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Hope Barton
University of Iowa Libraries, hope-barton@uiowa.edu

Michael Wright
University of Iowa Libraries, michael-wright@uiowa.edu

Rany Roeder
University of Iowa Libraries, randy-roder@uiowa.edu

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It Never Ends...Technical Services and Planning in a Changing Environment

by Hope Barton (Director, Central Technical Services, University of Iowa Libraries)  <hope-barton@uiowa.edu>

and Michael Wright (Head, Acquisitions and Rapid Cataloging, University of Iowa Libraries)  <michael-wright@uiowa.edu>

and Randy Roeder (Head, Complex Cataloging Unit, University of Iowa Libraries)  <randy-roeder@uiowa.edu>

Introduction

Libraries are facing a period of transformational change. The ubiquity of electronic and networked information has changed their customers’ expectations for timely access to an ever wider variety of materials and services. It is important for technical services departments to handle acquisitions, cataloging, and maintenance work efficiently, to make adjustments to ensure the steady flow of materials through the department, and eliminate the potential for backlogs. This article presents one library’s approach to reviewing and assessing traditional functions in the light of changing user needs and enhancing its flexibility to take on new metadata work and hidden collections cataloging.

The Central Technical Services Department (CTS) of the University of Iowa Libraries consists of two units: Acquisitions and Rapid Access (ARC) and Complex Cataloging (CCU). As CTS leaders, we felt it was necessary to review all operations in light of the rapidly changing library and information environment. Given the differences in the nature of the work performed each unit, we believed it would be more effective to have separate planning processes. In recognition of the magnitude of change likely to result from the reviews, it was decided to seek the services of the University’s Office of Organizational Effectiveness (OE) to guide us through the planning efforts. After consulting with OE staff, a modified Lean approach was selected as most appropriate for accomplishing our workflow review.

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Lean is a process improvement tool pioneered by Toyota that seeks to eliminate steps which fail to add value to a process, promote those which do, and note necessary steps which are neutral. A typical Lean event involves an intense multi-day event, known as a Kaizen Blitz, where participants go through a set of exercises designed to eliminate waste (processes or steps which don’t add value to the end product), improve quality, and reduce costs and process time. Numerous variations on the technique exist, but for the process to be effective it is best that commitment and ideas flow from line staff upward. A Lean event typically begins with an agreed-upon “case for change” — reasons why the effort is seen as necessary. Changes might be structural or workflow oriented. Once established, goals and desired outcomes are formulated, as are specific metrics designed to gauge the success of the Lean event. The technique is built on the understanding that few workers strive to be inefficient and that most have ideas for improvement. Unlike a more traditional Lean process, the one established for ARC was spread over nearly two months, as opposed to the very intense three-day long “blitz” approach. For ARC staff, this worked well, and allowed tensions to evaporate between meetings.

CTS used a variant of Lean developed by OE for an academic environment. The OE model recognizes the importance of the social side of an organization and that change is often difficult for those involved. The local program also places heavy emphasis on gap analysis. The review group takes a structured approach to analyzing the ‘current state’, developing a future or ‘ideal state’ and determining a realistic alternative. An analysis of the differences, or gap, between the states is made and methods for bridging the gap (action items) are formulated. OE facilitators work to create a social environment conducive to the free flow of ideas while guiding the group through a series of exercises that provide focus to the activity. Although the review group is ultimately responsible to see that action items are accomplished and that ongoing process review becomes part of the workplace culture, OE staff monitors progress via a series pacing reviews.

ARC operations include acquisitions, receiving, rapid (copy) cataloging, and electronic resources management. It has a staff of 26 FTE with two professionals, six paraprofessionals and 18 paraprofessionals. CCU consists of 19.6 FTE staff, eight professionals and 11.6 paraprofessionals, and is responsible for monographic and continuing resource cataloging and catalog maintenance. Although each unit has distinct functions, there are overlapping responsibilities that must be closely coordinated to maintain consistency and efficiency. A CTS supervisors group has been formed to identify areas of mutual interest and to improve communication and collaboration between the two units. This group will play a key role as we move forward in implementing the plans we have developed.

