



“Supporting innovation with independent consumer insight, market intelligence and domestic energy expertise.”

Introduction

Domestic batteries help consumers optimise solar PV-generated power in their homes and earn income by selling their excess energy back to the grid. However, the upfront battery cost is high, and the payback period is long. As a result, take-up has been slow.

Levelise has developed an innovative home energy management system that links domestic battery systems. It uses advanced algorithmic controls to combine capacity into what's known as a virtual power plant, which aims to boost the income customers can earn by selling energy to the grid – making batteries economically viable.

Energy Systems Catapult is assisting Levelise through our Innovator Support Platform, which helps SMEs in the energy space overcome barriers that prevent products and services from reaching the market at scale.

The challenge

Overcoming resource limitations to reach a bigger market: With its team of hardware and software engineers, data scientists and renewable energy specialists, Levelise already had a robust technical foundation and clear vision. However, virtual power plants are complex, cutting across systems integration, energy trading and consumer engagement models.

In addition to this broad expertise, Levelise needed expertise to move to the next stage of development and expand its market.

Why Energy Systems Catapult?

An interdisciplinary, independent approach:

The Catapult's whole systems approach provides Levelise with the interdisciplinary support it needs to bring its complex proposition to market. Combining consumer insight with extensive knowledge of domestic energy services, we're able to provide comprehensive acceleration support.



Levelise were also attracted by our independence, as they wanted an impartial, evidence-based perspective of the competitive landscape and potential partnering opportunities.

Josh Robson-Hemmings, Chief Engineer and Co-Founder at Levelise said: “The chance to take our products to a focus group was incredibly useful from an engineering and sales perspective. The Catapult staff took a whole day to de-construct and refine our customer proposition through a series of exercises, workshops and round table discussions. Everyone left the room with a clearer picture of what our current and future customers value and how we can go about delivering that.”

The solution

Innovator Support Platform:

By being selected to take part in the Catapult's Innovator Support Platform (ISP), Levelise was able to acquire valuable skills their business lacked, particularly on how to tailor the proposition to their target market. The Catapult was also able to scope out future scenarios, upcoming trends, and advise on what our business should be focused on in the long-term.

Levelise is now working with our Consumer Insight team to explore domestic energy service propositions. They're evaluating consumer acceptance of novel energy services, including validating the approach within our Living Lab.





Horizon scanning and exploring international opportunities:

Levelise are also utilising the Catapult's expertise in market analysis, both domestically and globally. Our partner Delta EE are assisting by delivering a current and forward-looking landscape view of energy suppliers and their position within the market, helping to identify prospective partners Levelise can target overseas.

The impact

Filling skills gaps and exploring future opportunities:

Through the ISP, Energy Systems Catapult changed the way Levelise pitches to its customers. The meticulous scrutiny and testing with focus groups delivered by the Consumer Insight team enabled Levelise to develop a far more refined proposition.

"Our concept is a complex one that requires a lot of explanation," according to Josh, "The Catapult is really good at finding ways to convey the message in a way that the customer understands."

Horizon scanning has highlighted opportunities for future service development and market timing, including related to the rise of cooling during hot summers. Levelise now has a solid understanding value streams and barriers to entry. Levelise is also evaluating German and Australian expansion opportunities based on our advice, with seven potential partners identified.

Highlights

- A 15-month consumer insight demand-side response project.
- Overseas opportunities in Australia and Germany explored.
- Seven prospective partners identified to help facilitate long-term growth.

About Levelise

Levelise is an Oxford-based technology start-up and now part of Social Energy, has developed a home energy management system linking domestic battery systems to advanced algorithmic controls. Founded in March 2017 by a team of engineers, data scientists and renewable energy specialists, it aims to address the energy trilemma – the interplay between carbon emissions, supply security and costs – by optimising battery operation.

About Energy Systems Catapult

Energy Systems Catapult was set up to accelerate the transformation of the UK's energy system 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 systems view of the energy sector, helping us to identify and address innovation priorities and market barriers, in order to decarbonise the energy system at the lowest cost.

Testimonial

"We were looking for support from an organisation that could help us hone our proposition and offer market intelligence.

"We know the technical side inside out, but needed broader energy system expertise to understand the landscape in depth and direct our approach to market. Energy Systems Catapult ticked every box."

"The Innovator Support Platform has opened doors for us, giving us access to expertise and markets we couldn't have accessed on our own."

- Josh Robson-Hemmings, Chief Engineer and Co-Founder