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APPROACHING DISCOVERY AS PART OF A LIBRARY SERVICE PLATFORM

Lessons Learned

Nathan Hosburgh

Discovery systems such as Summon, EBSCO Discovery Service, Primo, and WorldCat Discovery Services have become part of academic libraries' standard toolbox. The Olin Library at Rollins College in Winter Park, Florida, became an early adopter of Serials Solutions Summon Service in 2009, enhancing access to print and electronic material. Although this has led to general improvements over the fractured searching of the traditional online catalog, database list, A-Z journal list, and digital repository, we recognized that the disparate systems hampered our ability to deliver a superior discovery experience and effectively provide other library services for our patrons.

Therefore, we did not begin by examining discovery tools, but new library systems. Our goal was to streamline data and resource management and enable further deconstruction of information silos that developed in the library. We previously used a SIRSI Integrated Library System for decades in addition to other systems that operated more or less in isolation from each other. Integration between them meant pushing and pulling data from one system to another, resulting in information lag and inconsistencies across systems. All of this impacted the discovery experience for end users.

While we investigated new library systems, it became apparent that we needed a revolutionary change versus an evolutionary change. We required a holistic system, one in which back-end processes seamlessly

integrated into the front- end discovery layer. After the investigation process, we decided to replace our SIRSI integrated library system (ILS), Serials Solutions electronic resources management system (ERMS), and Summon discovery layer with Ex Libris Alma/Primo. This chapter will detail our motivations for change, investigation, selection process, preparation, and implementation of the Alma/Primo system as well as offer a framework for evaluating when a system architecture no longer meets current needs.

SYSTEMS BACKGROUND AND MOTIVATIONS FOR CHANGE

As Anita Cassidy points out, an information systems strategy must be coherent, consistent, and directional, offering positive changes of some kind rather than endorsing the status quo. Such a strategy should also be future-driven, focused on solving problems, and anticipating user needs.

"Through the planning process, the organization can proactively balance conflicting forces and manage the direction of Information Systems rather , than continually building upon the current investment in a reactionary mode" (Cassidy, 2006).

As early as 2008, it became clear to Olin Library staff that something had to be done with systems in place at that time, particularly the SIRSI ILS. An outside firm, R2 Consulting, analyzed the selection-to-access workflows in the library and found the SIRSI system to be a significant impediment to the future growth of library services at Rollins (R2 Consulting, 2008). The library had run various iterations of the SIRSI system since 1995: Horizon, Unicorn, and finally Symphony. This progression in the ILS did not keep pace with the advancement of other library technologies, making it difficult to integrate this core system with other key components such as web-scale discovery, course reserves, digital collections, and the institutional repository. Most urgently, the physical server hardware that housed SIRSI had reached its end of life and began to exhibit early signs of impending failure. At the same time, SIRSI was running on a Solaris 9 Unix operating system (originally released in 2002), placing it into the extended support period of its life cycle. Therefore, the continuing support contract carried with it a surcharge.

When Rollins adopted Summon, it was the first hosted "web scale discovery" service to market and there were no real competitors. Summon served Rollins well over the years, offering more "Google-like" search capabilities across the library's various print and electronic resources-and beyond. This tool supplanted the SIRSI online public access catalog (OPAC), opening up discovery beyond what could be traditionally housed in the catalog. The library was reasonably satisfied with the discovery experience afforded by Summon and the discovery service, in and of itself, was not a driving force for change.

The library also utilized the Serials Solutions electronic resources management system (ERMS), which included a suite of services: 360 Resource Manager, 360 Link Resolver, and 360 Core A-Z Journal List. All of these pieces working in tandem with Summon created a tightly integrated set of tools for managing and providing access to print and e-journals, e-books, databases, and the underlying content, such as articles, book chapters, reference entries, and so on. Unfortunately, this high degree of integration among Serials Solutions components did not extend across all of our resources. We continued to run the SIRSI ILS, composed mostly of books and e-books that were not contained within Serials Solutions' knowledge base. Running two core but disparate library systems required intensive data transfer of MARC records that were added, deleted, or modified from SIRSI to Summon in order to keep our holdings synchronized. Acquisitions information was also tracked in both systems. This situation increased the potential for errors, inconsistencies, and information lag. SIRSI and Serials Solutions formed the backbone of our library

