

Assessment as Change Management: Facilitating Consensus, Decision-making, and Culture Change through a Scaffolded Approach to ILS Review and Selection

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Introduction

Like many academic libraries, Utah State University Libraries have had a long and complex relationship with our integrated library systems (ILS). After migrating to SirsiDynix's Symphony ILS from their older Horizon system in 2009, the Libraries moved to Innovative Interfaces Inc.'s Sierra platform in 2012. These back-to-back migrations not only created frustration and fatigue amongst library staff, the decision-making processes that led to the migrations were also flawed and lacked genuine staff involvement. This resulted in problems during the implementation stage, such as workloads being inadvertently shifted from one unit to another. Understandably, this bred some long-standing resentment towards the idea of migration that persisted for over a decade across large portions of library staff. But in the past five years, as the Sierra platform began to show its age, it became clear that the system would not be able accommodate the Libraries' growing needs around collection management, as well as the desire to provide a usable and accessible catalog and discovery experience for library patrons. To make the case and break the tension around discussions of migration, the Libraries' executive committee commissioned a task force to conduct a systematic evaluation of both the needs for a new system and the general staff attitude about migration.

In addition to general unease, many other factors made it challenging to build consensus around the need for migration. Breeding notes that libraries typically map their staff operations around the modules and overall architecture of their integrated systems.¹ While useful for supporting workflows within the ILS, this creates silos across library operations and communication, which over the years made it difficult for library leadership to fully grasp collection management workflows across teams and ILS modules. Additionally, there was variance in how well the system supported different staff members' and teams' work. For instance, the ILS supported the acquisition and cataloging of print serials well but could not handle the acquisition and maintenance of electronic serials or databases, which, as in many libraries, have shifted to be the primary focus of our collection strategy. Because our current ILS does not reflect this shift, staff are forced to use additional tools and systems outside of the ILS. This, coupled with growing frustrations with front-end user experience and accessibility, made it increasingly clear that a new system was needed to support the Libraries' strategic goals.

ILS Task Force

The task force was asked to create a needs assessment report that focused both on staff and patron needs, a list of functionalities needed to support current operations, and some measurement of the staff's enthusiasm or concern for adopting a new system. While the process was originally articulated as a data-gathering exercise, the task force wanted to set the stage with an assessment strategy that would carry us through not just the review and selection process, but also support post-migration implementation, training, and ongoing system improvements for both staff users and library patrons. We designed a scaffolded approach in which each stage of assessment would build and contribute to the next stage, and hopefully foster cross-library understanding of our shared work and system needs.

This approach was successful both in giving library staff a voice and involving them deeply in these assessments, but also by helping to dissolve the silos between different teams and workflows, proving a useful tool for managing change and expectations.

Library-Wide Survey

The initial step in the assessment process was a survey aimed at understanding operational issues with the Sierra system. Anecdotally, we knew that many staff were working around the operational issues with Sierra and employing external solutions to workflow issues, such as using Airtable to manage transitions between system modules (e.g., tracking between when something was acquired and when it was cataloged). Through the survey, the ILS Review Task Force attempted to establish a typical workflow for library collections that would include the work of all staff members who had a part in the acquisition, ingestion, maintenance, withdrawal, evaluation, or facilitating the use of library collections. The goal was to evaluate the effectiveness of current systems, identify areas for improvement, and explore potential new systems. The survey collected information on specific operation workflows, how staff use the current ILS (Sierra), its public access points (Encore and WebPac), and about other third-party systems used to support those workflows or provide patron access. We wanted to know how well the various systems and workarounds serve staff; what could be improved to make workflows more efficient; and what other systems should we consider to replace or complement their current setups? This approach included a Plus/Delta evaluation to highlight what was working, what needed improvement, and future actions.

