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Migration as Catalyst for Organizational Change in Technical Services

Geraldine Rinna
Western Michigan University, geraldine.rinna@wmich.edu

Marianne Swierenga
Western Michigan University, marianne.swierenga@wmich.edu

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Migration as a catalyst for organizational change in technical services

Geraldine Rinna & Marianne Swierenga

This article describes the changes within the Western Michigan University Libraries Technical Services Department during a five-year period from 2012 to 2017, which involved a reorganization of staff and the migration to Alma/Primo, Ex Libris' next-generation library management system and discovery solution. The aim of this case study is to understand the role these two significant events played in the transformation of the department.

Introduction

When Western Michigan University (WMU) began investigating replacing their aging Integrated Library System (ILS), the Technical Services Department (TSD) had a decades-old hierarchical organizational structure built to support the systems and work of the time. Workflows mirrored the organizational structure, with redundancies, policies, and procedures that enforced a siloed chain-of-command and compartmentalization of duties. While following the status quo supported the department's high level of quality for years, the rapid changes coming to the systems and staffing were about to make following the status quo impossible.

This article examines a five-year period from 2012 to 2017 where WMU's technical services experienced a transformational change: a library systems migration, a reduction in staffing, and a reorganization. The TSD went through a perfect storm of overlapping change. Hindsight allows for the analysis of how the department took ownership and facilitated changes, emerging with a modern department capable of

harnessing the new systems with a much smaller workforce. The authors' focus here is how the TSD was able to manage this amount of change and use the interplay between migration and reorganization to create a more efficient, equitable, and entrepreneurial department.

Literature review

After a roughly ten-year period of stability and steady growth in WMU's Technical Services Department, there followed a five-year period of drastic change. Looking back, trends and their potential correlations and causations were recognized. Technical services should be adaptive to new technologies, changing cataloging rules, and emerging methods of information consumption, in order to meet developing user needs. Increased budget constraints required work to be efficient and cost-effective. But this particular confluence of technological and workforce change was making a significant impact in academic libraries, and widely so, from what was being discussed informally through listservs, message boards, and at library conferences. By examining the literature, the authors aimed to see if others in the field were drawing similar conclusions. Because the theory presented here had to do with the relationship between events like the migration of a library systems platform and the reduction and reorganization of staff, it was helpful to examine the literature addressing each issue individually, and then other published case studies where these issues converged.

Evolution of the Integrated Library System (ILS) / Library Services Platform (LSP)

When the literature on migrating from a traditional ILS to a cloud-hosted LSP was initially reviewed prior to the selection process, what was available was mainly non-scholarly in nature, and aimed at a library market still eyeing the options. Marshall

Breeding's Library Technology Industry Report provides a consistent guide to new directions in library automation and insight into where the technology was headed. Breeding's 2007 article, "It's Time to Break the Mold of the Original ILS," recognized the present library environment as one of accelerating change. With a focus on offering new services, a move to web-based discovery, and a continued reduction in staff, there was a need to streamline library systems and create efficiencies through automation. His vision for a next-generation ILS was a much more flexible and open system, a fully integrated platform of library services. "In contrast to the current monolithic approach, we might consider the ILS as a suite of lightweight applications woven together in a service-oriented architecture" (Breeding, 2007, p. 41).

Early library management systems, designed around the management of print materials, were not easily reconfigurable to meet the mixed needs of print and electronic resource management, and some companies took the opportunity to start over from scratch, using a new approach. "As a result, these systems build upon the advances in architecture that allow for multi-tenant operations, data aggregation, analytics, and redundant and secure data centers" (Grant, 2012, p. 7). The newly emerging Library Services Platforms (LSPs) also took advantage of the benefits of cloud computing. In his 2010 code{4}lib article, Mitchell outlined the benefits for libraries in moving their technological infrastructure to the cloud: "Cloud platforms enable organizations to use external expertise and resources to deliver complex services, remove the need for organizations to invest in server infrastructure, and lower the cost for organizations seeking elastic computing resources" (Mitchell, 2010, Introduction, para. 2). As many libraries were eyeing their costly and aging servers and the staffing needed to maintain them, cloud computing was beginning to look like a more sustainable future.

The first-generation ILS was not prepared for the proliferation of electronic resources that are now the mainstay of academic libraries' collections. Electronic Resource Management (ERM) systems were running concurrent to the ILS, creating inefficiencies. The literature leading up to the development of the next generation of library management systems agreed that libraries needed comprehensive resource management which included electronic and digital resources. Wang and Dawes described their ideal system where e-resources workflows integrated acquisition, description, and access provision, relieving what they called a "messy and redundant workflow" (Wang & Dawes, 2012, p. 79). Cote and Ostergaard describe the next generation LSP as being able to manage print and electronic resources in a "single, unified platform, replacing traditional integrated library systems (ILSs) and electronic resource management (ERM) systems" (Cote & Ostergaard, 2017, pg. 223). An important component in making these integrated platforms work would be the utilization of knowledgebases. In order to truly integrate functionality in one system, the knowledgebase needed to be central to ERM. "By using the knowledgebase to create consistent, reusable representations for electronic resources holdings, these systems promise to offer libraries new levels of efficiency, interoperability, and automation" (Wilson, 2017, p. 113).

