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ALMA AT LANCASTER UNIVERSITY LIBRARY

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MAKING THE CASE FOR A CONSOLIDATED LIBRARY SERVICES PLATFORM

Clare Powne – University Librarian

A critical appraisal of library operations at Lancaster University Library was undertaken in 2009, following the appointment of a new University Librarian. Technology-driven change in content provision and user expectation was reflected at Lancaster in a long-term decline in loans and annual visits to the library building, coupled with a huge increase in full-text e-journal access and e-book use.

The university's strategic plan for the period 2009–2015 set out a vision for an ambitious and innovative institution, supported by efficient, responsive and integrated services.

In response to these drivers, a tri-part planning framework – library as content, library as service, library as place – was adopted, and a modernisation agenda for effective support for research and learning was developed. Strategic priorities included resource discovery and the need to re-balance staff effort from time-intensive print-based processes towards higher-level activity for the digital environment.

An outline business case for upgrading the library management system (LMS) and the processes it supports emphasised the rapidly evolving external environment, and specified goals to deliver efficiency savings, service enhancements and greater capacity for new areas of work. Aleph, run as a stand-alone locally hosted LMS, had served Lancaster since 2002, with bolt-on additions (SFX and MetaLib) for link resolution and federated search. Ex Libris's unified resource discovery

service Primo, badged as OneSearch, had been implemented in 2011. Alma was identified as a complementary and cost effective Cloud-based solution, designed for the hybrid print / digital environment and offering a single platform for workflows for materials in all formats. The opportunity offered by early adoption to contribute to a global collaboration at the forefront of system developments chimed well with institutional aspirations.

The aims outlined for moving to Alma include managing the transition to an increasingly digital environment more effectively and efficiently, catalysing process reviews, integrating currently separate workflows for physical and digital resources, releasing staff time for work to enhance services, and offering staff development and opportunity. The provision of application programming interfaces (APIs) will enable integration of library and other institutional systems and processes and the availability of analytics will advance the use of data to support evidence-based decision-making and planning.

As an existing Ex Libris customer and early adopter, Lancaster's move to Alma was presented as collaboration in the evolution of significantly different approaches to automated management of library operations, and in an international shared services development. Resonances with themes underlying the institutional strategy – quality, innovation, responsiveness, efficiency and integration – were highlighted. Alma is key to the library's strategic positioning for the rapidly evolving environment, acting as a catalyst for process optimisation, and as an agency for necessary change.

THE IMPLEMENTATION PROCESS

David Summers – Deputy Librarian

Lancaster contracted to be an early adopter within three months of Ex Libris's promotional launch of Alma in spring 2011. At that time Alma was being implemented at four development sites, but was not complete as a commercial product and the implementation timetable for new customers was unclear. Along with nine other European institutions, Lancaster spent 2011–12 engaged in an early adopter programme of face-to-face meetings designed to inform priorities for future Alma functionality and webinars to promote increased familiarity with the system. In advance of formal project initiation, the library set up an Alma project team, which included the two systems staff and functional experts in core operational activi-

ties. Implementation proper began with a kick-off meeting at the end of June 2012. The subsequent project stages, which resulted in Lancaster becoming the second UK site to go live with Alma (after the University of East London in August 2012) are outlined below:

Lancaster University signs contract for Alma	24 May 2011
Project kick-off meeting	30 June 2012
Training programme	August 2012
Functional workshop	4–
Testing of workflows	September – December 2012
Cutover period	21 December 2012 – 14 January 2013
Go-	14 January 2013
Post implementation	January – April 2013

In contrast with the experience of previous systems implementations, Alma is designed to be rolled out remotely. Between contract signature and go-live, Ex Libris staff came to Lancaster only twice: for the kick-off meeting, which clarified expectations for the implementation process, and the functional workshop, which tested basic integrations and workflows. All other activity was carried out remotely, including configuration and data migration, and the intense three-week training programme ahead of the functional workshop. The most critical part of implementation was the activity between October and December 2012, when the Lancaster team were starting to develop and test workflows independently and cascade them to colleagues. This was carried out with support from the Ex Libris project team via email, boosted by a fortnightly telephone update between the Ex Libris and Lancaster project managers. Following a cutover period of offline circulation the library went live with Alma on 14 January 2013, the first day of the Lent term.