We fielded the survey for about three weeks and had a 91% response rate (n=69). The survey found that Sierra and the current patron interfaces (WebPAC, Encore) are adequate in meeting the basic needs of library staff, with many responding that the system was “fine” or “sufficient.” However, many staff expressed a desire for a system that worked better and afforded more efficiency for staff workflows. Poor support for electronic materials, including poor link resolving capabilities and a dated electronic resource management (ERM) module, stood out in survey responses. Many survey responses also noted frustrations with data and reporting features and the generally siloed structure of the system. The structure of circulation data was noted as impeding reporting and efficient workflows, while other responses noted frustrations with list building and reporting that would often involve many extraneous steps due to the overly complicated reporting module. Others mentioned that common functionality, like a single sign-on and communicating with other university software or systems like OCLC Connexion, was needlessly complex or non-existent. Respondents also reported problems with the catalog and discovery system, noting they were clunky and too complicated, but without much detail regarding missing features or what a more usable system would look like.

Along with surfacing some concerns regarding functionality that was missing or inadequate with Sierra, the survey also identified functionality and configuration options that already existed in the system but were not being utilized. This demonstrated a need for better training and internal support, certainly if the library continued to use the current Sierra ILS, but also looking forward to new systems that the library would eventually need to implement. Given the high cost and central role of ILS/LSP systems, the need to nurture the system, and ensure the library continued to maximize its functionality, was a major realization.

Workflow Analysis

While the survey was designed to gather initial perceptions of the ILS and get a general sense of the tools staff used to do their work, our next phase of assessment was designed to dig deeper and help

quantify how well the ILS was suited to collection management workflows and the operational needs of library staff. Building on the issues and workflow needs identified from the survey, staff were directed to analyze several key workflows across our internally created Collection Management Lifecycle (Figure 1.) and list out the technologies they use to accomplish each step in the workflows related to their domain, and as applicable, the reason why an external tool was needed.

