

CASE STUDY: BAYER



Keysource helps Bayer Bridge the Gap at UK Headquarters

London Conference plays key role in helping Bayer IT and Facilities professionals to work together to deliver resilient and scalable data centre.

Bayer's headquarters in Newbury was designed and built during the 1980's. Part of the design brief to the architect was, where possible, include Bayer materials into the building. So, as a showcase, synthetic dyes in the brickwork, glazing products and engineering plastics have all been incorporated within the building.

From a branding point of view, the building was both visionary and forward thinking. When it came to IT, however, the managers who presided over the company's move from Richmond considered that the company would be making little use of computers, other than a couple for the accounts department.

When it was opened in 1983, the building had a large data centre, built on the first floor to Bayer's global standard, which housed two large main frame computers, along with associated power distribution and air conditioning equipment. However, there was no raised floor and little else to support the distributed networks which have become a way of life today.

Naturally, things changed over the ensuing twenty years; the two mainframes have now gone and a local network has grown with its corresponding servers and routers. As this new technology requires less space and some of the original services were reaching the end of their life, there was an opportunity to recover a large part of the data centre for conversion back to office space and at the same time create a new server room.

An Imperative for Development

IT is required to provide highly available applications, including SAP and Lotus Notes, to support Bayer UK's sales, marketing and finance functions. IT also maintain a resilient link to the company's centralised accounting and invoicing services via the corporate WAN, acting as a central hub for other Bayer sites in the UK. This service, designated Corporate Network Bayer (CNB), requires its own equipment to be hosted within Bayer's server room.

"The construction of the new server room was a joint project between our IT and Facilities departments", says Peter Boxall. "IT specifies all of the equipment and relies on Facilities to provide the appropriate environment and infrastructure."

The challenge

To provide an end-to-end datacentre design and build service to help Facilities meet IT demands for zero downtime.

The solution

APC InfraStruXure Solution
2 x 40kW APC Silcon UPS (2N)
3 x 20kW floor standing air conditioning units
Raised floor environment



The customer says

"Keysource worked closely with us to design and build our new data centre. Their engineers worked efficiently and we experienced no downtime. I'd say the gap between IT and Facilities has been bridged to provide a facility to meet the uptime demands of a dynamic network at Bayer."

A handwritten signature in black ink that reads 'P. Boxall'.

Peter Boxall, Property Manager, Bayer





“For security of service to their users, IT demand diverse routing and alternative connections to the outside world so we have fibre links to both of our local telephone exchanges and there are three wiring closets to manage the CAT-6 infrastructure. We have become so dependant on computers at work and IT will not tolerate any downtime so pressure is on to provide a robust set up with 100% uptime.”

The Art of Good Timing.

As the project was about to commence, Peter Boxall and Neale Francis, Building Services Manager at Bayer who was responsible for building the new server room, received an invitation to “Bridge the Gap between IT and Facilities” at a London conference hosted by Keysource. “There had always existed a bit of a ‘them’ and ‘us’ situation and I saw this as an ideal opportunity for us to work together and for all of us to take ownership of the project.”

The conference focussed on the issues of provisioning power and cooling into increasingly high density facilities – a situation which both Peter and Neale knew they faced as they consolidated the company’s servers into a space around 12.5% of the size of the original computer room. “It was an excellent catalyst,” continues Neale Francis “and with the help of Keysource, we quickly arrived at a specification for the new room which enabled Facilities to meet the demands of IT.”

Delivered in Six Weeks

With expert help from Keysource a specification for the new server room was soon produced together with indicative costings, schematic layouts and project plans. Says Peter Boxall, “A good working relationship with Keysource developed and we became

confident that we had found the right partner for our project. On Day One, four Keysource engineers turned up to do the electrical work. Once they had their bearings they quickly got on with the work unaided.”

The total build time was six weeks for the new server room which is based upon APC’s InfraStruXure architecture. Its modular construction enables the network to be scaled rapidly and easily, with new equipment racks, power distribution, cooling, monitoring and management services all integrated. In fact, the 8 cabinets specified in the original drawing has quickly been increased to 20 as Bayer IT refresh and upgrade their critical equipment.

The room is cooled by three 20kW close control computer room air conditioning units in an N+1 configuration, and has an FM200 fire suppression system. Two APC 40kW Silcon UPS are located in the basement adjacent to the existing standby power distribution services.

The UPS are configured in a 2N solution. Each UPS feeds a separate distribution board within the server room, which in turn feed 2 rack mounted PDU’s. From here Bayer utilise the dual PSU’s by supplying 2 separate feeds, one from UPS 1 and the other from UPS 2. This level of redundancy ensures maximum availability and eliminates all single points of failure in the infrastructure back to the UPS.

In addition to supplying two separate power feeds to the new server room, the Silcon UPS provide 10 minutes autonomy. In the event of a prolonged mains failure, the power supply is protected by a 412kVA standby power generator which has enough fuel stored on-site to support the full IT load for over 12 hours.

A Prescription for Customer Wellbeing

“We didn’t have a moment of downtime throughout the whole implementation of the new server room.” Says Neale Francis. “IT quickly got to grips with the new facility and the features on offer. Because the InfraStruXure Manager software is presented in a browser window, IT have taken over the task of environmental monitoring. For the first few weeks Facilities had calls telling us that temperatures were rising in the cabinets!”

Peter Boxall concludes: “With the help of Keysource I believe the gap between IT and Facilities has closed considerably and the project is a huge success. Our new server room is up and running and providing networked services to every workstation.”

Pictures:

1. Bayer UK HQ, Newbury.
2. The new datacentre, designed and built by Keysource.
3. APC NetShelter equipment racks.
4. Battery back-up.
5. 2 x APC Silcon 40kW UPS.



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