Given that ARC was a newly formed unit, it was the first to proceed with its Lean planning process. While the workflows of the unit fell very logically into the Lean concept, staff schedules and the nature of the functions performed by the staff participating in the process did not allow for the typical blitz format to be used. Instead, the twenty-four hours of Lean exercises were conducted in two to four hour sessions over a period of six weeks. On the other hand, the objectives of the CCU Lean review were not as workflow oriented as most Lean processes, but the activity was conducted in the standard blitz mode. Given differences in the nature of the work of the two units, the action items resulting from each review were quite different.

ARC Planning

On May 1, 2006, the new Acquisitions and Rapid Cataloging (ARC) Unit was formed. An amalgamation of the former Acquisitions, Rapid Access, and Electronic Resource Management Units, it was clear from the beginning that there were overlaps of work, and repetitious, redundant and likely unnecessary tasks being done in each area. The merger of the three units allowed an examination of the efficiency and effectiveness of total processes, not just individual elements. This was important: only a careful analysis and overhaul of workflows and procedures would truly make one functioning unit from three.

We needed and formed an action plan. As soon as the merger of the three units had been approved administratively, but before staff was informed, the director for Central Technical Services, acting Acquisitions Unit head, and the soon-to-be head of the new ARC unit began meeting together and with staff from the University’s Office of Organizational Effectiveness (OE) to plan what slowly morphed into a Lean process. Participants included the unit head and seven paraprofessional managers.

The ARC process started with a case for change — why we felt we needed to undertake a top to bottom review of our work. Among the reasons cited:

• Merger of three units allowed for an opportunity to examine efficiency and effectiveness of the total process, not just individual elements
• Changing customer expectations and some customer complaints related to processing times
• The existing process had potential to backlog materials processing (as often happened)
• Benchmarking with selected peer libraries indicated that Iowa was behind in utilizing technology and vendor services

There was, additionally, agreement to view processes through the eyes of a customer, not those of a staff member, as well as a willingness to create an adaptable environment in which the speed of acquisitions and processing would be increased by at least 25%, as measured by specific metrics.

Realizing certain constraints (limitations of our ILS, laws governing business processes, etc.) efficiency evaluation began with the serials ordering process, the then-current state. When parsed out on paper this took a whopping twenty five steps depending on the type of material (print or electronic) being ordered. Participants analyzed the steps in terms of...
the Lean guidelines. Not surprisingly, it was tougher for some more than others to detach from well-known processes, just as it was much easier for “outsiders” to the workflow to see steps which didn’t add value, but which took time and energy to complete. When push came to shove, the serials ordering process was reduced to six or seven steps, depending on the type of serial. The Lean pattern was repeated for monographic acquisitions (which didn’t have as many steps) with similar results and for electronic resource acquisition and activation.

Agreement to improve the serials acquisitions process came by emphasizing improved internal processes and adding staff (via internal reassessment without significant change in vendors or technology). The similarities between print and electronic serials resulted in a number of processes being merged. This was not the case with the monographic acquisitions process (which included approvals). Not only were local processes evaluated, but a recommendation was made following lengthy discussion to leave our long-time approvals vendor and move to YBP. We chose to establish a system-wide virtual approval plan, where automated processes would do the pre-order checking and, at least at first, no physical books would ship automatically. This was a huge step for a very traditional operation, and one which would alter workflows and a number of job descriptions. The most radical piece, although no one realized it at the time: selectors would place their own orders without intervention from ARC staff. With support from the University Librarian and the Directors for Central Technical Services and Collection Development, ARC went forward with our largest Lean recommendation. Selectors were, if cautious, willing to give the experiment a try. To prevent duplicates, we loaded ISBNs for every item purchased from 2001 to date into our ILS and weekly ISBN updates were scheduled. We also provided the titles of some 3200 standing orders to YBP, in order to prevent “approval” selections from duplicating against them. This armed, we felt the chance of duplication from the virtual approval process was slim. The plan went live in January 2007; while there were glitches, most were minor. The duplicate check/standing order block works exceptionally well. Nine months later only five items had duplicated which couldn’t be attributed to initial bugs in getting the checks operational. Selectors appreciate the control offered by the virtual plan. They can identify and order books online without looking at physical volumes or paper slips via YBP’s GOBI selection database where and when they want. All materials selected are directed to receiver/catalogers immediately upon delivery, and are now on the shelves very quickly, often within two weeks of ordering.

