Case Study

University of Sydney

University of Sydney Turns to BSM Solutions that Promote IT Service Excellence:

Taking IT from "The backroom to the boardroom," as many organisations today are striving to do, is a feat of both cultural and technological re-engineering. It is seen in an evolution of people, processes, and technology. Australia's largest university, the University of Sydney, is undergoing an IT services transformation — from a devolved and free-spirited IT to, with the help of Planwell Technology & BMC Software, what will soon be a centralised command-and-control, shared services approach.

Missing Links

Ten campuses, forty-five thousand students, billion-plus revenue, three-and-a-half thousand administrative staff, and a rating as the world's 35th best university. These impressive numbers affirm the University of Sydney's top position among Australia's tertiary providers. Nonetheless, Doug Vail, the university's operations manager, wasn't about to let these achievements rose-tint his view of the University's IT organisation.

In his mind, market leadership demands IT leadership, and he wasn't convinced that devolved IT practices and IT leadership inside the organisation would maintain the University's pre-eminent position. Though acknowledging that the IT organisation was, in fact, maturing, his immediate concerns were adopting tools required to moderate IT performance and drive IT service management. "We lacked appropriate processes and tools, and were largely devoid of any sort of performance measurements or monitoring tools."

In response, Vail and the 180-person IT team adopted a self-styled continuous improvement culture, aiming to advance IT agility and service responsiveness. "Before we were the techo's locked in the cell, just keeping things ticking over. But, we had to fix our own backyard before thinking about centralising IT and migrating to a shared services model," Vail said.

Follow the Leader

In launching his IT change strategy, Vail acknowledged the pockets of IT excellence spread across the university. Some departments had developed systems that Vail described as "leading edge," and there was nothing to be gained by disestablishing those working systems, particularly at such an early stage. Rather than laying down the law, it was Vail's intention to establish the architecture that provided users with better options. Getting there first required his department to get its own house in order — a task made easier by implementing the right approach to spearhead IT service management.

"In some cases, it made sense simply to offer support. In other situations — for example, where small IT shops of three-to-four people were managing mail servers and the like — centralising those services would introduce efficiencies and more consistent service across the University," Vail said.

The adoption of the IT Infrastructure Library® (ITIL®) gave impetus to Vail's technology vision — Business Service Management — which he made a point of seeding with both IT and organisation users. "I'd been pushing Business Service Management for some time. We've taken a phased approach, introducing people to different aspects rather than saying, 'this is what we need, here's the big bang, let's put it in'," Vail said.

"By doing it systematically, we introduced a level of understanding to management and my own staff, so everyone could embrace it. From that point, it all started to fit into a bigger picture, shifting our focus to the tools for implementing the theory."

Lights On

The plan spotlighted critical early wins, including streamlined batch processing and automated server and application performance management.

The organisation's existing batch scheduling software wasn't doing the job — nightly batch processing of finance system backups and maintenance was taking too long, creeping into working hours. A growing database magnified the problem, says Vail. "It was ridiculous. There was wasted time between jobs, and when one job overran, the next was invalidated, causing reconciliation issues. A 12-hour window quickly grew to 14 hours, but only six hours of processing actually occurred." These irregularities drove IT staff to work overtime to manage job crashes, so systems unavailability couldn't be blamed on maintenance.

The first step saw the university adopt the BMC CONTROL-M agentless scheduling solution to manage batch processing and keep job completion within the nightly timeframe — despite database growth. "We then added dependencies, running concurrent jobs without impacting processing," Vail said. Adding error routines opened the door to automation, minimising the impact of job crashes and mapping recovery processes.

The University of Sydney

Enterprise

Planwell Technology established since 1991 is the leading independent specialist of IT Service Management Solutions (ITSM) and Customer Support Solutions in Asia Pacific.

