational solutions impossible when working alone[2]. This partnership creates significant societal value, as well as delivering value to individual partners through several key mechanisms:

Collective value creation

- **Systemic solutions:** by bringing together key players with complementary resources, capabilities, and knowledge, the Consortium pulls together the different jigsaw puzzle pieces that collectively address systemic market failures in net zero housing retrofit that individual actors could not solve alone.
  - Adam Swash from PP: *"By building a partnership, we stood a chance to make a material difference to this major societal problem."*
- **Maximising finance:** the Consortium carefully evaluates and prioritises retrofit measures based on factors such as payback periods, ability to attract external finance and cost-effectiveness. This approach optimises the limited available funding to achieve the greatest possible improvements within budget constraints.
- **Maximising impact:** by working together, the Consortium can undertake larger scale retrofit projects that address the systemic market failure of gaps in the supply chain. This enables comprehensive improvements across a significant number of properties, maximising the overall impact.
  - Jayesh Mistry from Sero: *"The consortium exemplifies scaling in action. Through collaboration, we can show the sector that various challenges (including funding) can be overcome. It's an exciting time as we begin to deliver at scale and make retrofitting a standard practice."*

[2] https://thepartneringinitiative.org/wp-content/uploads/2022/08/SDG-Partnership-Guidebook-1.0.pdf

- **Minimising risk:** the Consortium uses financial instruments like insurance wrappers to transfer certain liabilities off the housing associations' balance sheets into separate special-purpose vehicles or entities, minimising the housing associations' risk exposure.
- **Collective influence:** partners gain additional power and credibility when approaching the market together, with the flexibility to leverage different brand strengths (e.g. established corporates or innovative B-corps) as needed.

Individual partner benefits

- **Market expansion:** partners can expand their share and reach in the growing net zero retrofit market, scaling profitable commercial opportunities.
- **Mission advancement:** contributing to systemic change in net zero aligns with partners' missions and desire to contribute to climate action.
  - David Boynton from British Gas: *"The British Gas Net Zero function was set up as part of the continuing evolution of British Gas as it helps the UK decarbonise; partnerships such as this play a vital part in that evolution."*
- **Knowledge and capacity building:** partners learn from each other's strengths, especially where capabilities overlap, improving future delivery capacity.
  - Marcos Navarro from NatWest: *"This project helps to explore how the implementation of energy efficient measures, alongside financing solutions can help to reduce the financial burden on landlords, as well as improve the quality and comfort of homes and communities. We aim to build on successes from this pilot to extend this approach to benefit other social housing landlords across the UK."*
- **Brand enhancement:** each partner gains positive brand value as a leader in the net zero transition, showing tangible contributions that benefit society.
- **Data access:** shared data provides valuable insights for product development, market understanding, and policy influence.

SUCCESS FACTORS AND OVERCOMING CHALLENGES

Flexibility and inclusion: The Consortium goes to the market together as "preferred partners" but remains open to working with other players outside the Consortium. This flexibility allows the market to develop and grow, enabling clients to choose partners based on their existing relationships or preferences. To maintain respect and avoid conflicts, especially when dealing with their shared customer base in the social landlord sector, the partnership works hard to establish clear "rules of engagement".

Right partners, right time, right business models: Selecting the right partners for the Consortium was essential. The mix of big corporations and small specialists proved beneficial. Large corporations brought brand power and an existing customer base, while niche small organisations were able to adapt and fill specific gaps without competing with the larger players. The partnership's success also depended on how well it fit into each organisation's business model. There was an element of good timing and luck when engaging potential partner organisations. For instance, when PP approached NatWest, the bank was already considering how to develop a financial model for retrofitting social housing.

Independent coordination: The partnership benefited from having PP serve as an independent coordinator without direct commercial interests in the retrofit market. This neutral position helped maintain trust between partners and provided space to find solutions when challenges arose. This highlights an important structural consideration: complex multi-stakeholder partnerships often need a funded, independent coordinator to drive progress and broker solutions.

Traditional commercial partners, typically focused on quarterly results and direct business outcomes, may find it challenging to dedicate consistent resources to this coordination role. The presence of a neutral party, able to take a longer-term view of market development, helped bridge gaps between partners and keep the initiative moving during slower periods.

Stimulating, and building a bridge between, supply and demand: Another key success factor was the simultaneous development of supply and demand sides. PP consolidated conversations with social housing associations to ensure interest from the demand side, even providing capacity building for those with limited resources. Concurrently, they prepared the supply side by building the Consortium and developing the business model. This dual approach was essential, though it required PP to carefully balance their role as a neutral broker.

