June, 2017

Baby Snake Swallows Whale: Impacts and Insights from Winthrop's Recent ILS Migration

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Biz of Acq — Baby Snake Swallows Whale: Impacts and Insights from Winthrop's Recent ILS Migration

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From one System to Another: The Backstory

After over three decades with the same integrated library system (ILS), **Winthrop University** went live with a cloud-based new system on July 1, 2015. The old system fell behind in service and support, as well as speed and adequacy of response. The ILS and its modules operated through client software loaded on library workers' desktops, while some system admin functions were accessible only through the original text-based telnet client. Off-site access to the ILS modules was not built into the system. Satisfying the need for performing some tasks from home after hours required use of a VPN client to remotely access our work computers on which the ILS software was loaded. Additional doubts arose about the timeliness of system updates. The library system company had been purchased by a larger conglomerate, followed by periods of uncertainty for the system provider. The system's high costs and prohibitive à la carte pricing framework, paired with continuous price inflation in key library materials, necessitated new measures for staying within budget. Moreover, the local servers in the library housing the ILS were showing signs of age. The combination of these factors led increasingly to entertaining the move to a next-generation cloud-based system.

Ultimately, a fully cloud-based system was chosen. The new ILS houses all its modules on the system vendor's servers. All modules are securely accessible via web browsers, and the discovery tool's responsive design adjusts seamlessly to mobile devices' operating systems and screen sizes.

Onboarding and Migration

Before Signing On — As the factors outlined above pointed strongly toward an ILS change in the immediate future, a library collections inventory was conducted between 2013 and 2014 to resolve discrepancies and ensure accurate holdings data. We also took stock of acquisitions and cataloging workflows, noting how existing work steps were performed with the former system as a basis for translating those into the new system's functions. New services the library might offer beyond the capacities of existing staffing and workflow configurations were also noted. Additionally, we visited several regional libraries already using this ILS we were considering to glean information about system capabilities and their workflow implications.

Preparing for Migration — Preparations began after signing with the new system in spring 2014. Preparations included translation tables, extraction of library data for the vendor's migration work, and crafting strategies for data families that were known not to migrate owing to differences in data structures. For example, statuses of physical pieces or loan rules for various materials in the former ILS did not translate directly into the new ILS's structure of records. Such data could therefore not migrate and an alternative for capturing such information needed to be crafted. In the old system, item records could be configured with specific loan rules regardless of their locations. One location could hold various materials with varying loan conditions. For example, books and AV materials in the stacks ("General Collection") were available for checkout, while bound journals in the same stacks were designated for library use only. The old system's structure allowed for such distinctions. In the new system, loan conditions are tied to the shelving location. As a result, more shelving locations were created to capture the loan conditions. For example, materials in the stacks now have two locations: "General Collection – Circulating" for materials available for checkout and "General Collection – Bound Periodicals Non-Circulating" for bound journals designated for library use only. Along similar lines, the new system requires Reserve items available for various loan periods

to be assigned separate shelving locations. "3 hour Reserve", "24 hour Reserve" are two of many such examples of new shelving locations that needed to be created in order to reflect the various availability conditions. Item statuses did not translate, as the new system's structure does not include a mechanism to assign a status (for example "missing"). Of the items identified as missing in the pre-migration inventory, the titles still unresolved closer to migration were not migrated, but kept as a separate list for continued verification work.

Summer of 2014 marked the start of a nearly year-long migration, with the targeted go-live date of July 1, 2015. During year 2014/2015, the final year with the old system, we continued our library business in the old ILS in order to have the complete year's data for the then-current fiscal year's annual reporting needs. Because historical acquisitions and circulation were among the data known not to migrate, the 2014/2015 year was also used for exporting historical data in Excel-compatible format to support long-term needs for acquisitions continuity, historical budget analysis, collection assessment, and various on-demand multi-year data analyses.

