



INTERVIEW:

NOTTINGHAM 
TRENT UNIVERSITY

gets ready for cloud



As Infrastructure Services Manager at Nottingham Trent University (NTU), Amanda Ferguson knows all too well how changing times, technologies and requirements increase the demand for smarter network capabilities. With 28,000 students across three campuses, including 4,000 distance-learning students around the world, the need for instant accessibility and second-to-none data storage is ever expanding.

So, how will NTU meet these demands? And, also, reduce its carbon footprint along the way? We spoke to Amanda to find out how the future looks in a cloud world.

Amanda, tell us a little more about the size of NTU and your role as Infrastructure Services Manager.

NTU has 3,500 professional and academic staff members, and 28,000 on-campus students including 4,000 distance-learning students. We have campuses in Brackenhurst, Clifton and in the heart of the City of Nottingham. Our distance-learning students are as far and wide as Australia and Indonesia.

I joined NTU, at the City campus, in January 2009. My team and I manage the entire data centre infrastructure and networking,

“Janet’s pre-tendered framework saved us a huge amount of time”

both fixed and WiFi. I am also part of the management team in the NTU Information Systems Department.

What’s your current infrastructure environment like?

We currently use HP XP 24000 SAN and a range of HP Blade servers. These are spread over the City and Clifton sites. The cost of these, nearly five years ago, was around £3.5million.



“Students no longer just have laptops – they have all sorts of devices, and expect the same network capability across all of them.”

How do you plan to achieve your objective of 'Delivering high quality, cost effective, green IT services in an agile manner, supporting NTU strategic plans'?

Our existing environment has a limited life span – five years is a long time. As things start to fail, it's far more cost-effective to replace than fix them. With a number of servers running on a 'virtual' one, our carbon footprint is getting smaller and smaller and we're proud to be able to say we're currently in the top ten of the 'Universities Green League'.

By having fewer servers we reduce our heat output, and that means we've reduced power consumption and heating/air conditioning by 40 percent.

So, does this mean you're on track for your aim of a 48 percent carbon reduction by 2020?

I'm pleased to say we are. There have been industry changes around data storage and we have a university-wide information management initiative, which encourages people to stop keeping things 'just because they can'. This means less data, which has a positive green effect.

| Universities Green League 2013: <http://peopleandplanet.org/greenleague>



The biggest challenge we face is getting the balance between finding ways of being more effective and efficient, while still offering our students more. After all, they come first.

Are student expectations the driving force behind the changes you're making to your current infrastructure?

Absolutely. The students' expectations are increasing – they are becoming much more vocal and we have to respond to this. The student experience is paramount to us. Three years ago, they would bring a laptop into university. Now they have all sorts of devices – tablets, smart phones, etc. They expect WiFi, so we have implemented it, and expect to improve it over time.

As we operate such a mixed learning environment now, we're expecting a huge increase in video storage, which requires more capacity. It's not just lectures anymore – we now need to accommodate video clips, access to the internet, flipped learning approaches, and more. Students expect innovation and, as a department, we need to be able to support that, with faster networks, more capacity, and upgrades to handle the volumes.



“Cloud enables us to meet the demands of a far more responsive and flexible service”

How does cloud fit into this picture and what benefits will it offer?

We need to make sure we can take advantage of any opportunities that make it easier to run our business. Cloud helps us to be more responsive as a service. During busy times (enrolment, etc.) we still have to be able to offer the same flexible service. Before cloud, we had to have all the capacity in-house – which cost money. Now, at times when I need more capacity, I can move less important things to cloud and then bring it back again. It allows us to use our resources more efficiently and still respond to any pressing business changes.

What research did you do to understand cloud?

I did lots! Some of the software currently available is not scaled for us yet as, in business terms, we're an SME. There were concerns about security measures making access difficult, and we needed access to be as quick and easy as possible – both on and off campus. We have 9,000 desktops for students and staff and each student has, maybe, three devices – with 28,000 students that's a lot to try and protect! So we focus on data, not device protection.

I see more and more use of cloud for the university's activities. At the moment we archive things internally, but there's a big push from research councils for universities to make grant funded information publicly available. Long-term, as the industry develops, storage will become cheaper, which will benefit us immensely as it will be far more economical to do it externally.

How has the Janet Cloud and Data Centre framework helped you with your plans for the future?

The Janet Cloud and Data Centre framework has really helped a lot. We were looking at a complex EU procurement but Janet's pre-tendered framework saved us a huge amount of time. We started the exercise in January 2013 and made a decision in just three months. Without that framework, we'd be looking at around 14 months. And the framework covered a good cross section of the market – if not the whole market.

What difference will this strategy make to your IT infrastructure costs?

There's already been a huge difference in costs. We've spent £1.5m on infrastructure, rather than £3m – and I get more for my money! I get 40 percent more for my money now than I did in 2009.

How will you measure the success of this move?

We measure the success on carbon reduction, availability and customer satisfaction. We measure customer satisfaction at every level – we conduct student surveys at the end of every module and have monthly meetings with the student union. We're constantly monitoring feedback, which is very positive, and we understand and respond to what the students are saying. We also monitor the acceptability of our interactions with staff via the service desk portal, and service reviews by business relationship managers.

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