

# 2bm Rise to University Challenge

Set in the heart of the East Midlands, The University of Nottingham is rightly proud of its reputation as one of the foremost places of learning in the country. With over 30k students it is the fifth largest university in the United Kingdom with an enviable track record for research, one that includes two former Nobel Prize winners.

A key member of the Russell Group, the University's aim is to provide the finest possible environment for teaching, learning, and research.

## 24-7 Computing

A key element of this service provision is the University's computing facilities which are the responsibility of Information Services team. Students can access general IT facilities through a number of the Information Services Computer Resource Areas located in libraries, the Cripps Computing Centre and other sites across the University's campuses.

Study bedrooms in the halls of residence each have a data point which is connected to the campus data network and all computers are connected to the University's network, most available on a 24 hour basis.

## Responding to the challenge

Chris Tadman, Head of ICT is an integral member of the IS team charged with ensuring a stable and reliable level of service.

"Our challenge is to provide greater resilience within existing space restraints," explained Chris. "It is no longer the case of just supplying boxes. We have to provide service around the clock and it is vital that we don't have any single point of failure."

This prompted the University to set about the project of upgrading an existing room within the Cripps Computing Centre into a Secondary Data Centre. Their chosen partner to carry out the work was 2bm, who came out tops following a very thorough and competitive tendering process.

## Top of the class

"We received a lot of responses to our very detailed tender," explained Chris. "But from the very outset 2bm stood out. They took the time to visit the facility, quickly understood the challenge we faced, questioned those areas that needed questioning and responded in a very professional manner."

"This was in stark contrast to many of the other companies who quoted for the work, preferring to adapt their 'off the shelf' solutions to our circumstances. That wasn't what we were looking for and we had no hesitation in asking 2bm to undertake the project."

That confidence was quickly borne out when early issues forced a major rethink.

"Space and the provision of power were big issues for us," explained Chris. "But 2bm were equally at home talking to my team and our colleagues within the Estates department who have the responsibility for the building. We were delighted with their flexibility and even more so with the solutions they proposed."



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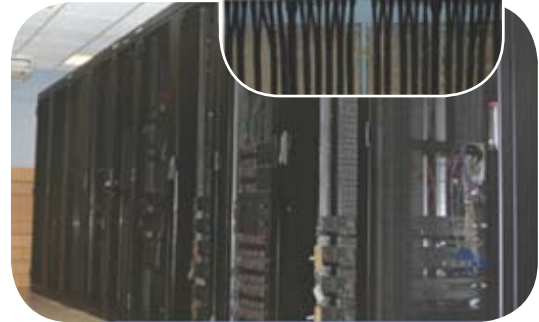
# Case study

## 2bm - keeping cool

With space very much at a premium an innovative solution to cooling was required.

"The costs to install cooling within either a ceiling or floor void would have been very costly and also disruptive to our day to day operation," explained Chris. "2bm were able to talk us through the options and proposed ceiling suspended CRAC units which provided us not only with N+1 resilience but a much more efficient way of working."

"The inverter controlled system is designed in such a way that it only works as hard as it needs to. As a result we are not wasting energy on cooling we don't need and the life expectancy of the kit is also increased as a result."



## Power problems overcome

2bm supplied the University with a complete overhaul of the electrical infrastructure within the new data centre, providing both a resilient and diverse power source to remove the risk of any catastrophic failure.

"Through 2bm's help it quickly became clear that we didn't have enough back up power for the Computing Centre," explained Chris. "2bm were able to spec and install a new replacement generator which gives us up to eight hours back up. That, together with the diverse power sourcing via the UPS and raw mains, means we have total confidence in delivering a 24-7 operation."

## Innovative SAR solution

Integral to the design of the new Data Centre was the use of 2bm's innovative SAR cabinets. "We've never really given much thought to the choice of what racks we have used in the past," explained Chris. "But on seeing the SAR rack we quickly made the decision that this was the way we wanted to go. Its unique design and approach to cable management has made both installation and routine day to day tasks so much easier to affect. We're more efficient as a result and it has radically improved the airflow management."

## The summary

"We couldn't be more pleased with the outcome," explained Chris. "We are already starting to see the benefits, and with 2bm's help we have also learnt from the process, highlighting best practice that we will be looking to extend to other facilities around the University."

"As we move to a virtualised environment our infrastructure, both in terms of hardware and buildings, will have to work harder. But thanks to 2bm we have a data centre that is more than fit for purpose and one that means with can tackle the challenges we face head on."

## Find out more...

2bm is one of the fastest growing providers of data centre solutions in the UK. Our aims are clear and simple ~ to offer unparalleled levels of advice, service and support. Located in the East Midlands, 2bm's clients include many blue chip organisations like The University of Nottingham, across all sectors of commerce and industry.

## Scope of works

### Cooling

Seven linked 11.0kW ceiling suspended CRAC systems coupled to a 2BM smart control panel providing N+1 resilience.

### Power

Complete new redundant and diverse sub-main services and distribution to cabinets and air conditioning.

### UPS

New 100kva UPS with 20min battery autonomy linked to new sub-main power distribution.

### Generator

New 440kVA standby generator linked to change over panel and new sub-main power distribution and UPS.

### Racks

2bm's innovative SAR cabinet was used to increase space efficiency, improve ease of installation and maintenance work.



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