ILS/LSP Migration

Library system migration is an event with extensive ramifications for an academic library, and one that should not be entered without significant research and preparation. The investigation into migrating from WMU's current ILS to a next-generation option is documented in an article that appeared in *Computers in Libraries* magazine in 2011 and included a survey of academic libraries on their readiness to migrate. In the survey results, approximately 64% of migrating libraries had or expected to restructure

workflows, and 25% were expecting to reorganize their units (Kelley et al., 2013). When it comes to change as pervasive and impactful as an ILS migration, no matter the amount of time put into planning and preparation, it is difficult to know where unforeseen problems will arise. The fear becomes not knowing what you do not know. This is where case studies of other migrations can be especially useful.

Day and Ou chronicle their process of determining readiness for migration at the University of Nevada, Las Vegas (UNLV), starting in 2013 with a strategic approach. UNLV developed a task force, representing an organizational cross-section of staff, which assessed the marketplace, identified and reviewed vendors and projects, and ultimately communicated back to the library as a whole on the library's readiness to make what they called "a significant change" (Day & Ou, 2017, p. 105).

Cote and Ostergaard's (2017) case study on the migration of Montana's Treasure State Academic Information and Library Services (TRAILS) Consortium to an LSP examined the role of the electronic resources librarian (ERL). While the TRAILS migration to Ex Libris's Alma and Primo was complicated by the additional complexities of migration planning within a consortium, the case they made for the important roles an ERL can play in the process are valid across library types. The ERL was able to explain to the implementation team the lifecycle of electronic resources, and the "possibilities and advantages to be gained from the ERM functionalities in the new system" (Cote & Ostergaard, 2017, p. 225). Cote and Ostergaard also highlighted Electronic Resources Librarians for their high tolerance for change, their analytical and critical thinking skills, and their experience working with outside vendors. These qualities and more were given as reasons for why an ERL was especially qualified to provide leadership in an LSP implementation.

In Fu and Carmen's (2015) case study of Central Washington University's migration to Ex Libris's Alma and Primo, migration was divided into three phases: pre-migration preparation, testing, and finally the cutover to the new system and post-migration cleanup. They found that the work involved in each phase was, unsurprisingly, extremely time-consuming, and that it took cross-departmental teamwork to complete most events and tasks. Collaboration was named a "top essential element" that contributed to the success of the migration (Carmen & Fu, 2015, p. 2).

In Dula & Ye's (2012) case study of Pepperdine University Libraries' migration to OCLC's WorldShare, migration created changes to their workflows that "instigated cultural change" (Dula & Ye, 2012, p. 130). Reference librarians had to rethink how searching functioned, and circulation practices changed also, though this ultimately led to improvements in areas like reserves and simplified student training. Technical services had the most dramatic changes, and it was noted that their processes continue to evolve post-migration. In technical services, the areas of acquisitions and cataloging blended and the kind and amount of work was refocused and streamlined. Cataloging became minimal, and the ERM workflow simplified by utilizing the OCLC knowledgebase. What they considered "revolutionary" about a cloud-based system was the increased data-sharing ability, which allowed for peer-comparison and a more strategic approach to future acquisitions (Dula & Ye, 2012, p. 132).

Automation and Workflows

Within certain areas of technical services work, like acquisitions, working in a cloud-based LSP versus previous library systems required new perspectives on process. Automation of ordering procedures are more inventory-driven than past systems, which previously hung everything on the bibliographic record (Parent & Maclean, 2014). Workflows were often predetermined by the systems functionality, and the

compartmentalized modules often increased the siloed nature of the work. Add in the periphery systems needed to perform ERM, and workflows became even more divided.

New acquisitions models complicated matters further -- "moving from ownership to access, from just-in-case to just-in-time delivery" (Gregory et al., 2016, p. 30) -- and libraries needed to keep up with user expectations in an on-demand digital environment. The very relationship of libraries to their collections was changing. Something had to give, and switching up systems can be a prime opportunity to change workflows and mental models. "The nature and scale of an LSP implementation is such that there is often an opportunity to re-evaluate workflows with an eye for making processes more efficient" (Cote & Ostergaard, 2017, p. 225).

Culture of Change

Purposefully building a culture that welcomes change is not an easy task. People fear the unknown. One style of managing change might work well at one institution but not another. At Butler University, a change management process was implemented by new library leadership to assist in creating a positive environment for change (Petrusa, 2016). Leadership used the ideas of William Bridges, in his book *Managing Transitions,* to facilitate managing the large-scale change they were entering, including a migration to a cloud-based library management system. The three phases of transitions outlined by Bridges were used in planning the migration. Bridges' transition model provided guidance for library leaders to acknowledge and address the emotional side of change. Through change style assessment, staff were able to understand their role in the new culture of change in the library.

Dulaney (2016) applies the work of Peter Senge to technical services, showing how transformational change can be achieved through Senge's model of a learning

organization. The work of technical services has evolved, and "these changes require continuous creative thinking and experimentation in order to adjust workflows and staff skills" (Dulaney, 2016, p. 1). Dulaney illustrates how each of Senge's five disciplines can be applied to staff in technical services, and how the culture of a learning organization can provide the creative, flexible, team-based environment needed in contemporary library technical services.

Collins and Wilson (2018) use the agile management philosophy to support change readiness in technical services. With its use of iterative decision-making and an emphasis on being adaptive, the agile approach can easily be applied to technical services. Collins and Wilson's agile formula (knowledge + readiness = transformation) creates an environment that supports change, and can be a useful tool for people "struggling to re-align their work and processes," because "at its heart, agile is a cultural solution, which helps to create an iterative mindset" (Collins & Wilson, 2018, p. 10). Applied to project management, workflow mapping and analysis, agile strategies worked well in technical services, and created a culture "ready to move away from legacy practices and embrace innovation" (Collins & Wilson, 2018, p. 18).

