
Cloud atlas: University of Wolverhampton's journey into the Library Management System cloud

John Dowd
*Assistant Director, Planning & Business
Development
Learning and Information Services
University of Wolverhampton
john.dowd@wlv.ac.uk*

Frances Machell
*Content & Digital Library Development
Manager
Learning and Information Services
University of Wolverhampton
f.machell@wlv.ac.uk*

INTRODUCTION

The University of Wolverhampton Learning and Information Service's library management system is Capita's Alto (previously known as Talis) and had long been run on a traditional model of locally installed servers supported by a dedicated team. Following departmental restructuring the decision was made to outsource the day-to-day operational activity of Alto, and subsequently to move the complete technical infrastructure to a cloud-based solution. This article reviews the department's rationale and implementation, and shares lessons learned about the challenges, benefits and organisational impact of moving to an outsourced cloud-based library management system.

OPPORTUNITY KNOCKS: INVESTIGATING MANAGED SERVICE

In the summer of 2011 Learning and Information Services (LIS) completed a major restructuring exercise, which saw the department re-formed into new teams focused on customer service, liaison and skills, content management and business development. The original structure also envis-

aged an information systems team responsible for maintaining the Capita library management system (LMS) amongst other duties. However, it soon became apparent that the team would not be fully populated during the internal recruitment phases, which posed a significant short-term challenge to the maintenance of the LMS.

Winston Churchill once said: 'The pessimist sees difficulty in every opportunity. The optimist sees the opportunity in every difficulty.' This difficulty offered an opportunity to review our technology requirements in the context of emerging technology developments and the ever-changing library landscape. Although the LMS continues to be a major investment and a business-critical system, it is increasingly one of a suite of tools and platforms, alongside, for example, the virtual learning environment, discovery tools, knowledge bases, online chat services, etc. There was an opportunity to rebalance the focus on the LMS and the amount of resources allocated to maintaining it.

At this point, we began a serious investigation of Capita's Managed Service, which is a subscription-based solution providing remote operational maintenance of Alto by Capita staff. The service includes monitoring of system availability and performance, problem resolution and software upgrades, with a change request process for any changes.

Our decision to subscribe to this solution was based on several factors:

- Routine system maintenance could be provided at less than the cost of one full-time equivalent at an appropriate grade.
- More hours of support would be available than are currently provided in-house
- Quickly deployable: no additional access to the university's network and LIS servers was required by Capita than already existed.
- Capita was uniquely positioned to understand and support their own system.
- Annual subscription model allowed for a pilot to be run at a low risk.

This solution met the immediate resource gap in terms of maintaining the LMS. It also provided us with the potential to phase the outsourcing of the LMS, and so provide an element of risk management, while allowing time for us to review our future technical requirements.

STEPPING OUT OF THE DOOR: IMPLEMENTATION OF MANAGED SERVICE

One member of the Information Systems team had been recruited and was temporarily incorporated into the Content Development team, which was also responsible for the acquisition and management of all content (print and electronic), as well as the institutional repository, LIS website and discovery tools. The Content Development team were chosen to be responsible for the LMS because they were heavier users of LMS modules than any other team and because they had experience of managing suppliers. The implementation of Managed Service meant more contact with the LMS supplier.

The initial stages involved some detailed work with Capita, who ran a technical audit of the locally installed LMS and reviewed the scripts running on the server, as well as local systems documentation. This produced a number of recommendations as to how they could standardise the installation, and where they would not be able to support local customisations; this fed into a service level agreement, which was used to performance manage the service. Managed Service was implemented in October 2011.

LOOKING TO THE CLOUD: OUTSOURCING TECHNICAL INFRASTRUCTURE

In 2012, following the successful outsourcing of the software maintenance, we started to investigate the outsourcing of the technical infrastructure. At this point, Capita was responsible for the remote operational maintenance of Alto software sitting on two ageing LIS servers. With the servers reaching end of life, a decision was required as to whether to purchase replacements or outsource.

As time went on, it became apparent that separating support for hardware and software was problematic, as it could be difficult to differentiate between the two and to diagnose faults; we were reliant on the university's IT Services department to help run servers that we had neither the in-house skills nor the desire to maintain. We therefore decided to opt for Chorus, Capita's newly branded cloud solution. Our version of Alto would be hosted in a Capita server farm as a separate entity distinct from other LMS hosted by them, with the benefit to us that:

- Combining Chorus with Managed Service would provide a one-stop holistic solution.

- The skills gap caused by the lack of the Information Systems team would be further reduced.
- We reduced our dependency on the university's IT Services department.
- The LMS would be on a shared hosted system, which would meet the 'green agenda'.