Figure 1. Collection Management Lifecycle

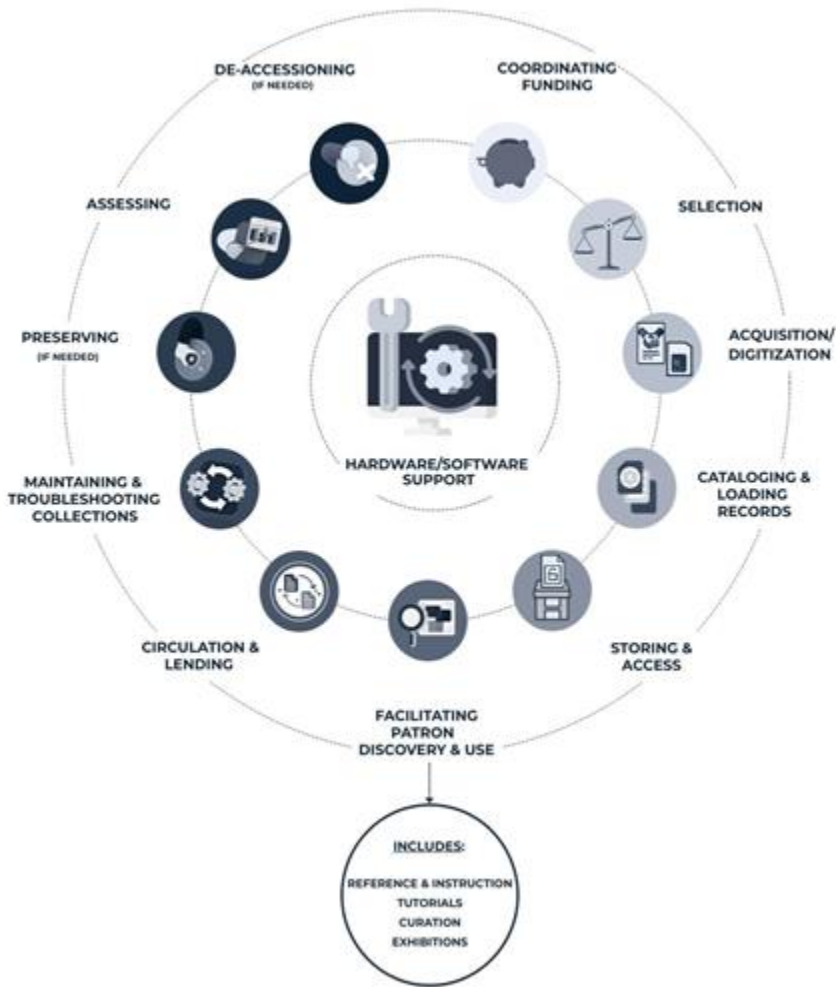


Image created by Andrea Payant, USU Libraries

Staff were specifically told this analysis was not intended to be punitive or criticize how they manage workflows under their purview. Instead, the analysis was explained as a way to illustrate just how much work staff were doing and illuminate overlap and interconnections across various teams' work. We found that this helped reduce tension and reassure staff that the task force truly wanted to better understand their work and find ways to streamline operations not just for the sake of efficiency, but also to improve staff members' work lives. As a result, library staff were excited to participate and engaged deeply in the analysis.

The task force defined six workflows representative of the Libraries' collection management activities, three for print and electronic resources, respectively. Spreadsheets were created for each of these six

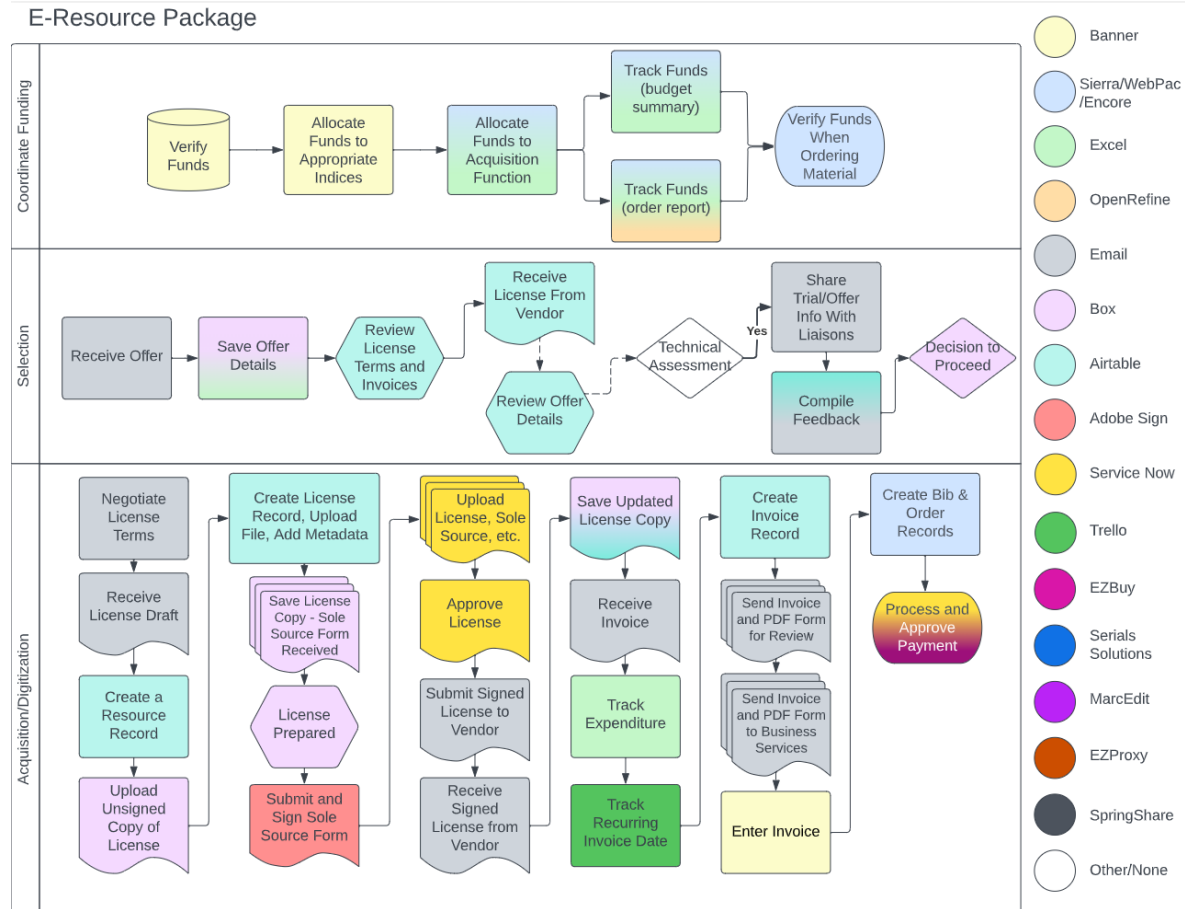
workflows, and participants were asked to document each step that they performed in a given workflow, if that step was completed in Sierra, what third-party tools were used to supplement workflow operations, how successfully those tools worked, and other details. These were first analyzed to determine how well each workflow was supported by the current ILS, Sierra (Table 1).