While each institution approached the problem differently, all ultimately found that *people* are the assets, and can make or break transitions. In describing staff participation in the ILS migration at Washington State University Libraries, Zhu and Spidal emphasize the importance of employee involvement: people are the "solid foundation of any successful migration" (Zhu & Spidal, 2015, p. 256). People that are not just casually involved, but engaged contributors empowered at every step of the process are "more likely to embrace changes even if they do not agree with the decisions" (Zhu & Spidal, 2015, p. 256).

Restructuring and Reorganization in Technical Services

The literature clearly supports the connection between the changing nature of library resources, the expectations of users, and the re-evaluation of roles within technical services (Gregory et al., 2016). Selecting, acquiring, describing, managing and providing access to these materials requires a less-siloed, more adaptable kind of technical services. With most resources now being electronic, and new technologies streamlining workflows and automating straightforward tasks (and plenty of the ambiguous tasks too), the work has become even more invisible, making technical services staff and support easy targets when budgets are tight. The areas of cataloging and acquisitions are especially singled-out for reductions, merges, or outsourcing (Gregory et al., 2016).

In "Transforming Technical Services," Jeehyun Yun Davis (2016) identified "technological innovation and budget constraints" as the primary drivers of change for an academic library, with the labor-intensive processes prevalent in technical services being impacted by reductions to staffing and budgets (Davis, 2016, p. 52). Davis felt this offered an opportunity for re-evaluation and change, and "to transform the structure of technical services to effectively deploy staff to manage the transformation of its functions through reorganization" (Davis, 2016, p. 52). Reorganizing or restructuring, however the authors name it, is being used in technical services departments as a tool to bring people and the work they do into alignment with the advancements in technologies. If done right, the organizational changes can take full advantage of the inherent potential for efficiencies offered by new library systems (Petrusa, 2016).

Scope and Methodology

The case study method was chosen to review and analyze the broad changes in the

Technical Services/Resource Management Department at WMU Libraries. Technical services was chosen as a focus of the case study since effects of migration and reorganization were seen strongly in the day-to-day functions of the department.

The time period analyzed in this case study was a five-year span that began in 2012 with the start of the ILS selection process. The study tracks changes to organizational structure, staffing levels, culture, and library systems during this time.

The data presented in this article were gathered from the WMU Libraries statistics and official and unofficial documents, including strategic plans, meeting minutes, and organizational charts. Qualitative data were gathered from technical services staff using an informal survey and the first-hand experience of the authors.

Background

Western Michigan University is a medium-sized Carnegie Classified R2 institution, offering over 260 degree programs to a student body of around 22,500 (Western Michigan University, 2020). The University Libraries' main library houses the technical services support for the main library and three branch libraries.

In 2012, the Technical Services Department included four fulltime faculty members, twenty fulltime and one part-time staff, and nearly 10,000 student hours annually. One faculty member served as the head of the department, which was divided into three units, Cataloging, Monographic Acquisitions, and Electronic Resources and Serials, each with a faculty lead. The Cataloging unit was the largest, with ten staff members, while both Monographic Acquisitions and Electronic Resources and Serials each had five staff members.

Pre-migration, the servers and support for the ILS were in the Systems Department. Staff maintained the systems and software that provided resource discovery, link resolution and authentication for the WMU community. The position of

Systems Librarian, vacated in fall of 2011, and largely responsible for configuring the VuFind discovery layer, was never refilled and was eventually eliminated. Prior to migration, the work of the former Systems Librarian was taken over by Systems staff.

Leading up to 2012, the Libraries were addressing the demand for a more digital information landscape by adding additional systems, mainly locally hosted and maintained, often stand-alone products, which led to a very complex grouping of systems. (see Figure 1: 2012 Library Systems Architecture) While the goal was to create more online access and choices for users, the multiple discovery layers and many siloed systems were confusing, and required an unsustainable amount of system maintenance and configuration. Some interoperability between systems was achieved through writing custom code and scripts, but they were increasingly difficult to maintain. And though many of these systems were used most heavily by both the Technical Services and Systems departments, the lion's share of the decision-making and work surrounding configuration occurred in the Systems Department, which also maintained the servers.

In 2012, all configuration and maintenance work in the ILS, Ex Libris Voyager, and the discovery layers WebVoyage and VuFind were handled in the Systems Department. Bulk importing and exporting of electronic bibliographic records and bulk changes to existing records was done by systems programmers. In Technical Services, the Electronic Resources (ER) team was using a suite of systems for electronic resource management and off campus authentication: USTAT and 360Counter products, which were cloud-hosted and maintained by the vendor; SFX and EZproxy, which were maintained and configured by ER, with server maintenance the responsibility of Systems; and SerialsSolutions 360 Resource Manager, configured by ER, who also

configured its companion discovery layer, Summon. Summon, which was cloud-hosted, was the third discovery option offered to library users.

With the loss of the Systems Librarian, the custom code that was written for VuFind was no longer supported. For example, a script that communicated journal holdings data from the SFX link resolver to VuFind stopped working. No one on staff had the time and expertise to troubleshoot and repair the code. This model of highly customized, locally-hosted systems produced a technical debt that was unsustainable for a library operating with fewer and fewer staff and a flat or reduced annual budget.