Building strong foundations: The partnership's journey has been a learning experience, with the regulated nature of the social housing sector contributing to long initiation times. This prolonged timeline caused partners' interest to fluctuate, creating capacity issues as they focused on other projects. However, going through these processes was necessary for learning and development, despite the extended timeframes. In hindsight, establishing a collective statement of intent (e.g. a letter of intent or Memorandum of Understanding) from the start could have helped better structure conversations and ratchet up commitments.

The significant time invested in conducting a feasibility study, developing the business model and playbook, and figuring out the partnership's approach reflects the reality that changing the system is a time-consuming process. Despite taking longer than initially anticipated, this thorough groundwork was essential for establishing a strong foundation and ensuring the partnership's long-term success.

High level champions: Navigating the complex decision-making processes in large corporations proved challenging, as it often needed to go through several stages of approval. PP's effectiveness in this area was due to their understanding of the corporate world, stemming from their corporate background. They successfully managed to secure engagement at board level of partner organisations.

At the same time, it was essential to find individual champions across different levels within the partner organisations, not just the board, to ensure that initiatives maintained momentum and implementation continued smoothly across all operational levels. To manage risks associated with personnel turnover, PP initially started with one contact per organisation but later expanded to multiple contacts.

Appropriate communication: Effective communication and coordination were crucial to the partnership's success. Initially, heavy email exchanges among partners could be frustrating. The implementation of weekly meetings to discuss arising questions and review progress proved helpful. PP played a key role in maintaining momentum, especially when partner interest fluctuated due to other work commitments.

Alignment: In the end, the partnership's success is driven by strong alignment between partners who share the same values and a commitment to making the project work. Partners have broken down organisational barriers, leaving egos, logos, and silos at the door, and now work together as a single "project team". The stability of individuals around the table, including PP's long-standing commitment, has been crucial for establishing strong working relationships and trust.

HOW CAN WE UNLOCK THE FULL POTENTIAL OF THIS NET ZERO HOUSING PARTNERSHIP?

The partnership aims to drive a revolution in housing retrofitting by creating a blueprint for upgrading the energy efficiency of the UK's housing stock, proving the commercial model and building up the capacity of industry and finance to deliver at ever increasing scale.

The partnership has been carefully designed to build an inclusive market where the partnership is not a restrictive entity that competes, but rather involves various partners who can showcase and demonstrate the model for retrofitting homes. By working together, the partners can create a scalable and replicable approach that can be adopted by other players, fostering the growth of the entire market for energy-efficient retrofitting, and not limited to the investments by, and interests of, the originating partners.

With social housing representing a significant portion of households in England, it serves as an ideal starting point to quickly build the demand, since a relatively small number of landlords (mainly councils or housing associations) own a large number of properties. The vast market of privately owned properties in the UK, presents an even more substantial opportunity for growth and impact.

To fully realise this potential, closer collaboration with **government** will be crucial. Engaging policymakers to create a favourable enabling environment will be essential for the next stage of scaling. The government plays a vital role in this through the following mechanisms:

- **Consistent policies** are essential for providing the long-term certainty needed for investment in the retrofit market across all housing sectors. A clear, stable policy framework would give confidence to supply chain companies to invest in capacity and skills, enable financial institutions to develop appropriate lending products, and allow housing providers and homeowners to plan long-term improvements.
- **Regulatory change** can drive demand for energy-efficient housing in both social and private sectors. For instance, gradually increasing minimum energy efficiency standards for all properties would create a strong incentive for widespread retrofitting.

- **Financial incentives** are crucial for making retrofits economically viable for all property owners. These could include grants, low-interest loans, tax incentives or changing the 'spark gap' to favour electricity for energy-efficient upgrades, applicable to both social housing providers and private homeowners. In addition, focussing specifically on the Social Housing sector regulations allowing 'Warm Rents' could be changed to more easily allow the fair distribution of costs and benefits.
- **Innovative financing:** Government could unlock transformative financing approaches by enabling property-linked finance mechanisms where retrofit costs stay with the property rather than the owner.

This might include legislation to allow retrofit debt to transfer with property ownership, energy savings performance contracts backed by government guarantees, green bonds for retrofit financing, and reforms to council tax and stamp duty linked to energy efficiency. These mechanisms would help overcome the critical barrier of upfront costs while ensuring that those who benefit from the improvements contribute to their cost.

