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Is It Really Time to Replace Your ILS With a Next-Generation Option?

By Keith Kelley, Carrie C. Leatherman, and Geraldine Rinna

A claimed benefit of the emerging next-generation, cloud-based systems is to give libraries new efficiencies, allowing them to do more with less. And we can hardly wait. But we suspect that they are not there yet.

Is it time to replace our integrated library system (ILS)? The vendors would have us believe that the time is now. But what is the right time for us, and how do we know if we are ready? What do we, as a library, need to do to decide on and prepare for an ILS replacement? These are the questions that we, at Western Michigan University (WMU) libraries, have been mulling over for the last few years.

What got us started thinking was when our ILS vendor was purchased by another company in 2006. We decided then that when the time came to replace our ILS server, we would replace it with a next-generation library management system. However, given that next-generation library services platforms were still—and in many cases, even this many years later, still—are—in active development, we were skeptical that as a product they were “ready” for us.

Nevertheless, we realized that our hardware cycle was nearing its end, and it would take time to plan its replacement. So, we started to research potential replacements. According to product literature at that time, there were four next-generation library management systems that were offered as cloud-based systems. But in this case, as often happens with product literature, the vendors overpromised what their systems could actually deliver. Although these four library management systems existed, we had to question whether they were robust enough to replace the ILS that we have relied on for more than 15 years.

Inherent Challenges

Our existing ILS, which has evolved to handle a growing number of library services, is actually not one thing. Instead, it is a complex environment comprising various products, including Voyager, SFX, VuFind, Summon, 360 Resource Manager, ILLiad, Luna Insight, Ares, CONTENTdm, and EZProxy. Additionally, we use custom code and several add-ons that assist us with functionality, support our workflow, and provide us with the ability to connect to the university’s authentication, student information, and human resources systems. As technology evolves, we expect that the complexity of our current systems will increase, while our staffing and budget resources will continue to be stretched to the breaking point.
It is common for commercial software to go through cycles. Specialized applications erupt and have to be accommodated separately. But that phase is generally followed by integrated solutions that wrap up everything you need into one thing. While the functionality we need is still rather siloed, we sense that the trend with next-generation systems represents a swing back toward more consolidation and integration of needed features and functionalities.

A claimed benefit of the emerging next-generation, cloud-based systems is to give libraries new efficiencies, allowing them to do more with less. And we can hardly wait. But we suspect that they are not there yet.

After investigating what were being touted as next-generation library management systems, we decided to explore those vendors’ claims by formally evaluating our library’s needs and comparing those needs to the new systems’ capabilities. We also decided to seek the wisdom of the crowd by conducting a survey of other librarians to determine their plans to replace their ILSs. In this article, we’ll share the results of that study, but, first, let us provide a little context about who we are and what challenges we face.

**Starting Points**

Western Michigan University is a research university with a student population of approximately 22,000. WMU Libraries employ 25 librarians and 60 staff members. In 2010, library expenditures were $13.1 million with a per-student expenditure of $596. The libraries have about 1.9 million unique titles and total cataloged holdings of around 2 million items.

Our libraries are currently working through a five-phase ILS replacement project consisting of the following phases: research and education, selection and preparation, migration and integration, cutover and shakeout, and project evaluation. The project, which began in November 2012, is currently scheduled to be completed in summer 2015. Although a 2.5-year replacement project may seem long, we intentionally designed our project to be a slow, well-thought-out process in order to allow the vendors of our prospective new systems time to more fully develop them before it became absolutely necessary for us to make a selection.

Our project is being managed by a selection overview committee, which consists mainly of library staff, faculty, and administrators, but it also includes people from the WMU community. The selection overview committee directs 13 subcommittees assigned to study various aspects of the prospective systems. Forty-one people—half of our libraries’ full-time faculty and staff—serve on one of the project subcommittees, each of which includes four to 10 members.

The subcommittees have completed the project’s first phase and are well into the second phase of selection and preparation. At this point, we have mapped out the selection process and we are currently working on requirements gathering and analysis—a step in which the ILS stakeholders are interviewed or surveyed in order to determine their requirements for our new system. Once the requirements are determined, we will move on to software evaluation, at which point our subcommittees will begin to compare the functions of the available software with the stakeholders’ requirements.

**What’s Trending?**

So that we could make informed decisions about our replacement project, we reviewed the library science literature to find out if other libraries were actually replacing their ILSs. In the literature, we found some case studies describing the migration of an individual library to a particular ILS platform, but we only located one study done in the past few years (Zhonghong Wang, 2009) that looked into the ILS evaluation and selection process of many libraries. The Wang study, however, took place before the recent shift to cloud-based systems. So we determined that we needed to conduct our own survey research.

**Survey method.** The purpose of our survey was to determine whether other libraries had or were planning to replace their ILSs with a next-generation system. If so, were they dealing with the same challenges that we are with regard to system complexity and diverse user requirements?

We invited 334 institutions of varying types and sizes to participate in our survey. The sample was defined using Carnegie Classifications in order to select a group representing all sizes and types of institutions, including several colleges and universities in Michigan. We also included our 10 peer institutions as defined by WMU and chose 20 institutions that occupy the first and last 10 positions in the Association of Research Libraries’ (ARL) ranking.