Table 1. Breakdown of Workflow Steps Completed in Sierra

	Yes – Workflow step is completed in Sierra	No - Sierra doesn't support this step	No - prefer not to use Sierra for this step
Electronic Workflows			
Resource Package	17.72%	59.49%	22.78%
Gobi E-Book	40.00%	60.00%	0.00%
Streaming Video	19.57%	78.26%	2.17%
Average	25.76%	65.92%	8.32%
Print Workflows			
POD Request	47.50%	37.50%	15.00%
Weeding	42.86%	57.14%	0.00%
Serials	63.08%	32.31%	4.62%
Average	51.14%	42.32%	6.54%

After the workflows were articulated in shared spreadsheets, they were converted into visualizations and color-coded by the tool used to complete the task. The task force then sent the visualizations to staff to request feedback and surface any missing steps or add clarifications. Finally, data from the workflow analysis was coded and depicted in visual flowcharts (Figure 2).

Figure 2. Example of Workflow Visualization



After reviewing the coded data, some major issues were readily apparent. Most notably, the shift from print to electronic resources had frontloaded the workload into the first half of the collection management lifecycle, represented by a 470% increase in steps in said first half. Across the entire lifecycle, Sierra ILS was only used in 37% of the workflow steps across the six sample workflows (Figure 3). While 11% of steps were possible in Sierra, staff preferred other external tools, such as Airtable, Excel, email, and Box. In all, 37 different third-party tools were used to supplement steps in the collection management workflows. Table 2 shows the top ten third-party tools by number of steps.

Figure 3. Average Number of Steps per Collection Management Stage by Print vs. Electronic Resources