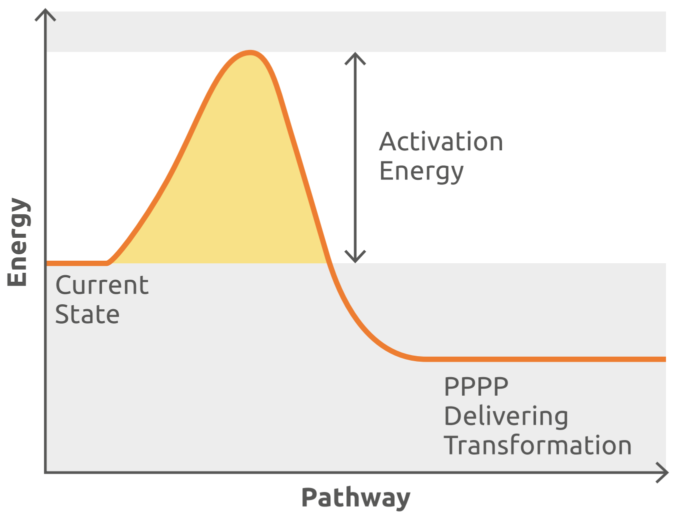
While some engagement with the government already exists through individual and collective efforts of the partners, the positive results and data gathered from the work in social housing could provide substantial leverage for these discussions with a potential to influence public policy, and so unlock the domestic housing market.

AN ACCELERATING ROLE FOR PHILANTHROPY?

Getting complex multi-stakeholder partnerships like this one off the ground is challenging. Partners face significant barriers including perceived commercial risks, resource constraints, the need to build trust among diverse organisations, and institutional inertia. Philanthropic foundations can play several critical roles to help partnerships overcome these barriers[3]:

- **Initiating and convening:** bringing credibility as a connector and enabling dialogue among partners while coordinating activities
- **Co-creating solutions:** working alongside public and private partners to design and develop approaches while maintaining steady momentum
- **Providing catalytic funding:** supporting partnership setup and development costs (rather than implementation costs)
- **Building capacity:** offering technical assistance to help partners adopt new ways of working and accelerate progress
- **De-risking investments:** making initiatives more attractive to mainstream private sector investors by taking on initial risk
- **Supporting learning:** enabling iterative testing and prototyping of innovative approaches.

These roles provide the "activation energy" - appropriated from the scientific term meaning the initial energy that may be needed for a chemical process to start - to help partnerships overcome initial barriers and build momentum.



[3] https://thepartneringinitiative.org/wp-content/uploads/2023/12/Philanthropy-critical-activation-PPPPs.pdf

As a B-Corp consultancy, PP successfully delivered this activation energy through neutral convening, partnership development and technical support. This commitment was a significant success factor, though it relied heavily on the company's goodwill and limited partner funding.

Involving philanthropic foundations would accelerate project work, addressing the urgency of the climate emergency and improving living conditions for vulnerable populations. The speed that could be achieved through philanthropic funding would be highly beneficial, and in hindsight, involving foundations at an earlier stage might have shortened the project's initial development time.

Philanthropic funding could also play a crucial role in de-risking investments from commercial partners, making the project more attractive and feasible. Beyond financial support, philanthropy brings important political and social capital to the table, which could provide useful leverage when engaging new partners, including government entities. Given philanthropy's focus on the common good and broader societal value beyond commercial returns, it would be particularly advantageous to incorporate this perspective into the project, especially when engaging with social housing associations.

Foundations may also take the blueprint from the project and initiate similar activities in other parts of the country or internationally, playing a catalytic role by taking the proven concept and bringing together a group of partners to make it happen.

More generally, the involvement of foundations accelerates collective learning for the common good, which is particularly relevant as other countries besides the UK are also facing challenges in retrofitting their housing stock.

The role of philanthropy has been crucial in multi-stakeholder partnerships like the #BuildingLife project[4], a European initiative run by the World Green Building Council (WorldGBC) that aims to drive decarbonisation in the building sector through private sector action and public sector policy. Philanthropic funding enabled WorldGBC to enhance specific aspects of their work, promoting collaboration, international cooperation, sharing of best practices, benchmarking, and joint communication. It also allowed for real-time evaluation of progress, generating learnings and enabling course correction.

Philanthropy's unique role was to elevate national efforts to an international scale, fostering cross-border collaboration and knowledge sharing that would not have naturally occurred without philanthropic support, as National Building Councils are funded by national members' fees and are primarily focused on their respective domestic contexts. This case highlights philanthropy's catalytic role in scaling impact and accelerating progress in complex multi-stakeholder initiatives.

[4] https://worldgbc.org/buildinglife/

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