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ERM System Implementation in a Consortium Environment

Abstract

Purpose – The purpose of this paper is to address the issues associated with electronic resources management (ERM) system implementation in a consortium environment.

Design/methodology/approach – The paper outlines the implementation process along with the problems encountered and their solutions and impacts on the use of the system in the implementation of Verde ERM system at University of Windsor Leddy Library which implemented the system as one of the early adopters within a consortium. The issues and challenges the library having experienced in the project are analyzed and discussed.

Findings – ERM system is still in its early stages. There are both benefits and challenges of the consortia approach in ERM system implementation. Should a library adopt the system within a consortium or just as a single library? When would be the right time to implement an ERM system? Answers depend on the library's local needs, resources and environment. The strategy of ERM system selection, evaluation and implementation is crucial for libraries to make a suitable decision.

Practical implications – The issues related to the ERM system implementation in a consortium environment discussed in the paper will have implications for libraries to select a proper approach and time on the adoption of emerging library systems.

Originality/value – The paper addresses issues related to large library system, especially ERM system implementation in a consortium environment. The experience and findings obtained from the project will provide practical information to libraries that are considering of implementing ERM or other large library systems.

Keywords Electronic resources management, ERM systems, Library system implementation, Early adopters, Library consortia

Paper type Case study

Introduction

Since the early 1990s, e-collections have become a major part of library collections. Libraries are investing significant amount of their budget in acquiring or getting access to electronic resources. According to a report of Association of Research Libraries (ARL), the average expenditure of academic libraries on e-collections has increased about 400% from 1994/95 to 2001/02 while the overall collection expenditure only increased 61% (Case, 2004). However, traditional integrated library systems (ILS) were designed for print resources and are generally unable to manage electronic resources under the existing architecture (Sadeh & Ellingson, 2005). A system that is capable of managing the entire life cycle of electronic resources effectively and efficiently is in demand.

In recent years, University of Windsor Leddy Library has spent increasingly larger percentage of its collection budget on digital resources acquisitions. In 2006/07, about 80% of the collection budget went to digital collections. In addition, through the consortium level purchasing the library has significantly multiplied the number of the digital resources to its users (Ebbet, 2008). How to control the rapidly growing electronic resources becomes a big issue to librarians, especially to those responsible for the electronic resources management or collection development. Information related to the electronic resources is buried in documents of different formats, such as e-mails, spreadsheets and paper format. Librarians need an effective tool to control over the situation. In June 2006, the library participated in a project of electronic

resources management (ERM) system implementation with six other academic libraries in Ontario Council of University Libraries (OCUL) as one of the early adopters. The OCUL was the first consortium to install the pre-release ERM system (Darnell, 2006). This paper addresses the issues and challenges the library has encountered in the process of the implementation and their solutions or impacts on the use of the system. The experience obtained from the project will have implications for ERM or other large library system implementation.

Literature Review

ERM system development

A number of articles or presentations have addressed the problems faced in e-collection management and the development of ERM systems. Jewell's (2001) study found that several institutions, including MIT, Penn State and the University of Texas at Austin, had begun developing local systems to overcome the shortcomings of their existing library systems in the management of electronic resources. In addition to the homegrown systems, many ILS vendors and serial providers already have ERM systems on the market or under development. All the ILS vendors indicated they had consulted the guidelines made by the Digital Library Federation's (DLF) Electronic Resources Management Initiative (ERMI) (Duranceau, 2004). Since its publication in 2004, the report of the DLF ERMI has become a key document for the development of ERM systems. The report describes required functionality for ERM systems, workflows specific to electronic resources, phases of electronic resources life cycle, as well as model system architecture (Jewell et al., 2004).

Some articles describe the development process of the ERM systems. Johns Hopkins University Libraries developed a university-wide homegrown ERM system started back in 1999. The system includes modules managing electronic resources acquisitions and the workflows identified by the project committee (Cyzyk & Robertson, 2003). Sadeh (2004) addressed the development process of the Verde ERM system by Ex Libris. He outlined the complexity of the electronic resources management and the factors specific to electronic resources, including licensing, authentication, access, administration, usage, etc. Functionality required for managing the entire life cycle of the electronic resources was also discussed. The system architecture was based on the DLF ERMI model.