Migration

By 2012, it was evident the Libraries required a new systems model. The Director of Systems had been advocating for the adoption of a cloud-based ILS for some time, and it was an exciting time in the development of library systems, with some next-generation library system contenders developed enough to consider as viable options (Kelley, et al). The move to the cloud was appealing since the WMU Libraries' hardware was nearing end of life and the cost of replacing it would be substantial. Additionally, the hope was that next generation functionality within a single unified platform would reduce duplication of work related to electronic resource management and discovery layer configuration. These issues, and the expectation of upcoming retirements with the potential for recruiting different skills into the technical services department, provided serious motivation when the ILS Selection Overview Committee assembled in late 2012, and the focus was on the new generation of library services platforms.

The Selection Overview Committee was comprised of a cross-section of library faculty, staff, and administration. The committee outlined a project plan that was broken down into five phases: *Research and Education, Selection and Preparation, Migration*

and Integration, Cutover and Shakeout, and *Project Evaluation.* Leading into the

Research and Education phase, members established and chaired subcommittees,

representing thirteen areas of library work and technologies. Roughly half of the people

working in the Libraries served on at least one of the subcommittees, which aimed to be

as inclusive as possible with the goal of finding the best possible system to fulfill all the

institution's requirements, and ultimately produce buy-in through participation in the

selection process. A similar mindset of encouraging staff to be engaged, and

empowering contributors in the process was used in the ILS migration at Washington

State University (Zhu & Spidal, 2015). The participatory nature of the project

acknowledged that the migration was much more than a software upgrade. It could

fundamentally change how Libraries' staff did their work, and therefore should be

supported by all parties. Having a say in the selection process meant that the final

decision was not something that just happened to library staff, but rather something

which they had taken an integral role in.

During the *Research and Education* phase, subcommittees familiarized

themselves with the available products by reading literature and marketing materials.

They developed a list of requirements for a new system, and a list of features they could

not live without, or "deal-breakers." The committee attended live demonstrations and

webinars. Questions regarding desired functions and features were compiled and sent to

potential vendors.

After gathering information about each of the candidate systems and lists of

requirements from the library, the *Selection and Preparation* phase began. The data was

analyzed, evaluating the pros and cons of each system, while considering the

subcommittee feedback. Through process of elimination, certain systems were

immediately dismissed based on "deal-breakers." The remaining list was narrowed by

evaluating the functions and features of each ILS, how it would fit into the Libraries'

mission, and if the work required to maintain the new ILS would be possible given the

current structure and staffing of the Libraries. Discussions took place about how, or if,

data would be brought over from disparate systems into the single platform also. By

mid-2014, the ILS Selection Overview Committee and the subcommittees had

completed their work, a new SaaS LSP was selected, and university approval and

funding was granted.

Once the system was selected that could fulfill immediate requirements and had

the potential to provide desired features in future developments, the Libraries began the

Migration and Integration phase of the project. Final decisions were made about what

data would be export from outgoing systems, and what data would be left behind. Parts

of this data became a "test load" in the new system to evaluate for completeness,

accuracy, and quality of the migrated data. Staff partnered with the ILS vendor to

configure interoperability with third-party systems used within and without the library.

Extensive training began for all staff members in the use of the new system, utilizing

vendor videos, documentation, and a sandbox.

By March 2015, the ILS Migration Team (formerly the Selection Overview

Committee) and the ILS vendor had completed the work of integrating third-party

systems being retained. A portion of data to be migrated was identified, cleaned, and

loaded to a test instance and configured in the new discovery layer. In mid-2015, the

Migration and Integration phase of the project was completed and the Libraries "went

live" with the new system. The Libraries' systems architecture looked drastically

different once the number of systems used was effectively cut in half: two systems

eliminated, four systems moved from the ground to the cloud, and three cloud-hosted

systems no longer needed after migrating to a single platform that provided the same functionality in an integrated system.

(see Figure 2: 2017 Library Systems Architecture)

After the go-live date, during the *Cutover and Shakeout* phase, staff were working in the new system, but retained access to the old system for a few months. This allowed for data comparisons and time to correct any errors caused by the migration. Before going live, staff received group training, but working independently with the Libraries' collection data was considered the best way to learn their work in the new system. This built confidence and trust. In Technical Services, supervisors were especially empathetic to the widespread changes affecting people who had spent up to fifteen years working within a largely unchanged system and allowed for this prolonged cutover time for staff to become accustomed to performing their work differently. There was no urgency to quickly change physical materials workflows, but to allow for a natural evolution between past and future workflows. Electronic Resources used the *Cutover and Shakeout* phase to automate record loading, additional electronic data interchange (EDI) invoicing, and other work within the new LSP.

The final phase of the migration project, *Project Evaluation*, did not occur due to turnover in the positions responsible for the project's management. Informally, staff and faculty in the Libraries provided feedback to the vendor and input to other migrating libraries, but mainly were getting on with the business of learning the new system and its capabilities, and discovering new, sometimes easier ways to complete their work. In some ways, the *Shakeout* portion of the plan was still underway, especially in Technical Services, as staff became more comfortable with the new system, as new features and functionalities became available, and as everyone became more accepting of iterative change.

Staffing Reduction and Realignment

By the time the migration was complete in 2015, the Technical Services Department had experienced staff loss, mainly due to retirements, that reduced staffing levels by 12%. These vacancies were not filled; nonessential work was eliminated, and essential work reallocated to other staff. Additionally, the amount the library was spending on physical materials had been reduced by 38% by 2015. A shelf-ready workflow had automated most copy cataloging and processing, so the department needed less student labor, which in turn warranted a reduction in student hours by 47%. Overall, the technical services workers were reduced between 2012 and 2017.

