

CASE STUDY

EXPLORING THE FUTURE OF HEATING WITH BAXI

DRIVING THE DIGITAL REVOLUTION WITH HEAT-AS-A-SERVICE PROPOSITIONS

The impact of digitalisation can be seen across many industries over the last 20 years. New technology, new data and new insights have transformed the way we use things like media, transport and telecoms. Energy is on the verge of huge change, so what does the future look like?

Energy Systems Catapult have been working with Baxi to explore digitalisation and how can be applied to deliver new heat services. The Heat-as-a-Service contract brings together connected products, data insights, maintenance and energy supply in a simple monthly plan that has applications for homes and landlords.

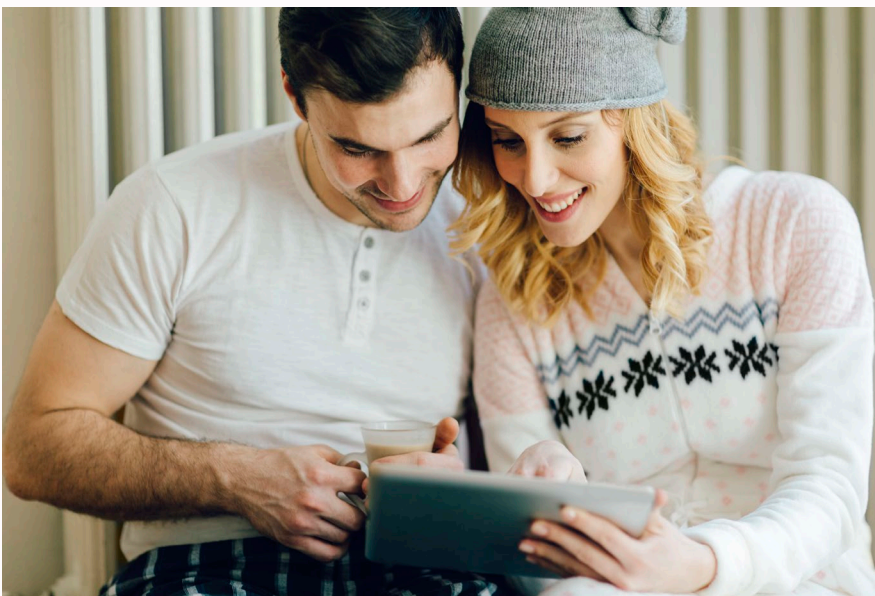
Through use of the Catapult's [Living Lab](#), our Consumer Insights and Business Model innovation teams, we've been able to help Baxi lead the way in the transition from energy products into energy services.

The Innovation

Baxi Heating is a leading UK provider of smart heating and hot water solutions. Connected products and low carbon are a major part of its product roadmap, and this presents an opportunity to re-think Baxi's place in the value chain.

Starting in 2019, Energy Systems Catapult helped co-design a Heat-as-a-Service proposition aimed at providing customers with a comfort guarantee – called the Baxi Heat Plan. It was offered to 20 homes in our Living Lab.

Using the Baxi Heat Plan as a vision for the future, the team looked at adapting the concept for near term opportunities. The challenge was set to bring together Baxi's connected boiler, smart thermostat and existing maintenance contracts into a new, improved service offer for customers.



ABOUT US

Energy Systems Catapult was set up to accelerate the transformation of the UK's energy systems and ensure UK businesses and consumers capture the opportunities of clean growth.

The catapult is an independent, not-for-profit centre of excellence that bridges the gap between industry, government, academia and research.

We take a whole system view of the energy sector, helping us to identify and address innovation priorities and market barriers to decarbonise the energy system at least cost.

Baxi said:

"Our work with Energy Systems Catapult has played a major role in what heat-as-a-service could mean for Baxi. Testing in the Living Lab gave a great foundation for what customers might want in the future.

"Turning that into something that we can demonstrate to clients and launch in the market with the Cqatapult's Business Model team has been an invaluable experience."

Oliver Moffatt - Segment Manager for Multi-Occupancy, Heat Networks & HaaS





The Challenge

The transition to net zero needs a seismic shift in how we interact with and buy our energy. Attractive consumer offerings will be key to unlocking a more dynamic and flexible energy system. Customers will not make low carbon choices if their expectations on quality, service and value are not met.

In the UK, one in every 20 households needs to replace their gas boiler each year. When a family replaces an existing gas boiler, there is an opportunity for them to select a low-carbon heating source.

For the heating industry there are two key issues:

- ▶ How do you give customers the confidence that a new heating system will not cost them more and provide the same comfort as their old one?
- ▶ How can you explore disruptive business models when your business is still dependent on the current way of doing things?

To overcome this, the Catapult and Baxi worked on a series of projects during 2019 and 2020 to explore the future of heat services and how to start their journey into a digitalised and decarbonised energy system.

Impact

- ▶ By working together, the Catapult and Baxi have helped to define Baxi's product roadmap for Heat-as-a-service and its future partner strategy.
- ▶ The Catapult provided Baxi with a greater understanding of what this service could offer for both customers and the business.
- ▶ The Living Lab helped gather unique insights on what the future of energy might look like, and the Baxi Heat Plan sparked interest in 13 out of 20 households, where 10 were enthusiastic.
- ▶ The project has helped build requirements for a demonstration facility (due to complete in 2022) that will be able to explain the concept to clients and industry stakeholders.

The Solution

Starting with a Heat Plan, where, instead of buying units of energy (kWh), consumers buy hours of warmth in their home – called Warm Hours.

Heat Plans assure consumers they can get the comfort they want for a fair price from a new heating system. The plan consumers pick, and the way they use it, reveals their preferences to manufacturers so they can design better products.

By testing the Baxi Heat Plan in our Living Lab, the team could look at what worked and what did not, to build Baxi's heat-as-a-service roadmap. The team targeted a near term opportunity in the new build and social housing sector, and created the Baxi Heat Service which would:

- ▶ Provide Social Landlords with a **fixed price Heat Contract** including gas, connected boiler, controls, service and repair.
- ▶ Utilise data from **Baxi's connected products** to provide new insights on the homes and **improve efficiency, comfort and well-being**.
- ▶ **Heat Service+** would look at automatic upgrades to a **low carbon heating source** at end of the contract.

Next Steps

- ▶ The work on Heat-as-a-Service with the Catapult is now being developed further in an Innovate UK project called the "Digital Servitisation Demonstrator".
- ▶ It is part of a wider programme called "Manufacturing Made Smarter". The project consortium includes Siemens, Energy Systems Catapult, Aston University and a range of other manufacturers looking to understand the services model.
- ▶ Baxi is building a live demonstration facility for Heat-as-a-Service and will be taking live data from pilot projects with Housing Associations.

Get in touch

This project was delivered by our [Consumer Insight](#) and [Business Model Innovation](#) experts

To find out more, get in touch via email: business_modelling@es.catapult.org.uk

