

Learning through Technology

Guaranteeing Peterborough City Council's ability to deliver 'learning through technology' to thousands of school students was a key objective for Updata, through the delivery of an innovative broadband network managed service. Updata cost-effectively enabled a step-change in broadband connectivity speed for all 75 Peterborough schools regardless of their location, in order to underpin bandwidth hungry video conferencing and virtual learning environment applications. The service, developed in precise response to the schools' unique requirements and supported by a UK helpdesk, also incorporates core IT network and security capabilities such as high-availability Internet, server load balancing, mail, web hosting, DNS, anti-virus and Becta-accredited content filtering.

Peterborough City Council's (PCC) education remit includes 64 primary and special schools, and 11 secondary schools, each with expanding IT needs of their own in terms of applications, data and Internet traffic. From a communications perspective, that meant a new requirement for secure, reliable and fast broadband connectivity of between 10Mbps and 100Mbps for all schools.

A 'Working Group' comprised of PCC IT/IS personnel, head teachers and other school staff within the city came together in 2007 to discuss and eventually specify this and a range of other broadband/IT requirements. With support from PCC's business transformation unit, these were developed into an 'Invitation to Tender' entitled Peterborough Schools Managed Broadband Service.

Elaine Alexander is Head of Programme and Project Management for Children's Services at PCC and was integral to the procurement process. "The tender was very specific about what it sought to achieve, and the Working Group stipulated unanimously that a managed service approach was imperative. There needed to be flexible parameters as to the scope of the managed service eventually chosen, as we were keen to retain some of our own existing skills and assets. Moreover, we were conscious that a truly 'end-to-end' service would dissolve our strategic capacity to unify the schools in terms of technology best-practice."

Another key tenet of the tender was the principle that all schools be served on an equal basis, and that there should be no 'poor relations' among them. PCC understood that this would be challenging and potentially very expensive in respect of delivering ultra high-speed broadband connectivity of up to 100Mbps.

A number of organisations were invited to present to the PCC Schools Working Group, prior to shortlisting bids for final consideration. Ben Wilding, Head of Werrington Primary School, commented: "The group was very impressed with Updata; their realistic outlook and pragmatic approach came across very strongly, as did their professionalism which was borne out further on the evidence of their customer references. Despite few of us having little prior understanding of Updata's credentials – in stark contrast to the other organisations that presented – we soon reached the collective decision that they be included in the final round."



Udata was subsequently awarded a seven-year, £5m contract to provide the managed service. "The final bid was simple and straightforward, and demonstrated how much Udata had listened to the concerns of individuals," said Bryan Erwin, Vice Principal of Ken Stimpson Community School. "This investment in a positive working relationship with us continued into the implementation phase and beyond."

Following the award of the contract, Udata designed and built a next generation broadband network based upon a 100Mbps fibre ring connecting 5 POPs at strategically located telephone exchanges. Then, 100Mbps fibre was used to connect PCC's 11 secondary schools to that ring. Having obtained access to each exchange, Udata then set about unbundling the local loop (LLU) to provide its own managed 10Mbps EFM (bonded g.SHDSL.bis) symmetrical connections to each of the remaining 64 schools.

Udata further added resilience to the network with an MPLS-enabled IP infrastructure connecting back to two datacentre sites so there would be no single point of failure. The split across the two sites ensures that the school services would carry on even in the event of a disaster. Management and reporting is delivered via a UK based helpdesk and underpinned by an SLA.

The managed deployment also harnesses the efficiency and other advantages of virtualisation, as each school is in effect provided with a 'virtual' server for its individual needs. Each of these is connected via the datacentres to a 42TB Storage Area Network which is replicated and backed-up on-the-fly.

"PCC has very clear aspirations as a UK 'green capital city' and we believe that a commitment to IT virtualisation displays real intent in terms of minimising our environmental impact," added Jonathan Lewis, Assistant Director of Resources at PCC. "Given that we teach the importance of environmental responsibility to our students, it is entirely appropriate that we embrace this ethos in our procurement practices."

In addition to the managed network aspects of the project, Udata has also integrated and now manages the schools' core IT services such as high availability Internet, mail, web hosting, DNS, Becta accredited filtering and anti-virus. The scope and complexity of these different services has required Udata's engineer helpdesk to work diligently to maintain exceptionally high standards, as well as collaboratively alongside PCC IT service desk personnel.

"Udata have worked extremely well with our internal IT people during a time of great pressure and sensitivity. They have listened and invested in relationships at a personal level, as well as working with PCC to establish the most constructive shared processes which benefit the interests of the schools. Indeed, the schools have reported an overall positive experience of Udata. Schools – particularly primaries – are often nervous about changes in technology and wish to avoid any distraction to their teaching."

One such example where Udata helped allay anxieties among schools was during the transition phase between the old mail systems and the new managed services based mail systems. "The transition had to happen during the first few days of term; at the same time as schools are acutely focused upon new admissions and timetables. Coupled with this, the threat of an imminent swine flu pandemic was also causing alarm, and the last thing anyone wanted to cope with was email systems failing or being unavailable. In the end there were minimal technical issues, and Udata worked tirelessly to communicate regularly and effectively with schools to ensure they had confidence and reassurance."

While the deployment is only recently completed, Udata is confident of robustly identifying savings for broadband connectivity of over 25% in comparison to market rates, in addition to many other benefits related to the uptime and performance of core IT services.

"We are very pleased with the contribution of Udata to our schools IT strategy. We found their approach highly innovative and cost-effective, and we have been satisfied with every aspect of the project delivery and ongoing management thus far."



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