(see Figure 3 and Figure 4 : Technical Services Staffing Levels)

Another department to experience dramatic staffing changes during this time was the Systems Department, which by 2016 experienced an almost complete turnover. As positions were refilled, they were redesigned to fit the department's shifting focus from back-end system support to front-end user and emerging technologies, as illustrated by their name change to IT Services. Since many of the locally-hosted systems had moved to the cloud, been rendered obsolete, or fundamentally changed in structure, the volume of work performed in Systems related to the bibliographic and discovery systems was greatly reduced.

Reorganization

In February of 2016, University Libraries welcomed a new Dean. She began leading the Libraries in the next strategic planning cycle, which included a plan to reorganize the Libraries. The new strategic plan for the Libraries, adopted in 2017, included the goal, "Reorient the Libraries' organizational structure to better align with our mission and vision, and foster a user experience culture" (Western Michigan University Libraries,

2017, Goal 5). Objective 5.A of that goal was to "identify opportunities to transform work processes, build efficiencies, and realign human resources to focus on strategic priorities and more effective ways of working."

A Reorganization Task Force (RTF) was formed from a large representation of Libraries staff, faculty, and administration, including members of the Technical Services Department. The task force was charged with documenting all library services and activities and examining their continued relevance based on the newly adopted strategic plan. One strategic theme was to redesign organizational communications, operations, and structure. The task force was further charged with identifying where the Libraries could "break down siloes and bring like-functions into closer alignment; streamline workflows; reduce redundancies and eliminate outdated or unnecessary processes, services, and activities; and remove unnecessary layers within the organization" (Western Michigan University Libraries, 2017, Charge to the group). To say this team was charged with a big task with far-reaching implications is an understatement.

As a result of the recommendations of the RTF, significant changes to the overall structure of the Libraries were implemented. Fourteen departments were consolidated down to six over a transition period of four months. While some areas of the Libraries were extremely restructured, the Technical Services Department, now renamed Resource Management, underwent less dramatic changes as a result of the reorganization, having already undergone staffing level adjustments due to retirement and necessary workflow changes instigated by the migration to the new LSP (Garrison & Bundza, 2020).

In May of 2017, tasked with discussing and implementing the changes on a more granular level, the Resource Management Department met in their newly arranged

units: Cataloging and Metadata, Collections and Stacks, and Electronic Resources. Each unit answered the following questions: What is the work of the unit? What are the strengths, limitations, demands for new skills, and plans for developing or recruiting these skills? Then together as a department, these findings were combined and refined, creating a focused statement on how Resource Management fit within the new Libraries' organizational structure. This provided a strategic foundation for how to move forward post-reorganization and identified goals and gaps in staff expertise to focus on for future training and hiring.

Structurally, staff hierarchy was collapsed, flattening a staffing structure originally designed for more positions and siloed workflows. Now all staff report directly to their unit's faculty supervisor. In addition, the Department Head positions were to be eliminated throughout the Libraries in favor of a term-appointed department lead, a non-supervisory position that would coordinate departmental work and represent the department at the newly created Libraries Council. This is a 2-year rotating positions among the faculty members with 20-30% of their assigned workload allocated to cover the additional administrative duties. In Resource Management, this change aligned with the retirement of the current Department Head.

The Stacks Management team, previously under the direction of the Operational Services group was folded into Resource Management, joining the newly configured Collections and Stacks unit. Stacks Management brought to the department its large cadre of student workers (see Figure 4) who added physical processing and commercial binding to their duties, which already included stacks maintenance, shelving and reshelving, and weeding projects.

Post-Migration, Post-Reorganization Shakeout

While University Libraries can point to a few specific dates (like the LSP go-live date,

celebrated with cake), which defined moments of significant change, most change happens over time, slowly, in small decisions and milestones. Migrating from an ILS to an LSP is just the beginning of the story. Stating that the Libraries underwent a reorganization does not capture the incremental changes that happened following the Reorganization Task Force's delivery of their final report. Developing a culture of change takes patience, a lot of communication, and an ability to accept a certain amount of risk. The Technical Services Department discovered that there was just as much work fine-tuning the details as there was in making the big decisions.

Organizational Change

Less than six months after migration, the culture in Technical Services was changing. Some employees were obviously more engaged in their work and actively learning about what the new system could do to make their work easier. Functionality in the new LSP provided the ability to automate repetitive tasks and make time for more interesting work, especially in the areas of processing and cataloging. Staff responsibilities were rethought as the work changed and some areas of work required less attention, while other areas more. In some ways, the redistribution of work was surprising.

The Electronic Resources unit, expecting to have their workload reduced due to the elimination of two redundant software systems, experienced an increase in their workloads. There were some software and service regressions that created additional work, and the work that Systems programmers previously performed in the old system was now able to be completed by the ERM team. Along with their expanded ERM responsibilities, the unit assumed responsibility for configuring the backend of the discovery layer, and overseeing a cross departmental team charged with administration, maintenance and configuration of the LSP. This increase in the variety and volume of

work in the Electronic Resources unit prompted the adoption of agile management principles and practices. Scrum meetings, and a collaborative project management software and ticket system helped the unit better tackle and track the increasingly complex and expanding workload of Systems Administration and managing Electronic Resources.

These changes resulted in a more librarian-centered and less IT-centered administration of the library services platform. Instead of the administration of the LSP residing solely in the library Systems Department, a shared administrative model was adopted, and the Administrative Group's make-up was 60% from Resource Management, 30% from User Services, and 10% from IT Services.

