

# Carving Out Savings: Energy Efficient Data Centre Solution Cuts Howdens's Power Usage By 60%

## industry:

Manufacturing

## country:

UK

## business challenge:

Howdens Joinery needed to expand its data centre to cope with rapid growth. But it also had to cut costs by finding more find cost-effective solutions to reduce its energy consumption and avoid the costly alternative of increasing its power supply capacity.

## solution:

Dimension Data's Facilities Infrastructure team examined the problem and provided consulting services and support. With its expertise in building optimised environments for data centres and office environments, the team was able to identify a number of opportunities, and has reduced Howdens's energy consumption from 392 amps to 158 amps.

## services:

Consulting services and professional services to plan, build, and implement a cost-effective power management solution, incorporating the data centre, as well as the building's heating, ventilation and air conditioning systems, plus its power and lighting.

## results:

- reduced power consumption – power usage reduced from 392 amps to 158 amps
- cost savings – less power equals less cost
- improved growth potential – by identifying power usage savings, the company now
- has greater potential to grow its activities on its existing site
- increased efficiency
- sustainability gains – measure and better manage utilities to produce a reduced carbon footprint

## Executive summary

With its data centre nearing full capacity in terms of its existing power supply, Howdens Joinery was looking for cost-effective solutions that would reduce its energy consumption and avoid the costly alternative of increasing its power supply capacity. **Dimension Data, Howdens's long-term services partner, brought in its specialist Facilities Infrastructure team to examine the problem and provide advice and support.** With its expertise in building optimised environments for data centres and office environments, **the team was able to identify a number of opportunities and has reduced Howdens's energy consumption from 392 amps to 158 amps – reduction of 60%.**

## Client overview

Howdens Joinery is the UK's largest kitchen supplier and offers a comprehensive range of kitchen and joinery products designed to meet the needs of modern living. The organisation works on a trade-only basis, with everything in stock locally, supplying over 250,000 small local builders through a network of over 500 depots across the UK. Howdens Joinery's data centre in Northampton supports the operation of these depots, as well as the organisation's manufacturing, warehouse, and transport operations.

## Business challenge

The core site of Howdens Joinery in Northampton is an area of high energy

consumption which was running at a capacity of 400 Amps in terms of the electrical supply. The company was growing and fast becoming the market leader in the industry, so the ability for future growth was essential. The company has always seen IT as a key enabler and its power capacity was therefore critical to allow the company to expand its data centre facilities in line with growth.

## The way forward

Howdens Joinery is committed to its current facilities and the choice of an alternative site to house all IT equipment would potentially have resulted in further cost, logistical challenges and a departure from its preferred IT strategy.

Dimension Data has been Howdens Joinery's chosen core network, secure remote access and data centre services partner for a number of years and has an excellent track record in delivering high levels of service. Howdens Joinery engaged with Dimension Data's Facilities Infrastructure team, to examine the ways in which it could implement planned lifecycle improvements and accommodate additional growth in systems without exceeding the 400 amps capacity of power running into the Northampton building.

## Solution delivered

The Facilities Infrastructure team was asked to conduct a consultancy project to analyse the power usage throughout Howdens Joinery's main building in Northampton. The team looked at all aspects, from the data centre to the heating, ventilation, and air conditioning systems (HVAC), plus the power and lighting of the building.

The objective was to ascertain where power was being consumed and identify areas where this consumption could be reduced, while maintaining or improving

“Dimension Data took a very **systematic approach to our situation**. The Facilities Infrastructure team gathered information, took it away for assessment and **came back with some very considered and highly effective solutions. It was an impressive response to our particular needs.**”

Clive Cockburn, Head of IS Infrastructure, Howdens Joinery Group

levels of service. The Facilities Infrastructure team engaged with the key facilities and IT staff on the Northampton site to obtain initial information, such as utility supplier readings and billing information. This helped Dimension Data to build up a baseline picture of key focus areas.

Dimension Data then undertook a series of onsite surveys, including physical inspections and measurement of:

- major systems and overall power consumption
- UPS utilisation and efficiency
- air-conditioning utilisation and efficiency
- lighting levels, utilisation and efficiency
- general heating and hot water utilisation and efficiency
- data centre room construction and operation
- fire suppression system effectiveness and compliance

Dimension Data also noted areas where energy consumption could be reduced by adopting more efficient business practices, such as lighting control. Information was collated and taken off site, where it was worked on and fully evaluated with expert business partners to determine the most efficient, cost-effective solutions, utilising the latest technologies, while also considering capital expenditure, running costs, and return on investment.

Key areas were identified as follows:

- The existing 200 KVA N+1 UPS solution was actually utilising a single string of batteries, so not giving a true N+1 solution. Also the room in which the UPS systems were housed was severely over temperature, which was having

a drastic effect on the life expectancy of the UPS solution, especially the batteries. This was addressed and a new sustainable energy solution was supplied and installed, together with addressing the high temperature situation with the final changeover carefully programmed to ensure minimal downtime of the data centre electrical supply.

- The existing water heating systems, room heating, and shower facilities within the toilet areas were all electrical and this was having a drastic effect on the electrical consumption resulting in peaks at certain times of the working day. The Dimension Data solution to this problem resulted in a drastic reduction to the electrical power requirements and prevented these peaks from occurring.
- The existing 6kw over-door heater was found to be another large consumer of the electrical supply, and Dimension Data installed a new heating system that substantially reduced the power requirement, but without having an effect on the staff or the day-to-day operation of the business.
- The lighting installations in certain areas were changed with more automatic controls and low energy consuming luminaries installed.

All the possible solutions were presented to Howdens Joinery, who then chose to address key areas that were affecting its business. Dimension Data installed a new UPS to optimise power usage and improve resiliency for both the data centre and the building as a whole. The heating management for the building was addressed by introducing an innovative heating system to manage both the building temperature and the heating

of water for employee facilities such as showers. Finally, the lighting in the building was looked at and improved.

### Value derived

The impact on the electrical supply was drastic and the power consumption was reduced from a peak of 425A to a more controlled level of 158A, a saving of over 60%. This allows the IT infrastructure requirements to be expanded to facilitate the growth that Howdens Joinery wishes to achieve and requires to meet its business imperatives.

This programme is ongoing and Dimension Data is working with Howdens Joinery to look at possible ways of further improving its power consumption through more innovative cooling solutions, data centre efficiency, and additional lighting improvements. Additional resilience is also being considered, with a second UPS option already designed into the first UPS install.

The benefits to Howdens Joiner included:

- reduced power consumption – power usage reduced from 392 amps to 158 amps
- cost savings – less power equals less cost
- improved growth potential – by identifying power usage savings, the company now
- has greater potential to grow its activities on its existing site
- increased efficiency
- sustainability gains – measure and better manage utilities to produce a reduced carbon footprint