MHR
Case Study

About

MHR are a software specialist delivering market-leading solutions in the Human Resources, Payroll, and Finance industries. Their pioneering platforms have been making the world of work easier for over four decades.

The Project

Sudlows were approached by our trusted supply chain partner, Vertiv, to assist with the design and build of MHR's latest generation of data centre facility, located on privately owned land in Nottinghamshire.

Whilst MHR have over 30 years' experience in building and operating data centre facilities, they wanted to engage a specialist with proven expertise in delivering state-of-the-art, mission-critical environments.

Their objective was to utilise the latest technologies and highly efficient systems to support their expansion and long-term sustainability plans.

MHR had an existing relationship with Vertiv and specified that their equipment would be deployed within the new facility. Working in close collaboration, all three parties partnered to develop the design, led by the Sudlows in-house Design Team, under the guidance of one of our Uptime Institute Accredited design leads.

The facility is subterranean and was constructed on the footprint of an existing building. By utilising land previously occupied by a storage facility, the project achieved minimal environmental impact. MHR directly managed the building works to deliver the physical white and grey spaces, along with the external plant rooms and compounds required to accommodate the various mechanical and electrical systems.

Due to the nature of the facility, several design stage challenges had to be carefully considered. Particular attention was given to ensuring safe and practical access for the installation and positioning of both the M&E equipment and the client's IT hardware.

The building layout, including the data halls, electrical switch rooms, UPS rooms, and circulation areas, was developed and planned through close collaboration between Sudlows and the client's Design Team. This ensured that all requirements of MHR's specification were delivered.

MHR required a robust and highly resilient facility, which Sudlows' Data Centre Design Team carefully incorporated specific input from MHR to ensure these objectives were fully achieved.

The cooling infrastructure was designed to provide N+2 resilience, utilising Vertiv's air cooled chillers and chilled water in-row coolers, delivering a concurrently maintainable solution.

The electrical infrastructure was similarly designed with resilience and planned maintenance in mind, providing an N+N configuration to support the critical loads within the data centre.

By adopting a collaborative approach from the outset, the team was able to draw on previous experience and incorporate valuable lessons learned into the design where appropriate.

The project's success was driven by MHR's early engagement and existing expertise, allowing for a true partnership approach between Sudlows, Vertiv, and the customer's own data centre personnel.

Following completion of the installation, Sudlows carried out a rigorous commissioning programme, including full load bank testing to validate that the electrical and mechanical infrastructure could support the 240kW IT load.

This process involved simulating various failure scenarios to demonstrate and verify that the data centre would remain fully operational during such events.

After completion of the installation process, Sudlows conducted on-site familiarisation sessions to explain the installed equipment and systems. These were followed by a classroom training session for MHR staff and operators responsible for the day-to-day operation of the facility, providing them with both familiarisation and a comprehensive understanding of the infrastructure. The training was recorded to serve as a reference resource, and electronic copies of the materials were provided, enabling cross-reference with the O&M manuals as required.

MHR successfully migrated their IT services during a planned maintenance window, with no unplanned outages or disruption to their clients' services.

As with most complex projects, several challenges arose during delivery. However, these were effectively managed through a fully open and transparent relationship with the customer. This approach enabled any minor issues to be discussed promptly and resolved collaboratively, preventing delays.

The project was delivered to scope, within time and to budget, with no significant change management required. This outcome demonstrates how early engagement and meticulous planning ensured that all requirements were fully considered and incorporated at the design stage.

As a result, MHR were delivered a fully compliant facility, built to their requested standards, providing complete peace of mind and a reliable, future-proof data centre for years to come.

Due to the established relationship between the customer and Vertiv, all primary equipment was supplied by Vertiv, including:

- 4 x Free Cooling Chillers.
- 10 x CRV In-Row Cooling Units serving the data centre.
- 2 x CRAH units serving the UPS Room.
- Smart Aisle Containment System.
- 2 x 300kVA UPS systems supporting the IT load.
- 80kVA UPS system supporting mechanical essential services.

- 800kVA Standby Generator.
- Single main electrical switchboard feeding N+N downstream distribution for IT supplies, chillers, etc.
- Temporary generator connection points to allow maintenance of the main electrical switchboard and standby generator.

Together with:

- Integrated BMS offering full visibility of the status of all systems.
- Fire Suppression systems.
- Fresh Air and Extract Ventilation systems.
- External GRP CHW pump room.
- Leak detection.

By utilising the latest technologies from Vertiv's range of data centre solutions, Sudlows designed and delivered a state-of-the-art facility to replace the customer's existing data centre.

This has enabled the customer to achieve year-on-year reductions in energy consumption and carbon emissions, supported by a highly efficient system underpinning their critical operations.

Sudlows has continued to support the facility through the provision of our full Facilities Maintenance services, including a 24/7 out-of-hours helpdesk to manage emergency calls and escalation procedures.

Conclusion

The successful delivery of MHR's new data centre stands as a testament to the strength of early engagement, collaborative partnership, and specialist expertise.

Through close cooperation between Sudlows, Vertiv, and MHR's experienced in-house team, the project achieved its objective of delivering a resilient, energy efficient, and future ready mission-critical facility.

Designed with N+2 and N+N resilience, constructed with minimal environmental impact, and delivered on time and within budget, the facility provides MHR with a secure and robust platform to support its ongoing growth. The seamless migration of IT services, comprehensive commissioning process, and structured training programme further ensured a smooth transition into full operational status.

By combining innovative technology, meticulous planning, and long-term maintenance support, Sudlows has delivered a fully compliant, high-performance data centre that will provide reliability, efficiency, and operational confidence for many years to come.

Testimonial

Ian Price, Director of Corporate IT at MHR commented;

"It was a pleasure to deal with Sudlows as the lead partner in this project. The expertise and depth of knowledge was obvious from project inception, and the attention to detail demonstrated by all members of the project team was exemplary, the added value of Sudlows' ability to take the facility from design and build through to monitored operations and response has provided the assurance that we can deal with one entity for all our needs.

"MHR has been hosting sensitive customer data in its private cloud since the mid-90s, before the word cloud was even coined! In that time, we have moved through three generations of data centre design to where we are today; Hosting over 3.5M UK employee records and transferring £2.5Bn in BACS transfers per month.

"This latest generation of data centre will now allow MHR to support its customers well into the 2030s with the most efficient and reliable model ever."