systems architecture, yet there were separate peripheral components that factored into the picture. In archives and special collections, we have used the open-source Archon software for archival finding aids-descriptive guides for archival print collections. For our digital special collections, we have relied on OCLC's CONTENTdm software. Since 2008, we have also been using OCLC ILLiad, a proven application for handling interlibrary loan activities. In order to provide users with secure authentication and access to our licensed resources from outside the library's computer network, we have relied on OCLC's EZproxy web proxy server. One of the newest additions to our constellation of systems is the institutional repository, locally known as Rollins Scholarship Online (RSO), which is hosted on the Digital Commons Bepress platform. In addition to these library systems, there are also important campus systems such as the Banner enterprise resource planner (ERP) and Blackboard learning management system (LMS) which are critical to the educational mission of the college, but are not as closely tied to the library systems as we would like.

Working with a scattered information systems architecture is less than optimal, yet most academic libraries find themselves in a similar situation. Libraries have started with core components, such as the ILS, and added various software over the years to handle specific services such as interlibrary loan or specialized sets of material such as digital collections and institutional repositories. When considering discovery as an aspect of a complete library system, we should not approach it as if it were simply an "add on" like an addition to a home. If executed poorly, home additions look as though they have been slapped on-they are neither aesthetic nor functional. From a systems architecture perspective, the discovery piece is similar to a home addition. Whether it sits on top of or alongside the existing structure, it should be integrated seamlessly into a cohesive whole.

INVESTIGATING SYSTEMS AND DECISION-MAKING

Before I arrived at Rollins College in 2013, a "Next-Gen ILS Task Force" had been formed and was charged with investigating options for a new library system, including the possibility of a new discovery layer. This initial charge included certain prominent factors:

- The new system should have a lower annual cost than the total existing expenses associated with all current systems.
- Focus on the overall ease of use and effectiveness for the end user, particularly undergraduates.
- Enable more efficient staff time through the reduction of duplicate data entry.
- Enable more effective integration with other campus-wide applications, such as Banner and Blackboard.

The current SIRSI system was deemed "increasingly outmoded" and other library systems were offered up as options, although this was by no means an exhaustive list. The original task force also solicited input from Olin Library staff in fall 2012 for specifications for a new library system. While this type of input is a good idea, in this case, it resulted in general statements such as "less labor-intensive", "more intuitive," and "less complicated and clunky" and also combined specifications for both an ILS and discovery into one list which was confounding to some degree.

Early in 2014, I was asked to revive the search for a new library system and co-chaired the task force along with Jonathan Harwell, the head of collections and systems. As discovery and systems librarian, I

began intensive research on library service platforms on the market at that time. There were a number of useful publications that served as guideposts in the investigation (Ken Chad Consulting 2012; Breeding 2013; helibtech 2015), but the most important source of information was Carl Grant's 2012 article in *Information Standards Quarterly* entitled "The Future of Library Systems: Library Services Platforms" (Grant 2012). Grant observes that many libraries are critically examining the effectiveness of their ILS, which has long been a core component driving many of the services provided by libraries. Next-generation library systems have come to be known collectively as "library services platforms," conveying that the new systems extend beyond the traditional scope of the ILS (largely designed to manage print collections), integrating a variety of workflows necessary for managing both print and digital items. While some vendors have taken an evolutionary approach to developing next-generation systems, effectively building on existing products, others have taken a more revolutionary approach by designing completely new products from the ground up.

Rollins College's current ILS vendor, SIRSI, released "BLUEcloud", a cloud-based library services platform around the same time the library began its investigation in earnest again. Although BLUEcloud might have been a natural option in the progression of SIRSI products, it would not have enabled us to save money or meet our other goals. Built on the existing SIRSI architecture and structured around the traditional catalog, it did not appear to offer the e-resource management and discovery capabilities inherent in other key systems, such as Serials Solutions Summon and 360 Suite. Although BLUEcloud was touted as a cloud-based, Software-as-a-Service (SaaS), this was not a major selling point for us. We wanted a cloud-based service, but one that was proven among academic libraries and would expand our capabilities beyond those of the traditional catalog and ILS.

