

Revolutionising Retail — The Power of Real-time Energy Visibility



Since 2018 we've been building a relationship with 1 of the top 4 retailers in the UK. The supermarket chain can be found at over 2000+ locations across the country and commands a 14% share of the industry.*

The retail giant contacted our team with a specific goal in mind: to gain and increase visibility and control of assets within their estate with regards to their energy usage.



Demand for Intense Analysis

The full retail estate consumes energy in massive quantities, annually. With a range of power-drawing assets such as powerful bakery ovens and 24/7 refrigeration systems, the retailer noticed energy costs rise. In addition, Triad periods are increasing the retailer's expenditure by £10m+. There is a requirement for ongoing analysis of the retailer's processes and energy consumption patterns to identify where efficiencies can be made.

Our initial energy monitoring session highlighted errors in energy-consumption processes that were the leading causes of high usage. In one store, we observed excess levels of energy being drawn and identified which broken asset was to blame. In other stores, bakery ovens remained switched on during downtime periods, leading to unnecessary energy consumption. Between the retailer and the Hark team, end-goals were collated and simplified. The supermarket chain required:

- The ability to observe all stores and devices from their HQ and subsequently pinpoint environmentally inefficient stores
- The ability to then control devices from HQ to avoid high energy-consumption and rising energy prices
- The ability to highlight potential failures and inefficiencies within assets or devices before they happen

24,000+

Number of Assets Monitored

600+

Number of Sites

100,000+

Number of Sensors

“Hark is now in a very exciting phase, our work with retailers is a testament, not only to the robust benefits of the Platform we’ve built but also the demand for the creation of insight out of energy consumption data within the retail market”.

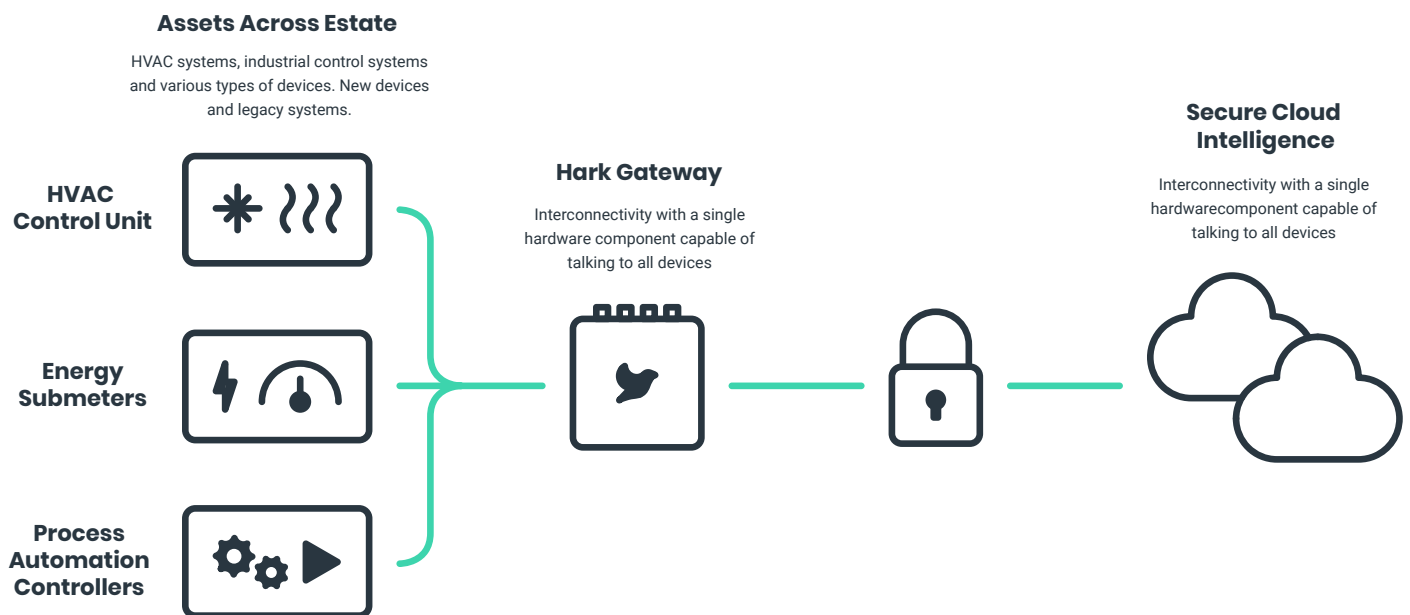
— Jordan Appleson
CEO, Hark

What Could We Offer a Retail Giant?

The Hark Platform consists of two components. The Hark Gateway is a physical device that runs on the edge and physically connects to assets such as Submeters, HVAC Systems, Building Management Systems, Solar Panels and more. It connects via industry-standard protocols such as Modbus and BACNet. One Hark Gateway can be used to connect many assets together. Once connected, the Hark Gateway streams data from the assets in real-time to an easy to use cloud-based dashboard. Energy Demand, Power Quality, Voltage and other environmental information is sent every 60 seconds to the Hark Platform.

The Hark Platform is a cloud-based platform that ingests millions of sensor readings in real-time and allows for the visualisation, exploration and analysis of data. This can be used to organise large estates comprising of thousands of assets.

We installed Hark Gateways to over 40 different asset groups in stores and are currently retrieving over 2 million readings per-day, per-store. This is providing significant insight into their energy-usage patterns and highlighting potential areas of concern regarding efficiency.



Mass Supermarket Rollout Across the UK

Our team worked in tandem with the retailer to identify asset groups that have the highest cost and biggest potential impact. This involved an initial on-site survey in which we identified assets that could connect to the Hark Platform quickly and easily for real-time insight. Then, a proof of concept was fitted into a single store to monitor several asset groups such as the Bakery, Refrigeration, HVAC and Lighting. The following weeks of data collection gave our client the ability to identify the highest energy-consumptive assets while analysing information that had never-before been available to .

Critical information had been gathered by the Hark Platform that, if utilised at a larger scale across a single region, could provide unprecedented visibility of asset energy patterns, reduce energy costs drastically and reduce their carbon footprint. We forged and implemented a plan to monitor 20 stores across 3 months. Following its success, the retailer was soon keen to issue a mass rollout to all of their supermarkets across the UK.

In addition to energy monitoring support, Hark would also:

- Help with any bespoke software
- Help with inspections and installations
- Collaborate with the client and our own partners to forge the perfect solution to any obstacles

“We’re extremely excited to be working with retailers and to see the tangible benefits the Hark Platform can provide to the companies”.

— Jordan Appleson
CEO, Hark

“We’re seeing a broader understanding of the power of machine learning and its applications across various industries as business owners become astute”

— Jordan Appleton
CEO, Hark

Implementation & Results

Previously, the retailer relied on 30-minute readings that could only be observed the following day. Now, over 256,000 of their sensors have been connected to the Hark Platform.

The Hark Platform receives energy consumption data every 60 seconds. Over a 24-hour period, 1,440 readings are taken. In total, 368,640,000 readings are now taken daily for the retailer. With such a massive amount of data recorded and stored for analysis, the following results have been noted so far:

- Energy impact and asset performance can be observed and analysed in real-time
- In the retailer’s stores, the Hark Platform has detected anomalies that have saved over 4-8% in energy by detecting problems and alerting the relevant people in real-time
- The usage of legacy assets that would have originally needed to be replaced has saved over £500,000



Find out more

www.harksys.com

hello@harksys.com

0113 868 0805

Find Us

Hark. Unit 1.1

Mortec Park, York Rd

Leeds

LS15 4TA