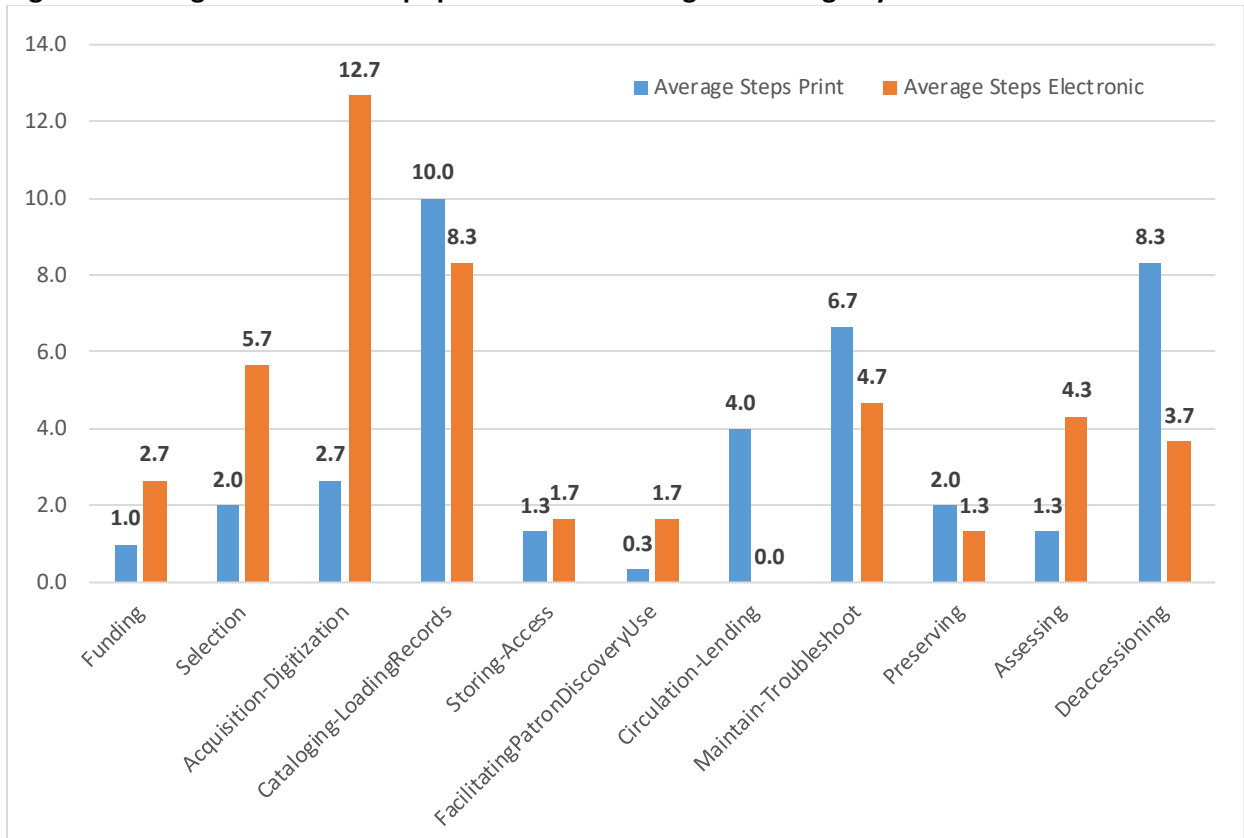


Table 2. Top 10 Third-party Tools Used in Each Workflow by Number of Steps

	Electronic Workflows			Print Workflows			Total Steps	Count of Workflows
	Resource Package	Gobi e-Book	Streaming Video	POD request	Weeding	Serials		
Email	15	5	14	1	1	1	37	6
Excel	14		1	4	7	4	30	5
Airtable	20			3		3	26	3
OCLC Connexion	2		3	4	2	10	21	5
Box	10		2	2	1		15	4
Physical Processing Tool				5	1	9	15	3
MyMedia (Kaltura)			14				14	1
Trello	3		5				8	2
Vendor website	2		1			2	5	3
Diafuku software						5	5	1

Focus Groups

Following the quantitative analysis of workflows, the task force assembled participants for two focus groups, one for electronic workflows and one for print workflows. This provided a more qualitative

perspective on the analysis, allowing each individual a chance to explain the work involved in their portion of a workflow and identify common issues they were all experiencing. After all participants spoke, they were asked about their third-party system usage and why these third-party systems worked better than the ILS. When all of this was completed, participants were polled on their desire to continue using Sierra.

Focus group participants voiced concerns over the dated design of the Sierra system architecture and interface. While staff noted that the print acquisition and serials modules worked well, they were too siloed from each other, with members of the same workflow group often repeating work or data recorded in other modules because of permissions structures that limited access. Core functions like creating lists and making global database updates also worked well, but participants were frustrated by the poor support for gathering usage data and integrating it with costs, as well as lack of integration with university systems (for financial and other student record information) and OCLC’s Connexion. Poor support for electronic workflows included a desire for features like the ability to store files and track troubleshooting and vendor issues.

Patron Interfaces Workshop

Library staff who participated in the initial survey commonly described the patron interfaces as “clunky” and often preferred teaching students to use alternatives like Academic Search Premier or Google Scholar. To better understand dissatisfaction around the patron-facing side of the ILS, a sub-group of the task force conducted a 90-minute workshop with library staff to develop a more concrete accounting of the system’s deficiencies and gather insights on improving the user experience (UX). Participants included staff from across the library organized into groups based on common work or perspectives. Prior to the workshop, facilitators from the task force asked groups to draft fictional user scenarios based on known search and discovery problems they observed or experienced. The task force facilitators selected three final scenarios reflecting three key issues: usability of known-item searching, author searching, and non-English item searching (Table 3). Using journey mapping techniques, each team detailed steps users would likely take and considered external factors affecting the discovery process, with the goal of identifying specific system deficiencies, and hopefully uncovering basic performance requirements for system UX.