The decision to move to Chorus meant recognising that we were fully committed. Any possible decision to revert would require capital investment and reconfiguration of our staffing structure. Though the Chorus implementation was viewed as a pilot, we were moving the LMS permanently out of the doors never to return, and reconfiguring our staff structure behind it in the vacuum being created.

TAKING THE LEAP: IMPLEMENTATION OF CHORUS

After the initial project kick off meeting with Capita staff, the early phases of the project rested with Capita, who were to set up the Chorus server and work with IT Services staff and set up the secure VPN (virtual private network) connection. Once the Chorus server was ready to be tested, LIS became involved in the user acceptance testing and disaster recovery testing before going live with the hosted LMS in February 2013.

The user acceptance testing proved to be a much longer process than the two weeks originally anticipated. All the existing test documentation was based on a traditional LMS migration and focused on functionality. However, it quickly became apparent that the main area we needed to test was performance in terms of speed and stability, and so some creativity was required; for example, coordinating large groups working simultaneously to simulate a heavy load on the system.

We had learned from Managed Service how valuable a service level agreement (SLA) can be for both parties in avoiding any ambiguity of responsibility, especially around the system margins and any areas of bespoke requirement, so we spent a lot of time revising and agreeing an SLA and acceptance criteria to define the point at which implementation would be signed off.

After going live, work continued with the system verification stage of ongoing performance testing and trouble-shooting, including the migration of some areas of more complicated integration such as online payment of fines and temporary suspen-

sion of borrower rights for students with university debts.

LESSONS LEARNED

The lessons learned during our staged move from a local to a fully outsourced LMS fall into some themes:

Culture change

More than a change of systems, this has been a change of working culture. It has taken time and repeated reinforcement to move away from the expectation of in-house systems knowledge, an expectation which initially lingered on both sides of the supplier-customer relationship. The move to a culture of fault reporting and call logging, with an emphasis on staff being 'expert users' of the LMS, has been a significant shift. It has also meant accepting the discipline of being clear about our requirements as system users, and anticipating those requirements in good time so they can go through a change request process.

Supplier relationships

Part of the culture change has been recognising the vital importance of continually developing an effective day-to-day relationship with Capita. As an early adopter of both Managed Service and Chorus, we have been consciously working to agree the boundaries of our expectations and responsibilities, and regular communication through conference calls and face-to-face meetings has been essential.

Understanding the technology

One of the most difficult tasks has been to tease apart what practical understanding LIS still needs to retain around the background technology. Although the attraction of the outsourced approach was that we no longer needed to look 'under the bonnet' of the LMS, in practice the LMS is a complex system which interacts with many other non-Capita systems (such as the student and staff record systems). We have been fortunate to have the on-going support of the university's IT Services, both on a practical level and in terms of drafting the SLAs; but it has also become clear that, as there are some aspects of the LMS interaction with external systems which will never fall entirely within Capita's purview, it has been in everyone's interests to define carefully the support we still require from our own staff in LIS and from IT Services.

STAFFING OUTCOMES

Outsourcing of the LMS was not seen primarily as a cost-saving exercise; however, it has proved an economical decision. With Chorus implemented, the vacant Information Systems team posts have been repurposed and the responsibility for systems has been permanently moved to the re-named Content and Digital Library Development team, the new name recognising the intrinsic link between library resources and library technology.

However, outsourcing, by its very nature, brings with it a degree of rigidity, as change needs to be managed in collaboration with the commercial partner. This brought with it a conflict of interest as we wanted to remain agile and opportunistic. As in most academic libraries, LIS is increasingly a digital entity. New tools have been introduced and are becoming increasingly important. The need to integrate technology to support improved and better access requires continual development; linking to above campus utilities is also becoming increasingly important. All these activities are of significant strategic importance for LIS if we are to remain forward-thinking and fit-for-purpose.

LIS worked with an external consultant in parallel to the outsourcing process in order to review our future technical requirements. His final report identified several areas for consideration:

- Business analysis requirements to identify options for improving business systems and bridge our business needs through the application of technology.
- To ensure we get maximum benefit we need to have a role of 'expert customer', to understand and engage in detailed discussions with suppliers.
- System integration capability to ensure LIS is able to exchange data and / or integrate between LIS systems and other university systems.

The new skill areas have been translated into a completely new role of digital library analyst. This new post is focused on the development of our digital library service through the design and implementation of business processes and IT systems, and will sit alongside other key posts with related skills within the Content and Digital Library Development team. Our focus is now fully on the application and use of technology rather than its maintenance, and has brought with it improved efficiency.

To end with a quotation from Winston Churchill, one thing we have learnt through outsourcing experience is: 'never, never, never give up': once you have taken the leap, there is no going back.