HEAT PUMP READY | Department for Energy Security & Net Zero

Part of the Net Zero Innovation Portfolio

Glowmarkt

CARBON TRUST

Project Lead: Hildebrand Technology Ltd

Partners: Richard Carmichael Research & Consulting Ltd, Build Test Solutions Ltd, NJV Ltd, Davies and McKerr Ltd, SE2 Ltd

Funding:

£665,910

The problem: How to improve the heat pump installation journey

For consumers, heat pump adoption involves considerable uncertainty and many complex decisions. Effective, data informed guidance and related information is lacking. Installers also face complexity and lack some crucial data before making a site visit, thereby wasting time and risking incorrectly specified and poorly-performing installations, resulting in higher running costs and reputational damage for the heat pump market as a whole.

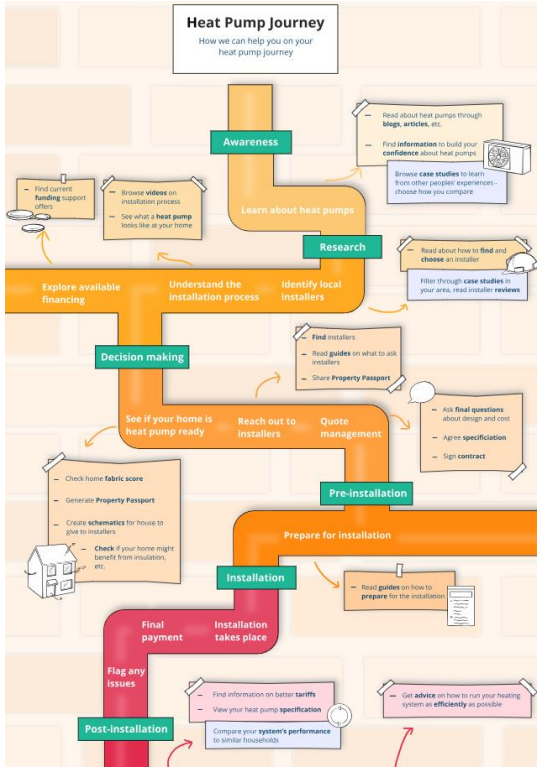
The solution

This project seeks to address these issues by creating a community of installers and consumers, sharing knowledge and smoothing the pathway to successful heat pump installations through structured Case Studies that support peer to peer learning.

Glowmarkt.com site will improve the heat pump adoption customer journey, installer expertise, and outcomes. Data and learning from every installation is presented in structured case studies (including pre- and post-installation assessment) to share insights in a structured, useful and engaging way. The goal is to create a feedback loop of peer-to-peer learning among consumers and installers to continuously improve advice and stakeholder confidence throughout the heat pump journey, based on practical real-world experience underpinned by smart meter data and accurate building fabric scores.

> “Heat Pump Ready gives us the funding that allows us to work with the UK’s experts in peer to peer learning, building fabric, consumer research, and the installer and local authority communities.”

Jane Wilson
COO, Hildebrand



Creating a peer-to-peer learning community

What are we going to do?

Glowmarkt builds on previously developed (and independently tested) functionality including the Smarter Tariffs – Smarter Comparisons tool, and BTS's leading SMETERS solution for measuring building fabric performance. Using smart meter data, we deliver a building fabric efficiency score derived from temperature sensor and consumption data. Consumers can provide details of their radiators that inform a schematic and heat output calculation. Energy data consumption history informs a running cost predictor. All of this is combined with EPC data to provide installers with a 'snapshot' view of the property, extracted from the Property Passport glowmarkt provides. Informed dialogue is facilitated between consumers and installers, and outcomes are documented in searchable Case Studies; installers have a technical version thereof.

Why is this an improvement on current solutions?

The current heat pump installation journey can be piecemeal, involves the consumer managing personal visits and facing complex decisions without basic understanding of what having a heat pump is like, what installation requires, and what it will cost to run.

Our consortium's unique experience of gathering and analysing data enables superior in-situ pre- and post-installation heat pump performance assessment. We replace performance estimation with measurement-based assessment data on building and heat pump performance. Independent consumer and installer research ensures that data and content is presented alongside qualitative information on consumer and installer experiences, giving all involved a clear picture of the steps to take.

What would success look like?

There will be active and engaged communities of heat pump consumers and installers, creating stronger heat pump demand and supply with hundreds of Case Studies, whose narrative content supports education.

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How will this project help towards the target of installing 600,000 heat pumps per year by 2028?

glowmarkt.com offers a reliable and trusted source of information, increasing confidence that any heat pump installation will be effective. Data and learning from every installation will be shared in case studies presented in a structured, useful and engaging way.

This will create a feedback loop of peer-to-peer learning among consumers and installers that continuously improves advice and stakeholder confidence based on practical, real-world experience, leading to higher heat pump uptake.

The Optimised solutions development stream of the Heat Pump Ready programme supports the development of innovative tools, technologies and processes to overcome specific barriers to heat pump deployment in the UK. This stream supports solutions aiming to reduce the life time cost and increase the performance of domestic heat pumps, minimise home disruption whilst providing high quality installations, develop and trial financial models to support heat pump deployment, improve the heat pump consumer journey and provide a smart and flexible home energy system.

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Contact information

Name: Jane Wilson

Email: Jane.Wilson@hildebrand.co.uk

Project site: glowmarkt.com

www.heatpumpready.org.uk

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Key Findings

- There has been significant interest from customers in the property passport even without promotion (700 created), which demonstrates eagerness of early adopters to use the tool.
- Independent consumer research confirms customers don't understand the heat pump installation journey: where they are in it, nor the right questions to ask as they start.
- People are buying a sensor to assess their building fabric score (Build Test Solutions' Smart HTC).
- It is a very silo-ed sector; bringing things together is critical.
- Five full Case Studies are available live

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Project Progress (Autumn 2023)

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What progress have we made so far?

Glowmarkt.com lets customers, installers, and local authorities sign up as users, each with access to features relevant to their role. In addition it offers content that supports: encouraging understanding the heat pump journey; the value of independent data (energy consumption, building fabric, heat output, predicted cost of consumption); and peer to peer learning through structured case studies.

Functionality on the platform includes customer case studies (including very technical for installers to learn from each other), property passports to document key installation data, building fabric assessment, a radiator tool (creates a schematic of heat emitters in a home), predicted running cost and HP size, and invitations between customers and installers to request data/quotes and begin the journey better informed.

The functionality is now 85% complete and progressing well.

What barriers have we identified and how has this changed our approach to delivering our project?

Data access is proving even more difficult than expected; industry lacks standards or agreement that data is of value. We have spent a lot of time trying to address this issue.

What are our next steps?

Recruiting more consumers and installers before heat pump installation in order to collect more data for pre- and post-analytics.

"My gas boiler was 34 years old and parts were becoming difficult to obtain. The BUS grant made switching to a heat pump affordable."

Customer switched from a gas combi-boiler to an air-source heat pump. They are very happy with the installation process (two weeks with no delays) and cost of their heat pump. They are expecting to break even in 6 years.

"The design, pipe sizing and room by room heat loss calcs are the key to a good install."

I replaced a combi boiler with an air-source heat pump. Everything went really well and I am happy with the running costs and comfort of the house.