Having developed a solid reputation for providing specialist consulting services with innovation, skill and effectiveness. Planwell has demonstrated professional excellence in the provisioning of holistic ITSM projects, including ITIL, Technical, Implementation and Support services for many leading government departments, institutions and industrial organisations throughout Asia Pacific region.

bmcsoftware ELITE SOLUTION PARTNER — BSM CERTIFIED

Planwell Technology
www.planwell.net

Australia			*New Zealand*		*Philippines*		
Sydney	*Melbourne*	*Canberra*	*Brisbane*	*Perth*	*Wellington*	*Auckland*	*Manila*

Commercial in Confidence

PLANWELL technology

Case Study

University of Sydney

BMC Performance Manager came next, demystifying performance issues on each infrastructure layer and eliminating a "needle in a haystack" approach to root cause detection and management. "Before BMC Performance Manager, I would receive a call informing me that the student system was performing poorly, but I would have no indication of where the problem lay," Vail said. "So the first thing I had to do was jump on the phone and check if there were any database issues. Then, I'd run downstairs and enquire about CPU. If that looked OK, we'd look at hardware and then look for bottlenecks in the middleware layer; same process for the Web. This continued for a considerable time period. Our people really didn't understand the performance of their own layer or KPIs [key performance indicators]."

Replacing "home-grown" scripts that often provided contradictory assessments, After testing and investigation through a pilot project developed by Planwell Technology BMC Performance Manager has been rolled out to database, application, and machine layers, establishing performance standards and associated alerts. "A lot of the time, the system would crash because the database had run out of space. We had no idea that it was at 80 to 90 percent, so we were very reactive," Vail said. Now, with the BMC solutions in place, violated thresholds activate warnings, allowing operators to take action before systems
and services are impacted.

In monitoring individual infrastructure layers, the university manages them more sensitively. "The rule of thumb was 90 percent CPU utilisation. However, in some cases, 70 percent was enough to degrade application performance," Vail said. "So, we had to set different thresholds for different applications. All of a sudden, we had a new understanding of bottlenecks and sticking points." The upshot is that Vail's team is now positioned for proactive management, reducing incidents caused by fundamental performance issues — unavailable disk space, server exhaustion, and the like.

IT Agility

Knowing that true agility demands a vertical view of IT — from user "moments of truth" right down to individual supporting components. That's why Vail is working to extend his BMC investment to manage IT Confidential - for approved customers only infrastructure according to service demands and seasonality. Heavy demand periods, such as course enrolments, have traditionally stretched backend systems. In response, the university has virtualised many of its servers to accelerate provisioning and load balancing. Vail still wants to go further, however, understanding performance issues and their impact on services. Having completed a proof-of-concept exercise for BMC Service Impact Manager, implemented by Planwell Technology he is excited by the possibilities.

"It's being more proactive, understanding the different services we need to provide (when they should be provided), and arresting problems before they occur," Vail said. "We can talk with the business and say, 'right, we need to add two or three more servers at this application layer and maybe one or two at the Web layer.' We can also understand database performance, and operate proactively – not waiting for someone to say, 'why is the system running slowly?'"

Vail expects to extend new systems management technologies to his service desk, adding event and service
impact management to take the ongoing systems management mantle from technical staff.

Counting on Performance

Vail says the deployment has so far improved systems availability, performance, and server utilisation.

Hard measures at this stage are elusive, but he is particularly pleased with declining incidents, which over the past year have diminished significantly. He's also detected a changing mindset among his people — new confidence and eagerness to deliver service, rather than remain in the "boiler room" and keep their arms around IT. "Now it's out there for everyone and anyone can see how the different layers are performing. I think that's a good thing. It's making people accountable and responsible for their area ofexpertise," Vail said.

Key Products Used

- BMC CONTROL-M
- BMC Performance Manager for Servers
- BMC Performance Manager for Databases
- BMC Performance Manager Express

I'd been pushing Business Service Management for some time. We've taken a phased approach, introducing people to different aspects rather than saying, 'this is what we need, here's the big bang, let's put it in.' By doing it systematically, we introduced a level of understanding to management and my own staff, so everyone could embrace it. And, from that point, it all started to fit into a bigger picture, shifting our focus to the tools for implementing the theory."

Doug Vail
Operations Manager
University of Sydney

About the University of Sydney

The University of Sydney, founded in 1850, is Australia's first university, and has an international reputation for outstanding teaching. It is also recognised as a centre of research excellence and an active and engaged community leader. The University of Sydney continues to rise in global rankings, confirming its place within the top 40 universities in the world.

bmcsoftware ELITE SOLUTION PARTNER

BSM CERTIFIED

Planwell Technology
www.planwell.net

Australia			*New Zealand*		*Philippines*		
Sydney	*Melbourne*	*Canberra*	*Brisbane*	*Perth*	*Wellington*	*Auckland*	*Manila*

Commercial in Confidence