After reading Grant's article, it became apparent that in order to achieve the type of integration and consolidation of disparate systems that we desired, a fundamental change was needed. It did not make sense to expend the time and effort of migrating to a new library services platform unless that single platform could take the place of a collection of software and services we were paying for and managing separately. There were a few systems at the time that had the potential to take us where we wanted to go: OCLC WorldShare, Ex Libris Alma, and ProQuest Intota. As current Serials Solutions/ProQuest customers, Intota would have been a strong contender, but because Intota was still being developed, we could not consider it as a viable option. Aging physical hardware and software associated with the SIRSI system meant that we had to take action sooner rather than later.

Since we were able to narrow potential choices down to two systems early on, this streamlined the selection process. When we brought the two vendors in for product demos and compared their relative strengths, weaknesses, features, and functionality, it was easier to identify the points at which they differed most. This kind of investigation can be very time-consuming, but we had the advantage of being more nimble than many other institutions. We are a small private institution with a single campus and single library serving that campus. There is no larger governing body overseeing the activities of the college, nor were we pursuing the selection of a new library system as part of a consortial effort.

CHOOSING THE LIBRARY SERVICES PLATFORM AND DISCOVERY LAYER

Rollins asked both vendors to come to campus for half-day demonstrations of their respective products, including discovery: OCLC presented WorldShare and their new discovery layer, WorldShare Discovery

Services (WDS), while Ex Libris presented Alma and their discovery layer, Primo. At this stage of the process, we were leaning towards OCLC WorldShare because we were already using a few of their products. WorldShare had also been adopted by hundreds of academic institutions of various sizes and had been on the market for a couple of years. We heard good things about the system from peer institutions across the region and believed that, if it satisfied their needs, it would satisfy ours as well. Ex Libris was more of an unknown for us. We had never used any Ex Libris systems previously and they did not have as great a market share with Alma as OCLC had with WorldShare. Because OCLC was more forthcoming with their pricing initially, we suspected that fewer institutions chose Ex Libris because they were more expensive. However, we were aware of a number of institutions that had selected Alma and were satisfied, including the Orbis-Cascade Alliance in the northwest United States. The Ex Libris legacy ILS systems were also well regarded as was their discovery layer, Primo.

During the OCLC WorldShare demonstration, we found its greatest strength was the cataloging component due to the seamless integration with WorldCat. When we saw a presentation of the ERM, known as License Manager, we were unconvinced that it could take the place of our Serials Solutions ERM. Over the years, we had come to appreciate the best-in-breed, robust functionality included in the ERM and relied on it heavily for managing our subscriptions and for feeding content into Summon for discovery. The lack of ERM functionality in WorldShare meant that we would likely have to keep Serials Solutions, undermining the purpose of such a systems migration.

The WorldShare Discovery Services (WDS) interface was also a disappointment. Part of this was due to the user interface and the inadequacy of certain search mechanisms such as robust faceting and advanced searching. The overwhelming preponderance of books within search results was also a serious concern. At Rollins, our users expect to discover the most relevant results, not limited to books and including a healthy mixture of articles, book chapters, and other non-monographic material. However, across various searches we saw similar results—a higher proportion of monographic content on our beta WDS site as well as with other institutions running WDS in a production environment. When we gathered feedback from our librarians, everyone was unanimously unimpressed. We were aware that OCLC and EBSCO formed a partnership and that EBSCO Discovery Service (EDS) was a front-end option when using WorldShare. Although we were dismayed with WDS, we didn't want to completely give up on WorldShare, so we brought in EBSCO for a separate demo of EDS. EBSCO's product was an improvement over WDS, but it would have cost us as much as we were paying for Summon and would have meant another disparate system outside of the single library services platform, which we hoped would be all-encompassing.