Onboarding — Parallel to migration and preparations, the new ILS vendor administered in-depth weekly training webinars lasting nearly full days between fall 2014 and spring 2015. The new ILS vendor groups newly signed-on libraries into small cohorts which go through the migration together from start to finish. This approach facilitates idea exchange and shared learning. Seven libraries at the same migration phase were grouped into a formal cohort. This cohort was comprised of small to mid-sized private and public academic libraries whose locations spanned the East Coast to Hawaii. Each cohort library joined the weekly training webinars at the appointed time. In most cases, multiple attendees participated in the training sessions at each library. The weekly training sessions were logically sequenced and began with introductions to the structure and general system functionalities. Gradually the sessions progressed to in-depth coverage of each module, augmented later with hands-on learning opportunities in a functional test library in a sandbox environment. The shared training and learning experience among the libraries who were at the same migration and training stage promoted a sense of community and encouraged idea exchange within the cohort.

Migration and Go-Live — The old system's data were extracted for migration on the appointed date early in the spring semester. On that day, all holdings records in the old system up to that date were migrated. Library holdings up to that date would be reflected in the new ILS. After this snapshot date, we continued working in the old system to complete the business year, but tracked the additions and changes to be tgr rlecygf "kp the new ILS after the migration was complete. After we were cleared for using the new ILS's technical services staff modules, we in essence entered information twice: once with full acquisitions and financial information combined with cataloging"kp"vj g"qrf "KNU, and once again with only copy cataloging in the new ILS. Despite the double work of entering new titles in both systems for several months, this approach shortened the period in which new information was only added to the old ILS, reducing the amount of catch-up entry into the new ILS.

Patron data needed to be loaded afresh; historical circulation and acquisitions data did not migrate. Because a complete year of acquisitions data was needed for financial reporting and collection assessment, no attempt at partial budget entry into the new system was made during the ending months of year 2014/2015 - only holdings were added to the new system. Because no circulation records migrated, the hardcopy usage data began to populate the new ILS from scratch — providing

a once-in-a-lifetime opportunity to see a spontaneous snapshot of the currently most-used subject areas and publication dates of the circulating library collection.

Life with the new ILS

The **interface** is clean, modern, and securely accessible from anywhere with the user's choice of web browser. On the downside, the silos between modules result in formerly simple tasks requiring multiple steps in two or more modules. Moreover, a variety of data did not migrate. While the new system's vendor provided lists of the non-migrated data, the amount of data resulted in the need for extensive manual reconciliation of the catalog database with real-world library holdings. Some of the non-migrated data were the result of missing items from the pre-migration inventory, but other missing data did not share commonalities that would prompt expectations of categorical exclusion from migration. After initially approaching these data reconciliations as the gaps were discovered, the library conducted a new formal inventory as the basis for a full and systematic reconciliation of the holdings data. The post-migration data reconciliation project continues.

The old system's **budget** structure provided cross-referencing between library acquisitions fund codes and the campus budget account codes. The built-in fund management accommodated customizable groupings. Examples included groupings by subjects, formats, purchase types (for example, reference or replacements), and smaller groupings for specific reporting purposes. The new system's budget structure allows for unlimited fund codes and up to five layers for arranging the fund codes into suitable hierarchies. Fund management for cross-referencing fund codes across campus or groupings is not included in the new structure. In the old system, updating the budget required an intermediary posting step. The new system updates the budget automatically in real time. While the old system's budget structure was more customizable, its export allowed for text output. The new system's budget data export cleanly in Excel, CSV, and PDF formats. The old system's exported budget data included totals (and subtotals where applicable); the new system's budget export function outputs raw data that require the added step of Excel formulas to provide the applicable totals and subtotals. **Analytics** include standard reports mirroring library functions, customizable report design, and evaluation tools for the library's own collection as well as peer comparisons. Excel-compatible exports are clean - data do not bleed across into neighboring fields as our old ILS had done, making the data immediately ready for further analysis. With the entire system still in its early years, analytics are still being built-out. Many new querying nuances have been added during our nearly two years with the new ILS.

