



Case study

Stockport Council

Location Greater Manchester, UK

Value £300,000

Duration 7 weeks



About

Stockport Council is a large local authority within Greater Manchester, which serves a population of around 300,000 people. The local authority has a strong digital presence with a growing number of services now being delivered via the Council's growing IT infrastructure. Like many local authorities, Stockport Council is also key in the IT strategy of local schools, libraries and other public services within their area.

The Brief

As with many organisations of this type, its growing IT needs had reached a point where it was no longer cost effective or practical to deliver these within the constraints of its existing site.

However this situation provided the Council with an excellent opportunity to both upgrade the IT facilities and to do this with new, high efficiency technologies. Together this would allow for a more energy efficient facility with an increased level of capacity and reliability.

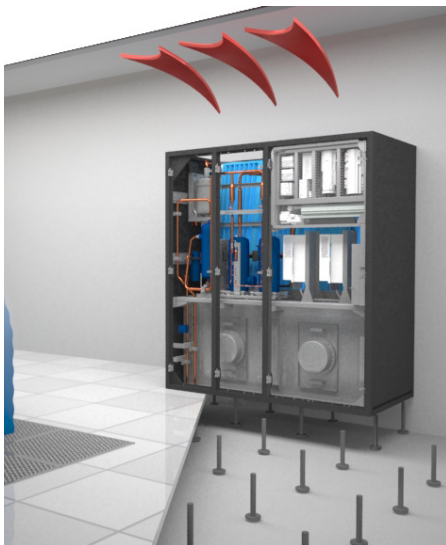
Sudlows were appointed, as Principal Contractor, to design and build the new facility within a short time frame of just 7 weeks, making sure the system design incorporated highly efficient technologies aligned with the council's needs.

The Solution

Cooling to the IT systems is therefore provided via a Direct Air Economiser system with DX top-up and Cold Aisle Containment, allowing cabinet densities up to around 7kW to be easily supported.

Electrically, the data centre is provided with a bespoke LV distribution system which provides a level of redundancy and resiliency in-line with the Council's needs and budget, providing N+N final distribution circuits and UPS protection. The phasing of the project allows for the day one solution to include for 1 No. UPS System with future modular expansion to a full N+1 redundancy level. In addition, the system was designed to be upgraded with a dedicated generator system just for the data centre in the future, with no required downtime.

The data centres primary innovate feature is the use of the existing ventilation shafts to provide the required air for a High-efficiency air economiser system.



Adrian Davies, ICT Specialist Support Manager for Stockport Council added;

“Stockport is a busy Metropolitan Council delivering a wide range of public services to over 300,000 residents every day. This essential infrastructure project delivered by the Sudlows team provides the resilient foundation from which to deliver our digital services along with increased security and a reduction in energy costs.”

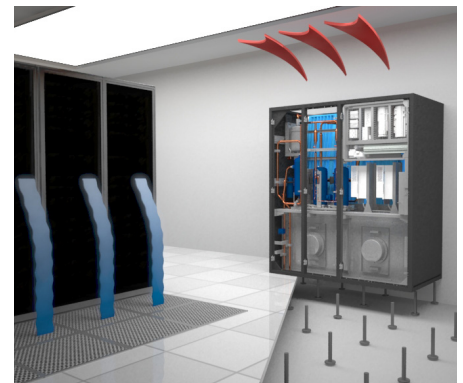
This is combined with a bespoke filtration system, air attemperation system and inverter driven DX top up systems to provide a bespoke cooling system which operates at the top end of industry efficiencies while also not compromising on the environmental conditions within the space.

The air conditioning systems are manufactured by one of the UK's leading CRAC unit manufacturers and as such are the first systems of their type to be installed. Each unit uses the latest 'i-drive' compressor technology to allow for the refrigeration based elements of the cooling system to match supply to demand for the cooling; something which is central to the efficient use of an air economiser system. This results in excellent energy efficiency benefits.

In addition to this, Sudlows installed a dedicated BMS system which allows the system to be closely monitored and measured against expectations. With this, the system can operate at the peak of its efficiency at all times and in-line with the actual loads within the space.

The Conclusion

In line with the initial objectives of the project, the delivery of this facility has allowed Stockport MBC to start to migrate services from an existing, aging computer room, into a brand new, high efficiency, resilient data centre. The facility is key to the ongoing operations of Stockport MBC and their ability to continue to meet the needs of their end users with State of the Art Digital Services. The project was successfully delivered within the tight timeframe of just 7 weeks, allowing the Authority to meet its own deliverables within their IT strategy. Further to this, Sudlows managed to utilise unused space by employing the latest technologies while contributing towards overall environmental and efficiency goals.



Chris Dummett, Commercial Director at Sudlows commented;

“Stockport Council are a dynamic council who are keen to deliver a wider range of digital services to the local residents of Stockport. This important new data centre will not only allow for greater expansion of services and access for residents, but will also deliver a more environmental, reliable and energy efficient system.”



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