Although cost was a concern for us, cost savings was not our ultimate goal, nor were we intent on settling for the least expensive product. The initial quote for Alma was much higher than WorldShare, therefore some work had to be done at the negotiation table in order to arrive at a bundled price that would allow Alma/Primo to compete with WorldShare as a viable option. If Ex Libris could not bring their price down into the realm of OCLC's price, we made it clear that they would no longer be under consideration. Although Ex Libris appeared to offer a more robust system, the price of WorldShare was very attractive. The bundled price for WorldShare included OCLC services for cataloging and interlibrary loan, which we were paying for separately at that time. OCLC supplied us with a worksheet designed to compare the collective systems in our library to WorldShare over the next three years. By adapting this worksheet and applying it to the Ex Libris system, we were able to compare each system to current services and compare each potential system with each other. This was extremely helpful in that we could see which services could be replaced by functionality in the new system and how that actually affected

the bottom line in terms of cost. It also enabled us to differentiate between upfront costs during the first year associated with the migration and continuing costs in future years. Once we negotiated an acceptable price for Alma/Primo, the task force compared the two systems across a range of features and functionality based on our experience with the products during the demos and feedback from other staff within the library. Although there were many issues involved, discovery turned out to be the deciding factor: Primo was very similar to Summon while WorldShare Discovery Services was unacceptable and EBSCO Discovery Services would have meant paying separately for discovery and potentially running into the problem of a cumbersome "addition" to an otherwise holistic system. Conversely, Alma and Primo were complementary parts of a system designed with end-to-end workflows in mind from acquisitions to discovery. No system is ever perfect, but Alma/Primo turned out to be the clear choice and was endorsed by everyone on the task force.

SUMMON AND PRIMO: DISCOVERY FROM A SYSTEMS PERSPECTIVE

It is beyond the scope of this chapter to perform a full-scale usability study of both Summon and Primo, but it is possible to outline some general differences between the two products from a systems perspective and how this will likely impact discovery and total system functionality going forward.

Activating Resources

By activating collections in the Serials Solutions ERM, they can be seamlessly turned on with checkboxes in Summon, 360 link, and the A-Z Journal List. The Summon index lives behind the scenes, yet the content is visible at the publisher, database, and journal title level within the ERMS.

With Primo discovery, the process is more complicated. Alma functions as both the ILS and the ERMS, including MARC records for print and electronic items and all the vendor/publisher, database, and title-level information for individual e-book and e-journal titles. Purchased or licensed databases, packages, and titles must be activated locally in Alma. Primo Central sits between Alma and Primo and functions as the Ex Libris knowledge base. It is necessary to take a separate step in the Primo Central activation wizard to turn on resources which have already been activated locally in Alma.

Coverage

The Summon index appears to be more comprehensive than Primo Central in terms of the sheer number of products and collections that Rollins College would be interested in enabling. During the process of activating collections in Primo Central, it was evident that there are often more collections available for activation for a given publisher in Summon than there are in Primo Central. For instance, with the publisher Adam Matthew Digital, there are 67 collections to choose from in Summon, while there are only 17 in Primo Central. While Ex Libris certainly continues to index collections from various publishers, they do not appear to have the breadth of content that Serials Solutions has in their knowledge base.

Data Transfer

Up to this point, we had used the SIRSI ILS and Summon, which meant a lag between the time MARC records were created in SIRSI and when those records were discoverable in Summon. This could take anywhere from a few days to a week. The synchronizing of data between the Serials Solutions ERMS and Summon was much better; activations and other changes were reflected the following day.

With Alma/Primo, the publication of records from Alma to Primo is set up as a daily automated job. E-resources that are activated in Alma are published to Primo Central once a week. Therefore, we have gained efficiency with MARC records published to discovery while we have lost efficiency with e-resources published to discovery.

CONCLUSION

Rollins College chose Alma/Primo in June 2014 and formally began the implementation process in January 2015 with a "go-live" date of June 1, 2015. After investigating various library services platforms and discovery layers, we are confident that we chose a system that will enable robust metadata management, streamlined workflows, and a rich, integrated discovery experience. There will certainly be tradeoffs between the best of what our previous systems had to offer and what Alma/Primo offer our library staff and end users, but the overall environment should offer an improved platform that will serve our needs for years to come. Since we will continue to have access to Summon for some time after implementing Primo, we will also find ourselves in the fortuitous situation of being able to compare two fully functional web-scale discovery systems side-by-side (although we will hide Summon from public view). Usability testing will likely provide interesting insights as to the relative strengths and weaknesses of each discovery platform and lend itself to future publication as a separate study.