Compared with traditional ILSs which are mature and function well for print resources management, the ERM system is still in its early stages. The following requirements for future development of ERM systems have been identified: refining the standards for license terms communication, usage data gathering and greater integration with ILSs and other library systems, etc. (Fons & Jewell, 2007; Mitchell, 2007).

Library System implementation

A couple of articles presented the issues and experience with ERM system implementation. Harvell (2005) described the experience of the University of California, San Diego Libraries beta testing and implementing an ERM system with an ILS vendor. The downsides of being a beta tester or early adopter of a library system were discussed, including the lack of fully developed documentation, library staff's timing and training issues, and the difficulties to identify software problems.

Chrisman and Matthews (2007) presented their experience of implementing an ERM system at the Washington State University Libraries. They positively saw the differences of the status of electronic resource management between before and after the adoption of the ERM system. The implementation of the ERM system also changed the library's workflow, such as cataloging and acquisitions procedures as well as staffing assignments.

Some studies have been done on the issues associated with system implementation in single library or a consortium environment. These systems, however, are ILSs or ILS like, and none of them are ERM systems. Myhill (2000) stated the experience with an ILS implementation at Exeter University library: including system conversion, implementation and future development. Bugg (2000) summarized issues in migrating members' systems of a library consortium to a shared client/server library system. The issues include interface, controlling, training, staffing, system maintenance and security, etc.

The ERMS Implementation Project

OCUL is a library consortium of twenty institutions in Ontario, Canada. The members work together aiming to enhance the information services to their users through resource sharing, consortium level purchasing and other activities (Ontario Council of University Libraries, 2008). In 2006, seven OCUL member libraries formed the Verde early adopter group. Verde is an ERM product by the ILS vendor, Ex Libris. As a part of the first group having installed the Verde consortium version, Leddy Library has experienced the interesting and challenging implementation process with other participating institutions.

Communication tools

An interesting part of the implementation is that the group has adopted various communication tools for information sharing. The OCUL support team put all project documents in Wiki, including project plan, documentation, issues reported or discussed, and notes or information on meetings and trainings, etc. People involved could search for, comment or discuss on their interested topics there. It has become a reference tool for comprehensive and detailed information about the project.

Conference calls were made regularly by the group to discuss or make decisions on the progress or issues emerging with the implementation. Web conferences were used quite often for the training sessions though sometimes on-site training was also conducted. The most popular communication method is the email list. Almost all involved librarians or library staff have subscribed to the project listserv in which they post their questions, concerns or findings, discuss with other institutions and keep up-to-date with the project.

Implementation process

As one of the participating libraries, we worked closely with the vendor, the OCUL support team and other institutions during the implementation. All parties had its own role and responsibilities on the system implementation. Our local implementation team included librarians and library staff from different departments. The team developed its local implementation plan as well as worked under the group plan.

- **Staffing and training:**

Our local implementation team was made up of three librarians from the departments of Acquisitions/Bibliographic Services, Information Services and Systems, and also

two support staff who are responsible for electronic resources acquisitions and maintenance.

Because the system was implemented in the consortium, member libraries did not need to take care of system installation and hardware/software maintenance. The training focused on understanding and using the system. Initially there was a two-day training session offering to involved librarians by the vendor. The session covered the general aspects of the system, including system architecture, data structure, system's elements, workflows, functionality, interaction with other systems, etc. The vendor posted all the training materials along with other documentation, such as staff user guide, on its online Documentation Center as a reference to all adopters. The training exercises created by the vendor were also posted online to provide various scenarios for people to be familiar with the system. Another on-site session we received was the pre-production training session before the system went live. The one-day session focused on the system localization, synchronization with SFX and report interpretation, etc. All of our team members attended and were able to interact with people from the vendor.