In retrospect, the 'remote' approach to implementation was not, of itself, problematic. Aleph data migration and SFX migration were both very smooth, as was integration with Primo. System configuration – once the project team fully understood the Alma principles – was also fairly straightforward. Any frustrations encountered were generally in areas where Lancaster's priorities were different from the earlier University of East London implementation and were completely new for Ex Libris, e.g. integration with the Aspire reading list system, data encryption using Stunnel open source software for secure communication with 3M self-service machines, and the

adoption of weekly account statements for users. It took time to get these pieces of the Alma jigsaw to work, but each task was eventually completed and these transitions should be more straightforward for libraries implementing Alma in future.

Go-live was merely stage one of an on-going project that will continue well into the future as the library continues to optimise workflows and Ex Libris continues to deliver monthly upgrades to Alma. The Lancaster project team has developed a 'traffic light' grid to measure progress with workflows, and this has assisted with establishing priorities for the way ahead. Library plans for the next few months are already clear:

- completion of work on reviewing and optimising workflows
- embedding analytics into workflows to inform on-going service improvement
- optimising integrations with other library and university systems
- exploiting the benefits of sharing metadata with a growing community of Alma libraries

SUPPORTING A UNIFIED RESOURCE SYSTEM IN THE CLOUD

John Krug, Library Systems Co-ordinator

From a library systems point of view, the key objective in implementing Alma as a Cloud-based service was to release time for other projects. In supporting Aleph, Metalib, SFX and Primo with a two-person systems team, much time was spent on management of servers, batch processing and report generation. Alma provided an opportunity to change and to be more innovative by greatly reducing the extent of traditional IT support. Although the systems team was heavily occupied with data and process clean up during implementation and is currently spending time developing Alma analytics reports and updating processes, it is no longer involved in managing the system itself. That is now the job of Ex Libris.

At Lancaster the move to Infrastructure as a Service (IaaS) started in 2008 when the library stopped using its own physical hardware and began using university-hosted virtual servers at lower life-cycle cost. The move to Software as a Service (SaaS), represented by Alma implementation, brings financial advantage of another kind through the release of staff time for developing new services. Since go-live, it has been possible to decommission the four production servers supporting Aleph, Metalib and SFX, leaving only Primo supported locally. Over the coming year,

consideration will be given to transferring Primo to the Cloud.

There are risks and concerns associated with moving core services to the Cloud. These include, but are not limited to: the capacity of service providers to maintain high levels of data security and integrity, optimisation of server performance, and efficient management of disaster recovery. There is no question, however, that the specialist infrastructure team at a major service provider like Ex Libris has a better capability to minimise these risks than a two-person library systems team.

Moving to shared tenancy in the Cloud has wide implications and has not been undertaken lightly. Ahead of Alma implementation, a critical review of current operations and processes was undertaken, with simplifications introduced wherever possible. Once it was agreed that Alma represented a more flexible way to run a modern academic library, efforts were targeted on 'doing things the Alma way' rather than trying to recreate the old system. Again, this ensured that time was made available for other projects and services.

The skills sets required for locally hosted and Cloud-based services are not radically different. The systems team are learning new web-based technologies as a basis for future library services, but many of the old skills still have some applicability. The move from systems maintenance to service development is exciting for those involved and more useful for the wider library and academic community.

Alma has also facilitated the transfer of the majority of reporting functions from systems experts to primary users. The creation of reports through Alma analytics is much easier for staff without specialist systems knowledge, and the transfer of much of this role has empowered the staff who make first-hand use of the reports. There is much more to do in this area to ensure that analytics are fully embedded and inform all activities. Plans are in place to develop library operations and statistics dashboards, to investigate data mining, predictive analytics and actionable intelligence.

Implementation has not been without systems problems, of course. Ex Libris undertook to provide the daily updating of analytics at the start of 2013, but at the time of writing – six months later – analytics data is still only being refreshed weekly. A glitch in the pre-processor used by Alma to process extensible stylesheet language (XSL) for library communications led to a consid-

erable delay in implementing communications, until just before go-live. There was also a delay by Ex Libris in implementing weekly mailings of letters to patrons, making it necessary to apply bulk adjustments to due dates to minimise inconvenience to users. On balance, however, the benefits of moving the library's system management to the Cloud are already apparent.