Table 3. Scenarios for Patron Interface Workshop

Team	Scenario Text	Targeted Problems/Needs
Team 1	Marlo is an undergrad student in political science. As part of a class assignment, he needs to analyze an important law or policy document in its original context. Marlo wants to focus his paper on the 1964 Civil Rights Act, and wants to find a copy. Using WebPAC, imagine how this student would go about finding a copy.	Usability of WebPAC, historical documents, primary sources, testing known item searching without exact title, comparison with Google.
Team 2	Libby is a new student majoring in management. She’s looking to learn more about leadership practice. One of her management professors recommends she reads a book by Peter Drucker. Using the search box on the homepage, she types in “Peter Drucker.” Imagine yourself in her shoes and how she would navigate to find an item of interest.	Author searching, separating famous authors from works about them, Encore filters, result and record metadata.

Team 3	Taylor is an education major who is also pursuing a minor in Chinese. She plans to look for jobs teaching English in China after she graduates. To help her practice for a language exam, she needs to find a book written in Mandarin Chinese—it doesn't matter what it's about, it just needs to be in Chinese. Using Encore, imagine how an undergraduate in her situation would conduct this search.	Searching and filtering for non-English languages, result and record metadata.
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Staff participants were separated into three teams to analyze one of the three scenarios. Inspired by journey mapping exercises,² each team mapped out on a whiteboard with sticky notes and arrows the steps a user might take to complete their assigned task using the catalog or discovery layer (Figure 4). In addition to mapping out discrete steps in the interface, facilitators encouraged the teams to consider information-seeking activities that might occur outside the discovery layer or catalog, such as receiving an assignment in class or checking out a book from the stacks. After each group completed a map of their scenario, the teams rotated and reviewed each other's work and added comments or additional steps to the initial journey map.

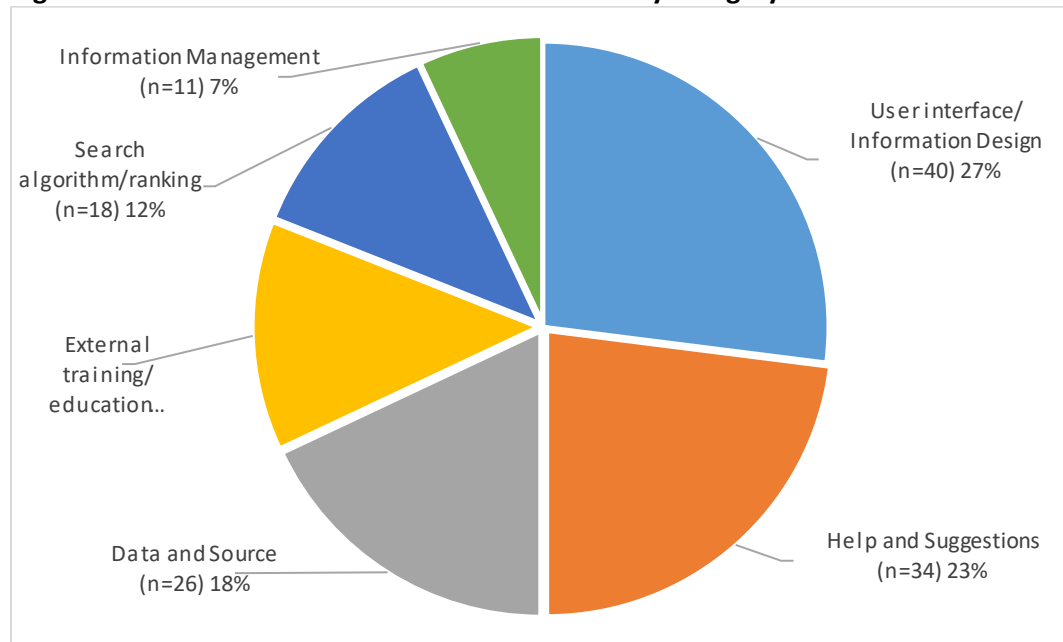
Figure 4. Example of Whiteboard Journey Mapping Exercise