Besides the on-site sessions, Web sessions were conducted more frequently among the participating institutions or by the vendor. Through these sessions, people from different libraries shared their experience, discussed the problems encountered, etc.

About every two weeks before the system went live, we also had local training sessions in which the local team worked together to do exercises on the system, solved problems encountered by individual staff, and identified issues with local

needs, etc. Through these sessions, the staff gradually got familiar with the system.

After the system went live, there were still some re-training sessions due to staff change.

- Test environment:

Before the system went live, the test environment was open to all involved staff. We took the advantage to learn the new system and to test its interface and functionality.

Because the interface and some e-product concepts are different from SFX link resolver, a product from the same vendor, staff who were familiar with SFX administration had a hard time to understand the concepts and interpret the various screens in the new system.

“I like the SFX better. It’s easy to navigate and manage titles.”

“In SFX, I can delete records easily. In Verde I just can’t find the delete button!”

There were many of such comments during the early stages of the implementation.

After a couple of months, some people began to appreciate the design of the new system.

“Actually, I found the interface in Verde is better than SFX. The tab keeps the search history while it’s not available in SFX.”

We spent a lot of time in reading the documentation and playing around with the system. During the test, bugs and other issues were identified and reported to the vendor.

- System localization:

System localization included settings for interoperability with other systems, local data import and local users and privileges setup, etc. Luckily, all the participating libraries already implemented SFX link resolver which could talk to Verde well. The initial data were imported from SFX directly. The bad thing is the two products have their own Knowledgebase which has to be synchronized daily. Thus, understanding the synchronization process and interpreting the reports became another task of library staff.

- Going live and future plan:

About one year later, the system finally went live. Responding to the users' feedbacks and the market needs, the vendor has continually improved and upgraded the system. Additional consortia functions has been introduced and implemented to the workflow. There is still a lot of work for the implementation team, such as expanding training to all librarians and library staff with responsibilities of collection development, subject specialists or user services in searching and navigating in the system, integrating the system with the ILS and other existing or upcoming systems, merging ERM to existing workflows, etc.

Issues encountered

During the implementation, we encountered a number of issues associated with the software, staffing and concepts with consortium environment.

Software issues

As the early adopters of the system, the group have identified a number of bugs or issues related to searching, displaying, creating and sharing records, and interoperability with other systems. Most of them were resolved within next couple of updates, while a few had taken a longer time. For those problems unresolved for months, libraries had to make temporary arrangements till they were cleared out. This has made many people concerned on the usefulness of the system.

“There are title discrepancies between SFX and Verde KnowledgeBase. It has affected our data accuracy.”

“We still have to manage some titles in SFX, why we should keep Verde?”

Staffs who were tired of the problems with Verde complained about the extra work.

Staffing issues

Due to the lengthy process of the project, our local team experienced a couple of staffing issues, including staff leave and staff sickness absence. Permanent or temporary replacements had to be arranged and new staff had to be retrained. All these took time and delayed the fully production of the system.

Conceptual issues

It is not trivial to understand the consortia model even for librarians having experience with consortium purchasing model or library system implementation. The consortium

approach benefits all participating institutions, but at the same time, increases the complexity of system design and implementation. Initially there were complaints on the use of the system.

“Sometimes I can find our collections. Sometimes it only displays those of the central library!”

The institution selection button is uncommon in most systems the staff were familiar with. They found it quite confusing. Through extra local training sessions and exercises, staff managed to navigate the system confidently. On the other hand, according to the feedbacks, the vendor simplified or corrected some terms or concepts confusing to users.

Discussion

Generally speaking, the time, resources and outcome are the three most important factors to measure the success of a project. Taylor (2004) also pointed out information technology projects have their unique risk compared with other projects. In this article, time, resources invested, the organizational impacts and potential risk in the project are used in its evaluation.

Obviously the consortia approach helps participating libraries save resources invested in a project, including the system pricing, hardware/software purchased and the human resources for their maintenance, etc. However, it may take longer time for participating libraries to make an agreement, and to identify or resolve a problem due to the increased complexity of the system. Member libraries, especially those

relatively small institutions, may also have no direct contact with the vendor, not easy to meet their local requirements, and spend more time to solve local problems.