Training is provided in abundance. The weekly onboarding webinars and later sandbox access during the pre-live period provided in-depth exposure to the system functions. The ILS vendor also provides a multitude of live webinars and recorded tutorials (accessible online on demand) devoted to specific functions including specific tasks.

Workflow Impacts

Broader impacts: The old ILS entailed system and server maintenance and separation between acquisitions, copy cataloging, and physical processing. That scenario left no staff time for the needed work of cataloging special materials or for establishing the much-wanted institutional repository. The new ILS modules bundle the steps of ordering, adding the received copies, and copy cataloging; thus these tasks were combined into a new acquisitions & description unit. At the same time, a new metadata unit was formed to combine original cataloging with the new initiative of systematically cataloging our many unique local history and archival materials to make them discoverable to our user communities. Lastly, the former systems functions were split up: a computer-savvy staff member took over the library's liaison role with IT, while a new librarian came on board to take over newly reconfigured systems duties to jump-start and maintain the long-desired institutional repository.

Acquisitions and collections impacts: Vendor records: Vendors' general information is shared across all of the new cloud-based system's users. The library-specific information is added to the general vendor information, but only visible securely to the individual library. If a library adds a new vendor, the vendor's general information is subsequently available for all other libraries' use for adding their own specific vendor account information. **Cataloging:** Bibliographic records are shared across all ILS customers. Any changes (for example, spelling corrections) made to the record are subsequently seen by all libraries. Specific libraries' holdings information is attached to the bibliographic record in form of a local holdings record, but these local holdings data do not intermingle with other libraries' holdings information. **Ordering:** Titles are searched in the staff mode of the worldwide shared catalog, then an order (visible only to the ordering library) is created in a series of guided steps. Electronic transmission is supported for most vendors. Transmission options can be set by each library and include email message, EDIFACT, print orders, or no transmission in cases of orders placed directly from vendors' online portals. **Knowledge Base for e-resources:** Electronic titles are shared by all ILS users in a knowledge base. Titles include individual e-journals, ebooks, databases, and a variety of custom collections such as patron-driven acquisitions collections or institution-specific or consortium database packages (set up through the ILS vendor and e-resource aggregators). Purchasing an e-resource entails a series of built-in steps to create a library order starting from the Knowledge Base's e-resource record. **Gifts:** The new ILS task bundling combines adding the received copies with copy cataloging — copies can be added without first creating an order record. Gifts can thus be added without first creating order records; a note on the holdings record shows the gift information. This design is in contrast to the old system in which gifts were added with order records and gift information was entered in note fields fully searchable in the analytics tool. While the new system's task bundling decreases processing time for adding gifts, analytics reporting for new acquisitions excludes gifts. The analytics module is growing in flexibility and searchable fields, but the staff note and public note fields containing the gift information are not searchable. Absence of staff-note searchability prompted the quest for alternatives for capturing the gift information. We learned through trial and error that the ILS discovery tool searches the public note field but not the staff note. To make the gift information findable, we add gift information including donor and year to the public note in order to make the information systematically findable with the discovery tool. **Collection assessment. (1) Expenditures:** The new system's financial data export cleanly, but totaling the numbers requires further work with specific spreadsheet or database tools which are relatively simple to set up. (**2**) **Circulation:** The old system provided circulation totals by call-number ranges and formats. The old circulation totals were clustered by call-number ranges. These were then grouped into our academic programs using queries in a specifically designed Access database. The new system's collection reporting tool presents collections by call number, format, and publication and allows limiting factors such as minimum number of circulation transactions. The resulting output provides total titles circulated at least the specified number of times (broken out by call number areas), but no such table view is available for total circulation transactions broken out by call number areas. Obtaining circulation totals requires exporting a table with the individual titles associated with the overview tables. Each individual title shows the total circulation since the new system went live — these must be added up by call-number ranges reflecting our academic programs in order to arrive at circulation totals. This design gap currently leaves us without ready access to subject-specific circulation totals. This in turn reduces options for comparing usage against expenditure.