Figure 5 illustrates the distribution of staff patron-interface concerns. Poor information design (like layout and content density) as well as overall user interface (UI) design were dominant themes in staff comments (27%). Staff complained about confusing layouts and labeling, and noted poor design of interactive elements like facets and filtering tools, UI icons, etc. Staff also mentioned the lack of integrated help features like chat widgets, as well as contextual search suggestions and other helpful features used by Google and common to many other search interfaces (i.e. library databases) - mentioned in 23% of comments. Over 50% of staff comments arose during the “Viewing/Filtering Results” stage in the user workflow. Staff commonly mentioned poor ranking and presentation of initial results (13%) but also noted problems with post-search filtering and advanced search performance, issues often attributed to limitations with cataloging data and architecture (18%). While the user

experience of the patron-facing side of ILS systems should not be the primary driver of ILS decision-making, it should be an important consideration, especially given the obligations of academic institutions in the U.S. to ensure accessibility of digital platforms and content. In addition to numerous known accessibility problems with the interfaces, the reality that the vendor would be unlikely to address any of these problems lent strong evidence in favor of the need to migrate.

Figure 5. Distribution of Patron Interface Concerns by Category



Change Management with Scaffolded Assessments

By scaffolding across these assessments, the ILS Task Force was able to efficiently gather both a breadth and depth of feedback. This began with a general survey that helped identify areas the task force had not considered and provided some jumping off points for deeper investigation across various stages of collection management. Additionally, it also signaled the start of a more inclusive process in which staff voices would be centered in discussions and strongly influence the decision-making process for any potential migration, a significant departure from past migration discussions.

Our assessments also helped the discussions move from being individual and anecdotal to being more data-driven and holistic in scope. This helped keep conversations and analysis anchored to the core goal of improving workflows and collection management outcomes, rather than past disputes or the narrow needs of individual staff or library units. While participants noted anecdotally that they did not use the ILS very often in their workflows, being able to quantify the number of steps the system did or did not support helped to validate these concerns and demonstrate just how much the Libraries' needs had evolved beyond the current ILS functionality.

In addition, mapping out and auditing workflows helped expose pain points more broadly. Staff who did rely heavily on the ILS for their work were able to see and understand the extent and depth to which their colleagues were unsupported. Focusing on third-party systems served as a useful way to expose these gaps and articulate the kind of functionality staff would like to see in a new system. For individuals who were not familiar with other ILS systems or how other institutions organized their collection management process, this helped illustrate the potential that a new system, more aligned with the

current collection management needs, could offer in streamlining staff members' work and providing efficiencies across the entire collection lifecycle.

Many of our assessments relied heavily on group work and drawing participation from across the library, which provided opportunities for productive discussions. For instance, starting the focus groups with a walk-through of the entirety of a workflow forced participants to see and engage with the work of their colleagues. This helped to both showcase the impact of each individual's work, but also how their work influenced the work of others further along in a workflow. Often, these discussions spurred groups to brainstorm and explore ways to solve a problem or smooth out pain points, either with current systems or by imagining more ideal functionality in a new system. In addition to exposing unintentional barriers and silos in both the system architecture and library communication more broadly, group work also provided a space to foster compassion and understanding across various library units.

While the work of the task force was initially focused on investigating the need for migration, another key goal was to enumerate concerns with the current system as a strategy for beginning to gather requirements for a formal request for proposal (RFP) if necessary. Taking time to outline system deficiencies helped staff imagine a better environment, sparking interest in newer systems, but also helped us articulate requirements in more concrete terms. The more functionalities that were outlined, the more staff could see how much friction and weight was added to their work lives, so that by the end of focus groups and workshops, many participants were excited about the possibility of a migrating to a new system, a stark contrast to the mood when the investigation was initiated.

Lessons Learned

Largely, the task force developed a review process that was successful in addressing some of the distrust and aversion staff were feeling about a potential migration. However, there were a few lessons we learned along the way, which might have strengthened or streamlined the process. While we did bring in vendors to demonstrate their systems as part of the review, a more structured environmental scan could have guided our assessments and the questions and data points we gathered. Rather than working against an idealized image of what a new system could provide, incorporating more information about the limitations and constraints of actual systems into the assessment process would likely have streamlined the wish list of features that were ported from the final report of the ILS Task Force to the RFP for a new system. Though true functionality (or lack thereof) is often only fully apparent post-migration, vendor demonstrations provide opportunities to see specific modules in action, learn more about the overall system architecture, gain insights about how vendors support their products—factors that can be very useful to know when preparing for a formal review. For these reasons, we recommend inviting vendors to visit well in advance of starting any needs assessments, as well as before the start of the formal RFP process. This is both a useful way to kick off any internal review, as it can help staff see what is possible and feel aspirational about the process, but also for helping set realistic expectations for what the “next-gen” of library software can actually achieve. For us, bringing in vendors helped make it clear just how drastically ILS/LSP systems had changed, particularly within acquisition modules.