Impacts of the project

Previous to the adoption of the ERM system, the library managed its e-collections almost manually. The information about licensed electronic resources was buried in address books, emails, spreadsheets, and file cabinets, etc. Only a couple of librarians knew how and where to find the related information for a specific resource. Now the information can be in one place and open to all librarians. The licensing information can be displayed to end users as well. In addition, librarians are able to search across the consortium to get the information about e-collections in other institutions. On the other hand, there are still challenges to integrate with other systems in the library or on campus, and to extend all the benefits to the entire library due to the complexity and some other issues of the system and our current system environment.

Working in the consortium: benefits and challenges

Working in a consortium is big relief for librarians in large system implementation. The consortium makes the project plan and is mainly responsible for the project management. Participating institutions are responsible for the local implementation which is only a part of the project management and they can often get instructions or support from the consortium or other institutions. Problems, concerns or issues local institutions identified could be discussed or shared within the entire consortium. The experience could also be shared with and benefited to other institutions. For example, during the implementation, one library created a tip sheet of their findings on how to work more effectively with the system. They posted on the project Wiki and all other libraries were benefited.

Another benefit is resource sharing. For instance, the central instance created and loaded standard data into the system which other libraries could apply to their local instances and make changes accordingly. This has saved a great deal of work for member libraries. The central instance has also developed templates and examples to save member libraries' efforts.

There are also challenges for libraries working in a consortium environment, including increasing complexity of system implementation, losing local control over system security, the interfaces or displays, and timing and scheduling issues, etc. People have to spend more time in understanding the working environment and often find it more difficult to identify the sources of problems. For those libraries whose local environments or local requirements are very different from most other participating libraries, the consortia approach may not be a good choice. In addition, libraries should also consider the reputation and the service quality of the consortium support team. Do they have transparent policies on system security or support? Are they supportive, respecting opinions of all the member libraries, especially those relatively small ones? Otherwise, libraries may be frustrated with the project, and may even quit it in the future. It is always necessary for libraries to carefully evaluate their local environment and local needs before join in a consortium to implement a large system.

Working as an early adopter: benefits and challenges

Working as an early adopter of an ERM system is a good learning opportunity. People work closely with the vendor, explore the system, report bugs and customization requirements and could often get quick responses from the vendor. It is also beneficial

to libraries who wish not only to meet local requirements, but also to be able to shape the direction of a product.

On the other hand, serving as an early adopter is a big challenge to libraries. People involved have to spend more time in learning the product and training themselves. It is not easy for them to identify whether it is caused by bugs or simply user errors when encountering problems. Some participants may get frustrated and it may affect their confidence on the product. In addition, early adopters may have to give up the product eventually if the system has big design problems or other serious issues. Of course, careful selection and evaluation process will reduce the risk dramatically. Before being an early adopter, participants should understand the issues they may encounter, and be willing to learn and investigate various problems. The implementation team should have high-level of understanding the various issues related to the system, and set reasonable expectations and goal for the project. It may not be a good solution for libraries who wish to get a bug-free, easy to learn system in a short time.

Conclusion

The ERM system is a powerful tool for libraries to get control over the entire life cycle of electronic resources and the collection development in the digital era. The implementation process of an ERM system, however, can be time consuming and challenging. In recent years, sharing resources in consortia has become a noticeable trend in the library world and many libraries are interested in sharing systems with other institutions as well. Implementing ERM systems within a consortium will benefit the members in many aspects though the consortium implementation may

significantly increase the complexity of the system design and adoption. Should libraries adopt the system in a consortium or as a single library depends on their local needs, resources and environment.

In addition, the ERM systems are not as mature as the ILSs yet. Currently many of the systems are still in development or test stage. Like working in a consortium, being an early adopter of a product has both pros and cons. Libraries have the options to adopt a system as an early adopter, select a relatively mature product, or wait for a couple of more years. The strategy of ERM system selection, evaluation and implementation is crucial for libraries to make a suitable decision.

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