Revising Job Descriptions

Job descriptions are a useful tool that guides staff on what is expected of them, and provides managers a foundation for performance reviews, and a reference for human resources in comparing salaries to industry standards. Obsolete job descriptions do not capture the real work being done in a modern, technologically advanced information landscape, provide employers basis for appropriate remuneration, or appeal to desirable candidates looking for exciting job opportunities.

Historically, job descriptions would be evaluated infrequently, when the University's Human Resources Department would perform a comprehensive compensation review. Additionally, individual descriptions were revisited when a position was vacated due to retirement and a new position could be created in an emerging area of need. In a department that traditionally had little turnover, however, many position descriptions were often ten-plus years old and detailed duties no longer being done or described work in a way that did not take into consideration advances in library technologies. Also, many positions supervised one other person, requiring a job

description unique to that supervisory role, enforcing a siloed, chain-of-command environment.

From 2013 to 2015, Western Michigan University conducted a study of the staff compensation system for all non-faculty employees. This initial review of job descriptions occurred well before both the migration to the new LSP and the reorganization, did not anticipate the changes to come, and resulted in minimal updates.

It became clear that as staff left or retired and their work was divided among remaining staff, the department's longstanding approach to creating job titles and descriptions was not adequate. Resource Management unit leads and library administrators, therefore, rewrote job titles and descriptions to reflect the less-hierarchical, less-siloed, and more complex work being done. These new titles and descriptions allowed for more flexibility in the work and created opportunity to try new things or join in special projects. Market recalibrations performed after the rewrites used the new job descriptions, which resulted in compensation increases for most staff.

Doing more with less

There were many factors leading to the decrease in the number of staff positions in the Libraries during this five-year span: numerous retirements, financial pressures on the library budget to leave vacated positions unfilled, administration's decision to redirect open lines to emerging areas of librarianship, the transition from print collections to electronic resources, and a substantial reduction in work-study money from financial aid. It is impossible to link the decline in staff numbers to one reason, because it is likely a combination of these factors.

Despite the staffing reductions, efficiencies created by a flatter organizational structure and the new library services platform has allowed a smaller workforce in Resource Management to perform the duties of a much larger department. People who

had spent years working in a system where they had little or no control over how they did their work now have more autonomy in how their workflows are performed. They provide valuable input into how the systems are configured and do much of the work that used to be performed by systems programmers and faculty librarians.

Many staff members have been cross-trained to handle the work that previously had been handed from person to person, and workflows are continually being streamlined, checked to ensure that they are more equally distributed. Staff have been instrumental in automating their own workflows and as a result are developing skills they would not have been able to develop on the job prior to the migration and organizational restructuring. Staff are encouraged to experiment and accept new responsibilities and collaborative opportunities. Professional development is promoted and supported to expand the knowledge and tools available to staff.

Working with Automation and Imperfection

Using technology to automate library work is far from a new concept, yet it is important to acknowledge the emotional component in reassigning a task previously done by a person to an automated process. When faced with a shrinking workforce and increasingly complex work, the automation tools and processes developed in the new library systems offered the answer to the how-to-do-more-with-less question. Post-migration, the work of technical services has been automated whenever feasible, which has required shifts in workflows and a change in mindset.

The inclination toward perfectionism had to be set aside when it came to the description of transitory electronic collections. Records for these are mainly provided through a shared repository or central data index, and when not, vendor-supplied records are imported into the repository by staff in Electronic Resources with minimal change. This work was previously handled in the Systems Department. Additionally,

vendor-supplied records for print and electronic monographs are automatically imported into the repository and include embedded order data. These records are analyzed by the system upon import and assigned a number indicating the "shelf-readiness" of the record based on the inclusion of bibliographic fields deemed necessary. Some titles are routed directly to the shelves, while other titles are routed to catalogers to add additional information to enhance discovery.

Automation has reoriented the focus of the catalogers to description of the Libraries' unique rare and archival materials, non-MARC metadata creation for digital collections, and regular database maintenance. Authority control is now largely done directly within the LSP and utilizes authority records from the Community Zone (CZ) and an integrated task list which flags headings begging cataloger intervention. The skills required to create scripts and programs to import, export and augment records are either no longer required or are now possessed by staff in Resource Management. This frees up IT Services to pursue new projects, and further moves the management of the new system from the IT arena into the purview of Resource Management.

Shifting Stacks

When the Stacks Management team joined Resource Management and absorbed physical processing and the management of commercial binding, it was an opportunity to build new workflows. Formerly, materials were sent out on a regular basis to a commercial bindery. This was a prime area for cutting back on labor-intensive work and also saving funds. The decision was made not to rebind damaged books, and instead weed or repurchase on a case-by-case basis. Journal binding became the exception, not the norm, especially as most journals were moved online. Bindery shipments were reduced to a quarterly schedule and very little is now shipped out for commercial binding.

Shelf-ready titles already greatly reduced the need for processing, but with Alma's import profiles, the workflow became even more streamlined. The Stacks manager designed a new workflow and physical processing area that allowed one person to process materials from start to finish in one location, then trained students to bring materials through the entire process. This has resulted in workflows becoming more efficient, with materials no longer changing hands unnecessarily, and getting materials out to the shelves faster.

ILS/LSP and Discovery Administration

With the new distributed administration of the LSP being coordinated in Resource Management, this work is not in the hands of a single individual, but is collaborative, involving many staff and faculty members across the library. With nearly 70% of the membership of the LSP administrators group holding a library degree, this trend points to LSP administration transitioning from information technologists to librarians.

With four Certified Administrators residing in Resource Management, staff who describe and manage the collection now have immediate access to LSP/Discovery Layer administrators and can articulate needs that can be understood fully. Making configuration changes is more efficient when a shared language encourages understanding and proximity facilitates collaboration.

