CASE STUDY

JCT600 - BMW Bradford

Smart Buildings have recently completed the brand new BMW showroom & Integrated workshop in Bradford. The Showroom has had an extensive facelift and is now benefitting from the advanced integration technology from the Smart range.

The Challenge

Smart Buildings have supplied a state of the art integration platform to incorporate all of the existing plant as well as the new mechanical and electrical services.

A combination of wired and wireless solutions have been provided to ensure the building performs to optimum efficiency. The integration consists of all energy using devices along with a direct steaming service of the utilities into the dash of the AMR data on a day plus one basis.

The client decided to retain all existing plant that was operational and supplement this with new where required. Back of house retained the most of this plant while front of house benefited from a total new infrastructure.

Managed by Smart Devices

Connected to the Cloud. (IOT)

All the connected services are managed by the use of Smart devices, the system operates over the internet directly to your smart phone, tablet or surface device. A cloud based service enabling your building for the internet of things invasion.

“With an additional plant energy load of over 30% Smart Buildings have still managed to reduce the previous costs by over 20% giving JCT a saving in excess of 40%…”

Mark Taylor

Property Director JCT600

About

- 1+ Million Investment
- State of the art
- BMW’s (Future Retail) Concept.
- 99 Sticker Lane
  Bradford
  West Yorkshire
  BD4 8RU

BMW Bradford
AC App

The offices and used car sales are controlled via a Mitsubishi VRF System, each room has a local wall mounted controller to allow the users to adjust the space temperature within their zone.

This is integrated into the Smart system via a BACnet gateway and this provides the user with a powerful control and management tool.

Within the Smart-VUE dash is a AC app and this provides advanced information and features for the AC system. The App is displayed above with the enhanced features detailed. On the right side bar

Showroom Control

Equipment retained and enhanced was the Air Handling unit that serves the main show room and this has benefited from new variable speed control from inverters that also provide the dashboard with the exact energy usage and performance.

The control of the AHU is enhanced by the Smart Wireless & Battery-less self powered Space temperature sensors located strategically around the showroom.

Coupled with the weather station which monitors the temperature, wind speed, direction, rainfall, lux level, sun intensity and position ensures we can track the temperature change around the building and provide the optimum performance through the day and environmental changes.

Heating Control

The main heating system serves the HWS and thermostatically controlled radiator system. The HWS also has an electric heating element to minimise gas usage during the summer months. Strategically located Wireless & Battery-less space temperature sensors ensure optimum control on this plant.

Workshop Control & Wireless interlock

The workshop is served by gas fired radiant heaters and these are zoned to maximize efficiency and have interlocks to the roller shutter doors via wireless Battery-less door monitoring contacts.

App Features

Smart Graphs

Auto graphing tool provides the user with a snap shot of the temperature performance. This section also has multi functional buttons where you can build historical performance of the data.

Temperature & setpoint facility

This displays real time temperature and the required setpoint. This feature also allows the user to adjust the setpoint, however to increase energy savings this can be controlled by the admin to a +/- maximum value.

Performance and Control

This section displays the current operation of the unit along with the status and highlights the software calculations.

Solar Powered Cells harvests the energy for the sensors

Self Powered Wireless Batteryless

Self Powered Door Switch
Smart Software

The Dashboard is a Smart software suite that provides functionality that is built up in a series of App’s.

Each App has unique features and can be expanded by adding plug ins to the app to enhance the feature set.

The software is built on the simple XML Service to allow the connectivity to any Smart device.

No licenses
No Expensive software
Vendor Independence

Smart Energy

The buildings energy load after the refit has increased by more than 30% electrical load. Whilst Smart have enhanced the building performance we have also reduced energy usage against the initial usage by over 20% effectively providing a building that is 40% more cost effective.

The Smart Energy App allows the user to manipulate data from all utilities providers directly streaming into the portal. We can collect AMR Data directly and run this along side any sub meters that are installed directly onto the site.

Solar Performance Integration

The latest energy source to be integrated into the Energy App is directly from the Solar source and JCT600 are leading the way with this solution. The benchmark performance on one of the new dealerships proved that the Solar is producing nearly 2 thirds of the energy required to run the building. This was logged within the Smart energy performance of the building.

Smart Base Load Management

Base load management of the building has been achieved by installing wireless relays around the 24/7 plant using devices. Simple scheduling of these devices have delivered savings on the base load of over 5kw overnight on such devices as

- Coffee Machines, Wireless Relay
- Zip Water Heaters, Din Rail Single Channel
- Bottle Coolers, 16 Amp direct switching
- Vending Machines
About Smart Buildings

We have built our product and service offering around the future technology that is the (Internet Of Things) IOT. We are pioneering the innovation of true Smart Building integration through open technologies.

With connectivity that is Cloud based and hardware that integrates Wireless Standards EnOcean & ZigBee provides the future for buildings to be empowered and ready for the Invasion of things.

The user interface is built around App technologies providing the ability to constantly build and develop the service on offer for our clients.

Controlled by App’s Managed by Smart Devices

By normalizing every building device ensures that all management can be undertaken over any type of Smart Device with total vendor independence.

In todays competitive market, the need to optimize your field resources to reduce overhead, yet still find ways to continually improve service, add value and delivery. Equals the need for field service automation this is provided by the Smart-VUE solution.

The Smart XML Service feeds the data directly to the enterprise. This opens the opportunities for Smart management of all connected devices.

Contact Us

Give us a call for more information about our services and products

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