Consortial holdings data sharing impact: Our library participates in the Partnership for South Carolina Academic Libraries (PASCAL) consortium and has historically shared holdings data with the consortium's union catalog, as the basis for our participation in the consortium's cooperative lending and borrowing. Our old system's holdings were automatically ingested in PASCAL's union catalog. Sharing our holdings using the new ILS now entails query-based extraction of requestable subsets of our holdings in mrc format. The

records extracted from the new system are structured as two parts: One part is the bibliographic record with description; the other part is the holdings record with our institutional OCLC symbol and item-specific information including the location, call number, and barcode number. In instances of multiple copies or multi-volume sets, the bibliographic record is accompanied by multiple holdings records for each copy or volume as required, in addition to each piece's location, call number, and item-specific barcode number. The new system's vendor provided us with a Perl script to combine location and call number from the separate bibliographic and holdings records into the 994 and 999 MARC fields on the newly combined bibliographic record to make the resulting records compatible with the structure required for sharing with the PASCAL union catalog. In multi-copy and multi-volume instances, the multiple holdings records are translated into separate MARC 999 lines showing each item's shelving location, call number, any identifying copy or volume enumeration, and each item's barcode number. The vendor also provided a library contact who provided insights and helpful tips for setting up this process. Instituting this regular project required a tech-savvy librarian's crash course on Perl programming in order to understand the script and customize it with desired alterations. Owing to the Perl script learning curve, the task remains with one specific individual.

Conclusions

Changing systems is a large undertaking with lasting effects on library services and operations. One big challenge with any migration is incorporating the pre-existing and the new: Activities necessary for implementing a new system include, for example, learning and applying new system functions, identifying and pursuing needed but not-yet-developed functions, and post-migration work which can include extensive data cleanup. At the same time, the library's pre- existing operations and services must continue with accuracy and timeliness. After nearly two years with our new system, many routine collection management areas have been normalized to the new ILS, but other tasks have not found a new framework owing to still-outstanding system developments. The vendor's abundant live and pre-recorded online training is a goldmine for learning about new features, learning new tasks, or simply refreshing one's knowledge of the modules' many features. Our new ILS vendor is accessible and the user community openly and enthusiastically shares solutions. On one hand, system migrations can invite comparisons between the old and the new. On the other hand, ILS migrations also provide opportunity to update workflows and embark on desired projects previously impossible within staffing and system-function constraints. ILS migrations also provide many skill-stretching opportunities.

Insights

For libraries considering a move to a new system, here are seven beneficial guideposts:

1. Due diligence: When selecting a new library system or services platform, it is important to assess how well the system or services platform and its user interfaces support the library's services and operations and system interoperability needed for consortium participation, both by consulting available information sources and by ascertaining the needs of library user groups.

2. Selection and future-orientation: Selection and evaluation should take into account the library's current and evolving operational needs, as well as information gleaned from due diligence fact-finding.

3. Decisionmaking: Collaborative approaches increase the range of needs factored into the selection, while top-down unilateral decisions can overlook key factors and thereby lead to productivity losses stemming from incomplete system capabilities.

4. Communication and support: Managing expectations and empathy for uncertainties help staff users see long-term benefit beyond the changes. Information should be shared early and continually.

5. Data migration and contingency plans: It is crucial to ascertain whether all the data needed for operations will migrate. Special attention should be given to post-migration contingency solutions to remedy migration gaps, and these should be specified in the contract.

6. Preparation and data deep dive: Thorough examination of data structures and system capabilities will ensure successful data mapping and conversion between the old and new systems. A rigorous contingency plan, as outlined above, is important for addressing data anomalies encountered in the migration.

7. Training: Rigorous and continual training promotes self-efficacy and confidence.

For Further Reading

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