Limitations

This case study is written from a technical services perspective of events that affected an entire academic library. Because the decision-making process for both the ILS migration and the reorganization did not happen only with technical services staff, the study's focus on just the Resource Management Department did not address all the added complexities of a full library. In their chapter "Breaking Down Silos through

Reorganization," Garrison and Bundza (2020) provided a library-wide perspective on the reorganization process at WMU Libraries, including the staff perspective one-year post reorganization. Remaining concerns included the user experience, customer service, and communication between departments. Future research on how the new Resource Management Department contributes to the new programs that developed to address these concerns is an area for future study.

Qualitative data was obtained from the staff who remained at the end of the process. Three of the four faculty members and four staff members in Technical Services retired between the time that the migration project began, and the reorganization project was completed. Through these retirements, the department lost many years of institutional knowledge, and the unique perspectives they could have offered.

In examining the department's move towards automation and the streamlining of workflows, the quality of work was not evaluated outside the scope of the study. A specific concern among the catalogers was the vendor records being automatically loaded for shelf-ready books and electronic resources. And while there is control in the configuration of the import profiles, many records are loaded or activated without review. It is fair to ask if this new mode of metadata management is just the new normal to accept, or if loss of bibliographic data quality is something the library community will grapple with in the future. This will be an area for future study.

Conclusion

In recording the details and timelines of events for this case study, it became apparent that library staff, materials, and systems were so intertwined and interdependent that a change to one thing can ripple out through the organization, starting a chain reaction. The catalyst for the accelerated period of change in the Libraries, and especially within

technical services, began with the migration to an LSP. The migration influenced the structure of the department, the work that can be done or done without, and encouraged a mindset that was more exploratory, empowered, and flexible. Though at times the changes that were implemented and experienced were difficult and not always voluntary, as a department, there was a tremendous amount of growth. In the end, the staff retirements and demands of the new ILS didn't result in making new hires for emergent skills. Instead, it was the existing staff who rose to the challenges, building the culture of change from within the process.

There is no indication that this period of accelerated change is ending anytime soon. And stopping to reflect seems a luxury when contending with constantly updating software and platforms, configuring new integrations, setting up new acquisition models, constantly pulling analytics reports, and investigating emerging trends in library metadata. In fact, change was coming so hard and fast after migration, it was not until the writing of this case study that it felt like the project had its final phase of *Project Evaluation*.

In the new Resource Management Department, managers act to remove obstacles to innovation and change, encourage and support new ideas, and create opportunities for professional development. With a smaller staff and new projects always in development, learning where to focus efforts is an ongoing process. Sometimes it means needing to stop doing things that have been done for a long time in order to make room for something new that will benefit the Libraries' users.

It is evident that technical services workers need to take ownership of the increasingly technical and intricate work of resource management and clearly communicate about the work being done by their department. In reporting out, technical services must be demystified, reminding the rest of the library that although it is

invisible at times, it is user-focused and service-minded, building and supporting the infrastructure of the library.

Acknowledgements

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Figure 1. 2012 Library Systems Architecture