It is also important to consider how to balance different voices in planning an ILS/LSP assessment. These are big, complex software systems that lie at the heart of library operations—having a full knowledge of such expansive systems is difficult. Thus, decision-making needs to be thoughtful and inclusive to ensure the library makes the right choices, both in selection of a system and in how systems are configured, so that library operations are not hurt and hopefully are improved as a result. However, ensuring an

inclusive process can be difficult. Naturally, some voices and needs will come through more loudly than others, meaning that assessments might be biased toward some features or functionality to the detriment of others. To resolve this, providing some rating criteria or way to prioritize core functionality—and being transparent and seeking consensus regarding these criteria from staff—would have helped filter out or contextualize some of pet features or personal gripes that sometimes drew attention away from other staff or system needs.

While some staff initially had a very negative response to the topic of migration, our assessment strategy largely served to reset the tone and perceptions around a potential migration. However, there were certainly some tense moments. For example, staff across different units had conflicting perspectives on whether the ILS should fully support a given workflow, or whether supplemental tools were appropriate to use. This was an active question during these discussions: at what point is it impractical for more external systems to be “latched” onto the ILS in order for an operation to be supported, and at what point would the need for such “hacks” make the system overall be considered inadequate? We expect these are questions other libraries will experience when mapping library workflows to ILS/LSP functionality. Figuring out how to facilitate these tense conversations and ensure a safe environment when reviewing workflows in this collective manner can be challenging, but for us, it was critical for building shared knowledge of operational needs. In addition to creating a safe environment for staff to share and discuss their work, they also need to know that their investment of time and energy will be valued, and, ultimately, will help the library make informed decisions regarding system selection and implementation.

Finally, it is important to consider what data is actually needed to support an ILS review, especially given the time and energy being asked from library staff. Before asking questions, we should have spent more time thinking through what data we actually needed and tailoring our assessments accordingly. For example, in our workflow analysis, we asked staff where any external procedures or policies related to their operations were housed, but never ended up gathering those procedures or incorporating them into our analysis. Rather than asking for so much detail and documentation from staff, it would have been better to limit the data we were gathering to only what was needed to answer our core questions.

Conclusion

Our scaffolded approach helped move the Libraries from extreme aversion to a possible migration to broad excitement at the prospect of a newer, more usable system. While systematically investigating ILS deficiencies helped make the problem more concrete to staff and library administration, the real benefit of this approach was in building consensus and forging a collective vision for the Libraries’ operational needs around collection management, and to a lesser extent, the quality of patron experiences in search and discovery. After the Task Force’s investigation was complete, library administration decided to move forward with an RFP, which led to a successful selection of a new library services platform (LSP) in July 2024. We are hopeful that this new system will better meet the Libraries’ needs, particularly given that the RFP process was more robust and reflected a better understanding of staff needs across the library as a result of our multi-stage assessment. As the Libraries proceed with the challenging work of migration and implementation, we also hope that the culture and practices around system management is similarly deep and draws directly from staff experiences and their evolving needs. This will ensure that we continue to nurture the system post-implementation and seek ways to optimize the functionality and value staff are getting out of the system. Ongoing assessment will be critical to this effort, both to understand how staff are using the system and to maintain a positive culture around library systems, but also to ensure that decision-making moving forward is strategic and grounded in consensus.

Endnotes

¹ Marshall Breeding, "Balancing the Management of Electronic and Print Resources," *Computers in Libraries* 34, no. 5 (June 2018): 26-28.

² Sarah Gibbons, "Journey Mapping 101," Nielsen Norman Group, accessed Jan 24, 2025, <https://www.nngroup.com/articles/journey-mapping-101/>.