ACQUISITION WORKFLOWS – INTEGRATING PRINT AND ELECTRONIC

Nicola Kilgallon, Assistant Librarian

In terms of acquisition processes, the aims and objectives of moving to Alma were to provide a single system that would support all processes, from selection and ordering, through to making new content available to users, and that would do this for all types of material – print, electronic and digital. Alma implementation was also seen as an opportunity to shift the balance of staff time from supporting print activities towards e-resources, and in the process develop staff skills in e-resource selection, acquisition and management. Ultimately, the aim was to implement acquisition workflows that would contribute towards the 'one team' approach being developed in the library as a whole.

Acquisition workflows prior to Alma had developed over a number of years, and were increasingly becoming less efficient, especially with the rapid expansion of new electronic content. From 2002, all ordering, receiving and invoicing tasks were managed in Aleph, and from 2004 e-resource activation and linking were managed within SFX. With the introduction of SFX, a small, dedicated e-resources team had been created alongside the existing acquisition team. The consequence of these developments was that different groups of staff were increasingly working in silos, dealing with separate parts of the process. For example, acquisition staff ordered both print and electronic books and created basic bibliographic records for both types of material, whilst their cataloguing colleagues dealt only with print material. The e-resources team were responsible for activating e-journals and e-books in SFX and also retrieving enhanced MARC records for e-books from external suppliers, whilst the systems team uploaded these records into Aleph. This lack of continuity was inefficient, and reduced the opportunities for staff to develop the skills needed to manage e-resources successfully. The implementation of Alma provided an opportunity to review all of these processes and design a new fully integrated workflow from scratch.

Several changes have been introduced into acquisitions and e-resources workflows since going live with Alma in January 2013. A number of processes are now automated and require little staff intervention. Library assistants ordering print material can now search external catalogues such as the British Library or Library of Congress, and can select and import MARC records directly into Alma. They can also search the shared Community Zone in Alma to locate e-book and e-journal records to place orders against. Another significant change is that assistants, who previously only undertook the receipting process for print material, now activate e-book titles in Alma. Activation tasks are automatically created when new titles are ordered, and these processes are managed by Alma's e-resources activation task list. To reinforce these changes the role of cataloguer has been redefined as metadata editor and now extends to all formats. The copying and enhancement of e-book records from the shared Community Zone has significantly reduced the need to retrieve and upload MARC records provided by suppliers.

It is anticipated that current workflows will continue to change and evolve as new and improved processes are introduced into Alma. For example, enhancements to the Community Zone – such as improved bibliographic records for e-books – and the addition of metadata from other Alma libraries will provide the option to link to shared records rather than create new Lancaster-specific records through copying functionality.

RESOURCE MANAGEMENT – TOWARDS SIMPLIFICATION AND A UNIFIED APPROACH

Annette Lawrence, Assistant Librarian

Alma provides highly flexible options to support simplified and unified resource management. As an evolving system, it supports the continuous review and optimisation of workflows and will accommodate future metadata developments, including Resource Description and Access (RDA), BIBFRAME, linked data and collaborative data sharing.

Lancaster's adoption of Alma represents a major advance in its management of metadata. Before 2002, the library operated with an in-house Pick-based LMS and all cataloguing was original, using modified Anglo-American Cataloguing Rules (AACR2) and locally developed authority headings in a non-MARC environment. In 2002, with the move to Aleph, all metadata was converted to MARC, and the library adopted full AACR2 standards and Library of Congress authority

headings and started importing records. This was a step forward, but processes were still staff-intensive and procedures for print and electronic resource management were separate. The adoption of Alma consigned these practices to history.

Key objectives in adopting Alma were to align resource management with the goals of the library strategy: to develop efficient flexible workflows, to adopt new technologies to reduce staff-intensive processes, to consolidate print and electronic metadata management and to use management information to inform future collection management decisions and space planning. A further objective was to support new metadata standards and schemas to ensure that metadata could be used outside the traditional library environment.

Progress has already been made towards the achievement of these aims. Library assistants now import records as new orders are placed and also undertake all aspects of inventory management. Metadata for electronic books is now taken from the basic records in the shared Alma Community Zone, with local enhancement by metadata editors, and this role too may pass to library assistants as record quality improves. All authority control is now managed by the network authority files in the Community Zone. Substantial progress has been made towards the goal of importing the vast majority of metadata and minimising the scale and level of metadata amendment, with the result that staff time has been freed for other activities.

Alma is forward-looking and fulfils the library's need for a system that goes beyond the traditional MARC environment and can handle new standards. From the third quarter of 2013, Alma is scheduled to support RDA with the RDA entities encoded in single bibliographic and authority records. Alma's format neutral infrastructure should provide a sustainable platform to allow for agile movement to new metadata schemas such as BIBFRAME.