= Cloud based service, all others are locally hosted

Figure 2. 2017 Library Systems Architecture

= Cloud based service, all others are locally hosted
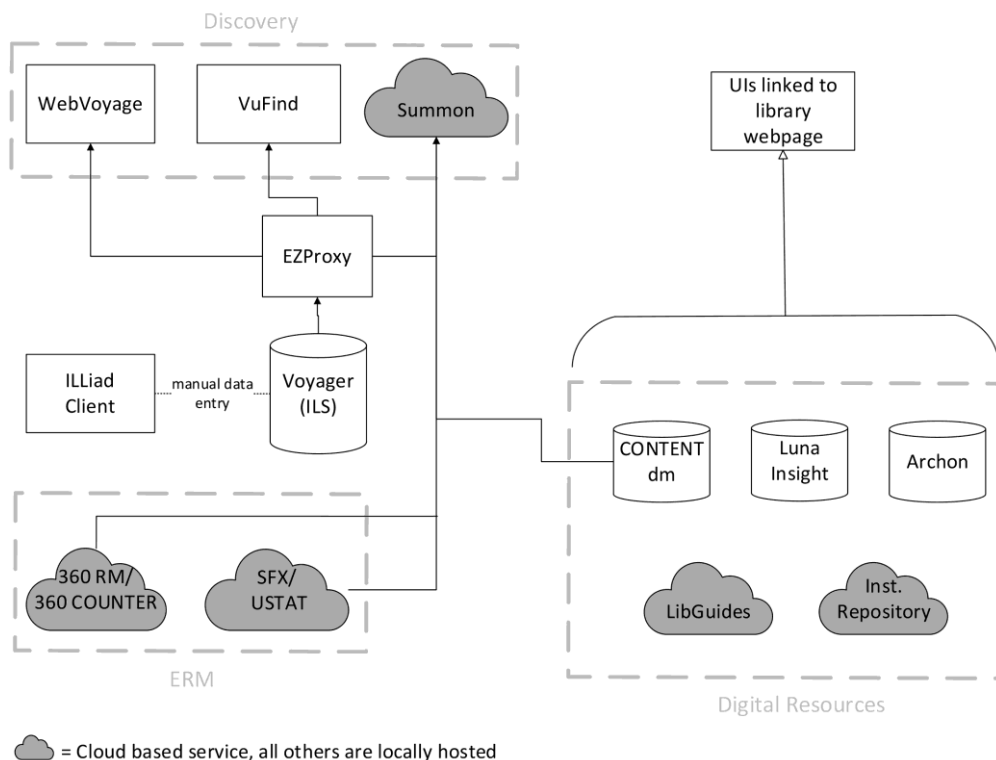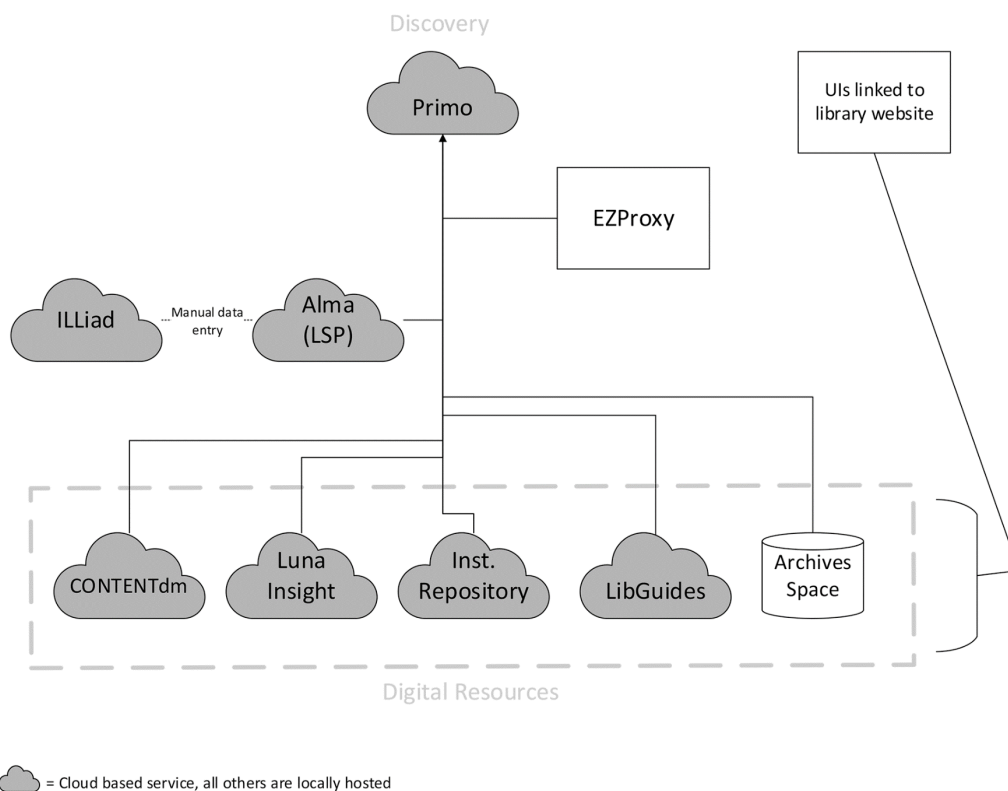
Figure 3. 2012-2017 Technical Services Staffing Levels. Number of full-time staff and faculty by year.
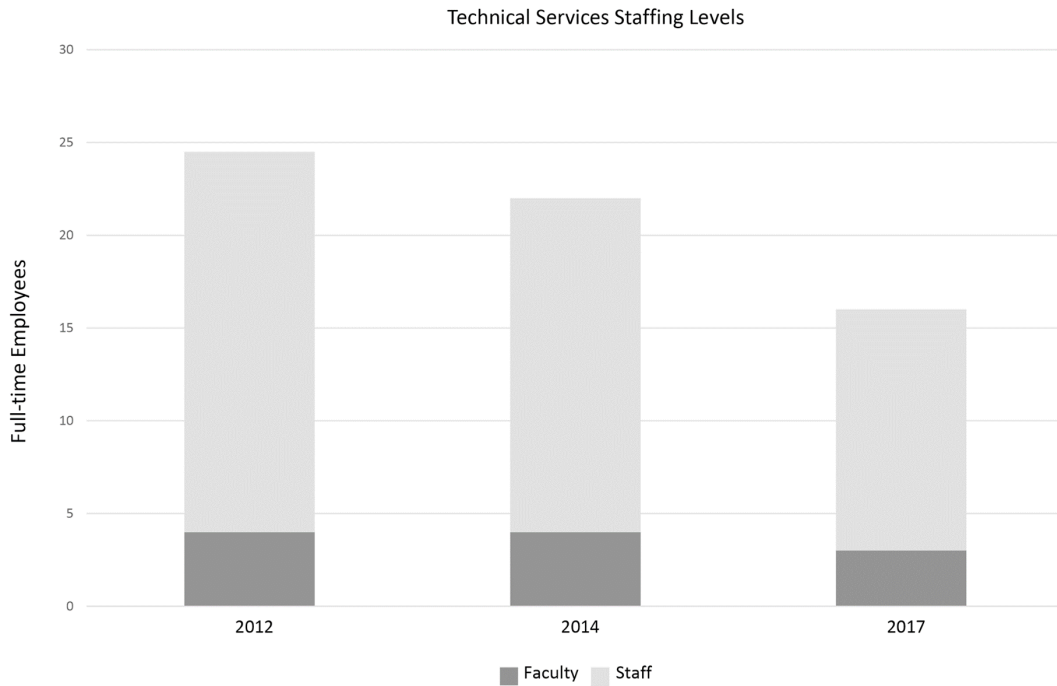

Figure 4. 2012-2017 Technical Services Student Hours. Number of student work-study hours per fiscal year. 2017 is representative of post-reorganization numbers where student workers in Stacks were rolled into the Resource Management Department.