The resulting sample consisted of 334 institutions comprising 100 community colleges, 103 colleges, and 131 universities. Institution size varied with enrollment ranging from about 300 to 68,000 students. Of the 334 institutions that were invited to take our survey, 77 of them completed it for a 23% response rate. The number of unique titles in their catalogs ranged from 7,200 to 16.3 million.

Of the 77 institutions surveyed, 27 are planning to migrate to a new ILS, and nine have already migrated. For the purpose of simplicity in reporting the results, we will refer to them collectively as “migrating libraries,” unless specifically stated otherwise. Average library expenditures for the migrating libraries were $7.5 million, representing an average per-student expenditure of $573. The average number of librarians per institution was 23.

**Overall trends.** Within the survey results, we found the following findings to be of particular note with regard to assessing the general movement toward ILS replacement:

- Of the 77 libraries responding, 5% said that they have already migrated to a cloud-based library management system. Twenty-three percent are planning to migrate, while 57% are not currently planning to replace their ILSs at all.
- Of those replacing their ILSs, 61% are moving to a cloud-based
How Libraries Select and Implement a New ILS—Top Findings From Our Study

When selecting a new ILS, 28% of the libraries surveyed said that they will use a project management process.

Roughly 11% spent 12-plus months conducting research about the products on the market.

Thirty-nine percent said that they would go through a formal proposal process.

Seventy-eight percent of migrating libraries spent less than 6 months selecting the appropriate product for their library size and setting.

Twenty-eight percent will use a formal software selection process.

Twenty-two percent of responding libraries report that they had a migration and integration phase lasting more than 12 months.

Fifty-eight percent of libraries that have already migrated currently use an institution-wide username (which allows users to log in to the library and, in our case, the university system).

Only about one-half had a discovery layer prior to migrating to their new systems.

Selection processes. Going into the survey, we were particularly interested in finding out how long the migrating libraries spent in specific phases of their projects in order to validate our own planning process. We learned the following:

- Of the migrating libraries, 28% had used (or were planning to use) a formal project management process and a formal software selection process. Forty-two percent included in those processes a specific requirements gathering step, while 39% included an evaluation phase.

- Eleven percent spent (or were planning to spend) more than 12 months conducting research about the products available on the market. Eleven percent spent 7 to 12 months, while 67% spent less than 6 months.

- Eleven percent spent (or were planning to spend) more than 12 months selecting the appropriate product for their library size and setting. Seventy-eight percent of migrating libraries spent less than 6 months selecting the appropriate product for their library size and setting.

- About 22% reported that they had (or were planning to have) a migration and integration phase lasting more than 12 months.

system, although 19% are not expecting their next system to be in the cloud.

- Nearly one-third of the deans of migrating libraries are the project executive, sponsor, or project champion; 44% of the projects are managed by the library’s head of systems.

- Fifty-five percent of already migrated libraries will have one person act as the single point of contact for the vendors.

- Very few (11%) that are migrating to a new ILS do not necessarily need to remain with their current vendor.

- One-third of migrating libraries will migrate from the Voyager system, and nearly another one-third will migrate from Millennium.

- Only 22% of libraries that had or were planning to migrate to a new ILS at the time of the survey used an ebook knowledgebase.
Some interesting observations include:

- Thirty percent of those libraries that have replaced their ILSs have found that they need to write less code to customize the software functionality on the back end. And 90% have found it necessary to write entire add-on modules (those that did seem to have larger holdings than those that did not).

- Approximately 64% of the migrating libraries have restructured (or expect to restructure) workflows as a result of their new systems. (Of those indicating a need for workflow restructuring, 17 libraries had less than 59 staff members, five libraries had 60 to 220 staff members, and two had more than 220 staff members.)

- Additionally, 25% of the migrating libraries are expecting to reorganize their units, and 28% have engaged (or are expecting to engage) in a formal change in their management process as part of their restructuring.

- Most migrating libraries did not add staff specifically for the project. (We did add a staff member to help oversee our project, but we did so because we are currently without a systems librarian.)

Finally, we were interested in investigating how the libraries had customized their current ILSs. Of the libraries responding to the question, 72% said that they had customized their ILSs in some way, and 92% said they had specifically used CSS or HTML to implement the customization.

**Caveats.** Our questionnaire construction may have inadvertently excluded a category of eligible respondents (those who were neither planning to migrate nor had already migrated but, rather, who were in the process of migrating), and the sampling method we used may not have resulted in a response rate high enough to run more sophisticated statistical tests against these results. However, we feel confident that we had a sufficient response rate to reinforce our understanding of the key factors at play in a migration strategy and to validate the methodology that we were using to plan our own system migration.

**No Longer If, but What?**

With our process definition phase behind us and our method validated, we are now engaged in the task of defining system requirements and starting our analysis.

**The 800-pound gorilla.** One of the toughest questions rearing its ugly head at this point is not so much whether we should migrate to a next-generation ILS, but how much is it going to cost? And are we going to be able to afford it?