Alma's repository search and analytics are powerful tools that support other aspects of resource management such as data analysis and configuration. Through the use of these tools, Alma provides insight into the evolving information base – how it is growing, where expansion is increasing the fastest, and how resources are being used. Progress has already been made towards providing a more sophisticated analysis of metadata than was previously possible, and this can now be done without the involvement of the systems team. In

a major shift of responsibilities, configuration processes have been transferred to the metadata editors, who are now setting up the rules in Alma for data import and enhancement, creating sets of records to withdraw, amend or export, and performing data clean-up routines.

Looking ahead, the immediate priorities and objectives for resource management are clear: optimising collaborative metadata management via the Community Zone, fully exploiting analytics functionality, maximising the use of configuration tools to improve processes and, above all, continuous review of workflows as new features are released.

FROM CIRCULATION TO FULFILMENT

Lynne Pickles, Assistant Librarian

Like Aleph and indeed any other LMS, Alma manages the full range of traditional circulation processes – issues, returns, renewals, requests and fines. Unlike earlier systems, Alma adds value by acknowledging fundamental changes in the information world and extending the concept of circulation to fulfilment.

Traditional circulation of physical materials is a decreasing proportion of the library's business. At Lancaster, chapter accesses of e-books overtook physical loans two years ago, and have doubled since then. In Alma, fulfilment as a concept is wider than physical circulation, also encompassing digitisation and access to e-resources, and the integration of traditional and non-traditional workflows.

Alma promotes simplification. A survey of library enquiries in 2011 showed that 45% of frontline enquiries related to circulation and highlighted a need for greater simplicity in loan arrangements, an approach which is now being delivered through Alma. In Aleph, mid-year changes to loan rules were time-consuming, e.g. a change from term to vacation parameters involved 200 lines of Unix code and up to a day of systems staff time. In Alma, by contrast, the interface is simple and does not require systems knowledge. Alma provides a clean and logical structure for building loan rules. From the experience of Lancaster's implementation there is considerable merit in simplifying circulation parameters before systems migration rather than trying to fit obsolete patron groups or collections into Alma's fulfilment units.

Alma facilitates efficiency. Since staff restructuring in 2011, the library has operated with a much

smaller team of clerical staff. Lancaster's direction of travel is to move away from supporting intensive task-driven processes, and to concentrate resources on learning support, which adds value to the student experience. Library staff are now expected to work flexibly and not be tied to 'specialisms.' Alma supports this approach by allowing managers and work teams to see at a glance what needs doing. The system is structured around automated workflows, with task lists prompting staff intervention or decision-making as required. Access to task lists is granted through user permissions and, from Lancaster's experience, there is merit in granting a relatively high level of privileges to promote maximum efficiency and flexibility.

Alma provides integrated workflows. A 'request' in Alma, for example, can refer to an item on loan, an item on the shelves, a request for digitisation or a requirement to move an item between library collections. All are handled through the same interface. A 'monitor requests' list enables the operator to see where any item is in the process. Whenever an item is scanned, the operator is alerted to the next stage in the process. This has helped to unify workflows: whichever team member scans the book completes the process. This applies whether they are processing book returns or adding new acquisitions to stock, whether a book is to be placed on the hold shelf or processed for the high demand collection. Workflows for processing expired holds and reallocating them to the next requester are also quick and easy.

One of Alma's main strengths is the ease with which information can be retrieved. In addition to the task and monitoring lists, each interface has search, sort and filter options. Powerful advanced repository searches enable the user to extract information to support operational activities, e.g. a list of books with a particular loan policy in a particular collection. Above all, the powerful and flexible analytics tool enables statistics and analyses to be produced without the need for specialised systems knowledge.

LOOKING AHEAD

The papers presented at the Lancaster Alma Day in June 2013 offer a snapshot of progress five months after go-live and an indication of Lancaster's aims for the immediate future, but it is a snapshot that may quickly become out of date. In future, it is anticipated that the library will benefit from systems evolution on an unprecedented

scale as it adopts and adapts the functionality made available through each new monthly Alma release. Members of the Lancaster project team regularly reflect that a month is a long time with Alma, but objectives for the coming months are already clear. Over the next year, the library expects to make further progress with reviewing and optimising workflows and wider integrations, exploiting analytics to inform service improvement, and enjoying the benefits of collaboration and sharing metadata with a growing community of Alma libraries.