FUJITSU

B&Q

Fujitsu and B&Q driving more sustainable stores

In preparation for introducing more sustainable energy sources to its stores, B&Q worked with Fujitsu, leveraging its expertise in sustainability initiatives and data analysis, to optimise its energy usage.

Challenge

With sensors in over 300 shops and warehouses, B&Q receives new data every 15-30 minutes, creating a hugely complex web of information, further complicated by the shops' different sizes and locations.

Solution

Fujitsu used AI analysis of B&Q's building management systems, searching for anomalies and patterns. Implementing the suggested fixes helped save money and prevent unnecessary CO_2 emissions.

Outcomes

- Curtailed unnecessary spending by identifying patterns and errors in the data
- Decreased energy wastage significantly
- Created an optimised base for introducing renewable energy sources to shops

"Fujitsu helped us understand why things were operating the way they did and what the drivers were behind some of the worst energy waste."

Ben Richardson, Energy and Sustainability Project Manager, B&Q

£3M

saved through energy usage optimisation in 2024

7,200

tonnes of CO_2 prevented in 2024

A business with a vision

Many large organisations strive to be more sustainable but not all of them are as dedicated as B&Q. The UK's leading home improvement and garden living retailer, and its parent company, Kingfisher, is leading the industry in peat-free compost, removing harmful chemicals from its products and developing water-based paints. In seven years, B&Q has cut its carbon emissions by 49% and aims to reach net zero for scope 1 and 2 emissions by 2040. It even advises its customers on how to create healthier, more sustainable homes.

Always on the lookout for more sustainable improvements, the company discovered that out of its 169 targets in sustainable development goals, almost 120 were directly influenced by IT, so it worked with Fujitsu to create 200 sustainable IT initiatives. This led to a partnership aimed at tackling energy inefficiencies and resource waste across 300+ B&Q locations through targeted engineering interventions and real-time data analysis.

More specifically, Ben Richardson, Energy and Sustainability Project Manager at B&Q worked with Fujitsu to optimise the company's energy usage in preparation for cutting out gas and introducing sustainable electricity to all shops and warehouses by 2035. The project also drove key stakeholder engagement by integrating sustainability into the IT strategy and highlighting how data-driven insights can bring on energy savings and carbon reduction.

Small changes with big results

Fujitsu's expertise in sustainability initiatives and data analysis was a perfect match for this project to support B&Q, which wanted to significantly reduce CO_2 emissions and energy waste to reach its 2040 goal.

Richardson says, "Fujitsu could help us understand why things were operating the way they did and what the drivers were behind some of the worst energy waste, effectively creating a leaderboard of the best and worst stores in terms of kilowatt hours (kWh)."

The company had a lot of data from its building management sensors and smart meters that send in new information every 15-30 minutes. This creates a hugely complex web of data, further complicated by the shops' different sizes and locations that affect their energy use. "We had all this data, but nobody was actually doing anything with it," he adds.

A range of systems and standards were implemented, including advanced energy metering and machine learning models linked to B&Q's building management system. Using proprietary AI, Fujitsu analysed the data, searching for trends, anomalies and patterns, and even included third-party weather data in the analysis to ensure the most comprehensive pool of information as the basis for its work.

Once the results started to pour in, the company saw where energy was being wasted. For example, some problems were found to be caused by sensors placed in drafty areas or close to doors, which made the system think that the building was colder than it was. Other culprits were found to be glitches in the settings, causing problems such as burners that never turned off, which simply required a reset.

"We have policies that at certain temperatures a burner shouldn't be firing," Richardson says. "And Fujitsu discovered how many of these policy violations there were. One of the early ones we found was a single burner that went through an eye-watering amount of gas, never turning off. It was operating out of policy for some reason. The data was there, but nobody picked it up."

Industry:
Retail

Location:
Eastleigh, UK

Website:
diy.com

About the customer

Founded in 1969, B&Q Limited is the UK's leading home improvement and garden living retailer with over 318 stores throughout the UK and Ireland. On top of offering great prices in store and over two million products available to order for home delivery or click and collect, the company prides itself on offering advice and help to customers in addition to the products sold.

330

locations' energy optimised in 2024

The next steps involved implementing fixes and, sometimes, simple solutions. Lowering the set temperature in stores by one degree brought some incredible results. In the 12 months leading up to July 2024, B&Q saw a 20% improvement across all locations, saved £3 million and prevented a staggering 7,200 tonnes of CO_2 emissions, which is something that the company is particularly proud of. "The tonnes and tonnes of carbon that have been prevented from escaping into the atmosphere is exactly why I'm doing the job I'm doing," Richardson comments.

Richardson also became reliant on the Fujitsu dashboard that offers real-time alerts to watch for discrepancies. "I'm on the Fujitsu dashboard most days," he says. "I'm slightly obsessed with it. I can see a specific time frame and how many hours have been outside policy. I can see that a specific burner somewhere was on for seven hours when it shouldn't have been. Sometimes there is an explanation, but 50% of the time it's a genuine opportunity for improvement."

B&Q's energy procurement and property sustainability strategies have become more data-driven and focused on implementing sustainability checkpoints across store operations.

What's more, the project set a new benchmark for energy management, showcasing how other organisations can make use of technology to enable sustainable business practices.

Being sustainable means constant improvements

B&Q needs to ensure that all its stores are ready for electrification from a technological as well as financial standpoint. Such projects are a huge investment and any savings in energy are going to diminish the costs of running it later.

"Hitting our improvements early allows us to wait for technology to advance and test what we have because there are big stores that we are still working out how we're going to electrify," says Richardson. "We're not even sure the technology exists to do it. So, we've got an awful lot of work still to do before we get into the thick of it. Fujitsu is taking a bit of the pressure off because we can save a significant amount of carbon already. It means we have a little bit of breathing room to do the right thing."

With the early benefits from the most obvious offenders already achieved, the additional energy savings are going to require more analysis, experimentation and finding solutions in less obvious places. This is why Fujitsu and B&Q have agreed on a gain-share model for further collaboration whereby Fujitsu will keep exploring new ways of saving energy for B&Q. These benefits will continue to pour in as the company has plans to remove a further 25 kWh of waste within four years.

Fujitsu will ensure that all the improvements can be maintained throughout the seasons and that maintenance can be automated. There is a lot of work still to be done, but the results so far are not only inspiring, but they are also feeding B&Q's determination. So far, B&Q's 39 million kWh reduction in energy usage is an equivalent to the annual gas heating consumption of 3,500 homes. "The numbers involved are staggering," concludes Richardson. "And when I turn my laptop off at the end of the day, it feels like we've made a difference."

Customer:

B&Q

Fujitsu

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