What we know for a fact is that it’s difficult to find concrete information on the actual cost of standard library management systems or even to get a general idea of the costs, given that the vendors all give only temporary individualized quotes, rather than publishing a price list or revealing their price computation models. However, certain components of the pricing model for new cloud-service platforms seem consistent: They are paid for on a subscription model as opposed to paying on a one-time basis for a software license, server hardware, and infrastructure cost. Apart from that, there is an initial integration and migration cost to move to a new system. While the older generation of systems generally involved paying for training, the new generation of systems seems to rely more on sharing information with peers at other institutions and getting peer-to-peer advice. In general, it appears safe to say that a library can expect to spend neither a great deal less nor a great deal more than they do for a traditional system.

With large software companies such as Microsoft adopting software-as-a-service and cloud-computing models, campuses ultimately have to create policies and procedures that allow for this model. At WMU, there is a specific cloud-computing policy that requires us to develop an exit strategy, submit a special security questionnaire, and go through a formal approval process.

At this point, we remain optimistic that the benefits will outweigh the costs and the risks. And on that score, we have high hopes.

**Hopes run high.** We hope the next-generation platform we choose will offer better account management for library employees and users, including integration with institution-wide accounts. We also hope that some of the systems that we have to choose from will have the digital preservation and built-in EAD (Encoded Archival Description) finding the aid support that we require. Because the next generation of systems is still under active development, we are optimistic that the responsive web design theory, the Bibliographic Framework Initiative, and the modern security protocols are an integral part of development, and we will have the opportunity to gain a state-of-the-art advantage when we finally adopt.

As a result of adopting a next-generation library services platform in all departments, we also expect staff structure and workflow changes. We would hope to see significant circulation transactions completed by the user with online renewal and self-checkout features, reducing the load on circulation staff. We are hopeful that next-generation systems will have better reserves functionality for modern needs, handling both physical and e-reserves for both permanent reserves and course reserves. A single search box with more relevant results has the
Are YOU Ready to Go?

There is no right answer to the question of whether to migrate your ILS. Among academic libraries, there really isn’t a new-system mass migration yet, since about half of those responding to our survey aren’t even planning to migrate at all and only a relative few actually have. The survey does confirm that many respondents, such as we at WMU Libraries, are thinking about it and even working toward it. Even so, our implementation is a good way down the line.

To our colleagues who are also considering looking into a migration, we offer the following advice, based on our survey results:

- If you are in a community college, you might want to strongly consider going to the cloud. If you are a nonresearch institution, a move to the cloud is a pretty safe bet. There seems to be a mix of larger institutions going to the cloud or staying locally hosted.
- If you have customized your system a lot, you might be ready to begin the planning process. All of our respondents who have created more than a year’s worth of custom code or who have written an entire library add-on are in the planning stage, but they have not yet migrated.
- If you have a highly customized environment, you might be ready to begin the planning process. All of our respondents who have created more than a year’s worth of custom code or have written an entire library module are in the planning stage, but they have not yet migrated.
- Given the results of our survey, chances are good that you will not need to add staff for the project. Only one (3%) of the 31 libraries that are replacing their ILSs are adding staff specifically for the planning and migration process. But do arrange to have a single point of contact for vendors, as roughly two-thirds of libraries we surveyed have done.

Everyone should plan on gathering input from outside your own libraries, just as 69% of the migrating libraries we surveyed have done.

potential to allow us to provide what Digital Natives have come to expect and potentially change the tools and strategies used in the reference department for student support and information literacy initiatives.

Some of the new library services platforms advertise efficiencies that reduce cataloging efforts and make acquisitions workflows require less turn-around time, need fewer man-hours, and allow for more resource sharing and demand-driven acquisitions in lieu of just-in-case purchasing. As a result of these advertised features, technical services groups may remain the same, but there will likely be changes in workflows and focus. Systems department staff have specialized skill sets that have allowed us to develop and maintain custom code for modules such as holds, call slips, short loans, and media booking, as well as to loosely integrate two discovery tools within our ILS. Additionally, much of the current report writing and record loading is performed in our system. If our new discovery tool is tightly integrated with our new platform and the platform works well out of the box, it will reduce the need for writing and maintaining custom code, reduce the hardware support and maintenance burden on systems staff, and reduce the extended orientation period for new systems staff required due to our complex system.

A next-generation platform that will provide better collection management features and better workflows will hopefully allow our staff to focus on developing our unique collections and strategic initiatives that are important to our users.

Unexpected (but welcome) consequences. We are less than 6 months into our replacement project plan, and we have already noticed some unexpected benefits. People are becoming more motivated and engaged in their jobs. We are learning a great deal. We are educating ourselves about what our own requirements should be. We’ve even learned how to run meetings more effectively. Looking forward, we can see that we are going to have the ability to redistribute workloads and redefine what are now inefficient workflows. Everybody is looking forward to working smarter, not harder. Last, but not least, we feel as if we are playing our part in building a better library community by learning more about what our colleagues in other libraries are doing and by sharing our insights with them.

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