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Appendix A:

Framework for Evaluating a System Architecture

Although it is possible to create a full-blown request for proposal (RFP) to outline detailed requirements for a library system (Ken Chad Consulting, 2012), it may not be necessary unless required to do so. In any case, it is helpful for libraries to lay out a high-level framework for evaluating a current library system architecture. The relative importance of each of these considerations will vary from one institution to another, but should be generalizable across academic libraries since we deal with very similar activities and processes within the library and with the larger institution. This framework was not formerly in place when Rollins began investigating new library systems, yet the library did consider some of these elements and, in hindsight, these have been identified as important considerations that should aid such an endeavor. The table draws from Anita Cassidy's *A Practical Guide to Information Systems Strategic Planning* and has been expanded and adapted specifically for libraries. It is designed to assist stakeholders in determining how a potential library information system fits their needs and goals in terms of costs, processes, integrations, resources, technology, and overall strategic planning.

| COSTS | |
|--|---|
| What are the costs of all your current library systems: base costs, hardware, subscription, services/support, necessary peripherals? | How can we decrease our spending on LIS or spend our money more wisely? Can we reduce the effort and money required throughout the life cycle of systems? |
| Are your costs increasing and, if so, by how much? Is the rate of increase sustainable? | Can costs be bundled? |
| How does LIS (Library Information Systems) spending compare to similar libraries? What percentage of total library budget is devoted to LIS? | What ROI/value are we obtaining from the investments in LIS? |
| PROCESSES | |
| Do the LIS and associated processes help us deliver services to our users in the most efficient & effective manner? | Is the LIS a bottleneck to improvement and growth? Is old software hampering our ability to implement new technology? |
| INTEGRATIONS | |
| EDI (Electronic Data Interchange) – Are we able to import/export invoices and orders between our LIS and third parties? | Are we able to take advantage of OAI (Open Archives Initiative) protocol for harvesting data from our institutional repository, digital collections, etc? |
| PDA (Patron Driven Acquisitions) – Is our current system able to effectively handle the complexity and unique workflow of PDA? | Is the LIS able to interface with the college financial system/bursar? |

| | |
|---|--|
| Are we able to sync holdings between our LIS, OCLC, Google Scholar, and other third party discovery systems? | Is it possible to load patron data from the SIS (Student Information System) into the LIS? |
| Do our proxies and link resolvers work seamlessly to deliver content to our end users? | |
| RESOURCES | |
| How much time do our IT/systems staff devote towards working on each component of our system? (Take into account both those who work in the library and IT staff working outside the library.) | How important is it to have local control over the library system? Often, local control means more physical technology infrastructure, more manpower, and more maintenance. Outsourcing usually means less control; may mean less stable connections depending on the internet; but you also now have a dedicated team of experts working on the other side; the vendor is now doing many of the tasks that campus IT/systems admins would normally be doing |
| How does the size of our IT/systems staff compare with other libraries or institutions of similar size? | How important is accessibility without regard to geographic location? Locally controlled systems have traditionally been client-based and are not web-accessible because they are housed on a local network. Hosted/cloud solutions are web-accessible without installing clients and the applications are accessible from virtually anywhere in the world. |
| Do we have the internal skills, time, etc. to take the LIS environment where it needs to be? How much can we do with internal resources and how much should we rely on external resources? | |
| TECHNOLOGY | |
| Open Source vs. Commercial Systems – which is the better option? | What are the library technology trends over the past 5-10 years and how do those trends affect us? |
| Can improved technology reduce operational costs? <ul style="list-style-type: none"> • Simplification • Standardization • Automation • Integration • Leveraging • Waste Reduction | |
| STRATEGIC PLANNING | |
| How should the mission of the library/college drive the LIS strategy going forward? | How does our choice of LIS impact our relationships to other libraries and organizations? |

| | |
|--|--|
| <p>How do changes in library services, research habits, physical space, etc. drive our LIS decision making?</p> | <p>Will our current LIS enable us to meet our future goals/challenges?</p> |
| <p>Do our discovery systems engender a sense of trust among our users? Libraries as organizations are based around relationships with our users. Relationships are usually formed around trust. If users cannot trust our discovery systems, they will lose trust in the library as locus of information discovery and knowledge creation.</p> | <p>What are end users telling us/demanding of us? What has usability testing shown us?</p> |