The Lean process, coupled with the merger of three units into one (and genuine assurances from management that no decision was set in stone), gave ARC staff the freedom to try something new. Multiple workflows were reviewed and adjusted, but none so completely as the monographic approvals process. The success of that change helped ease the way for other adaptations: the sky didn’t fall, no one lost their job, and improved processes made for better relations with our internal and external customers. Overall, working with a Lean process helped staff take ownership of the new unit and to the opportunities its formation provided.

Complex Cataloging Unit Planning

The CCU will face a number of challenges in the coming months. The number of newly acquired resources will decline as shelf-ready arrivals increase and collections requiring cataloging will be targeted for transfer to the Archival Facility and/or prioritized for a Google Book Search project. The unit’s role in creating metadata for a growing number of digital initiatives will be defined. Given the success of the ARC Lean review, management contacted Organizational Effectiveness for assistance in planning for the transition.

After some discussion, the Lean methodology was again selected. The CCU planning effort was not an obvious candidate for a process review. The unit was more interested in planning than in existing operations; workflows are relatively straightforward; the unit has little control over the work assigned to it; and there were no obvious hitches in production.

Once the decision to use Lean was made, we wrote a case for change, defined the scope of the project, developed objectives and metrics, and established a time frame. All unit activity was defined as within scope of review. Seven objectives relating to processing time, item tracking, project completion, communication and sustainability were defined. Metrics for customer and staff satisfaction, project completion, and processing efficiency were developed. A 16-month time frame for meeting the objectives — based on the expected crunch time for the Google Book Search project and the Archival Facility—was chosen.

After completing the initial work, we met with OE to review the project’s scope, examine the unit’s organization chart, and determine appropriate participants. Eight participants were chosen on the basis of supervisory responsibility or unique expertise. A customer — a branch librarian sometimes critical of unit services — was added to the mix. The nature of the objectives reinforced the decision to use a standard Lean process, and to schedule three full-day meetings — a Kaizen Blitz.

Two facilitators from OE guided the process, and as with ARC, kept planners on task and on schedule, established ground rules, focused the discussions, and defused occasional tense moments. The facilitators were flexible and adapted quickly when the group made an unexpected request to change the status of the CTS Director from “on call expert” to participant and to add seven more objectives — focusing on collaboration within CTS, training, documentation, and technology needs. After adding the new member and finalizing the objectives, the group analyzed the gap between its current state and an imagined ideal to develop a pragmatic vision of a more efficient future.

Although the planners worked through the Lean review in the traditional way — with a structured multi-day blitz — the composition of the team, the nature of the work performed within unit and the unit’s position in the CTS workflow produced atypical results. Of the twenty seven action items developed, twelve extended beyond the boundaries of CCU. Although the group may have felt more comfortable looking beyond unit borders with the departmental director present, all action items were generated at the staff level. CCU’s straightforward workflow with few hand-offs, did not prove to be fertile ground for streamlining. Action items focused on efficiencies continued on page 52
achievable through training, communication and IT support. Planners came to realize that the unit will be increasingly dependent on project work and added items involving learning, flexibility, and collaboration to the list. Action items fell into seven categories:

- Improving workflow between the CTS units and other departments
- Creating a CTS-wide program of training and cross-training
- Creating single point for CTS documentation
- Lobbying for improved technology and software
- Re-thinking authorities, non-Roman alphabet and video cataloging
- Redesigning work spaces to improve flow and communication
- Collaborating with others on metadata work

It has been two months since the unit’s Kaizen Blitz. A presentation to the Libraries’ executive officers has been made and work on initiatives involving inter-unit communication, non-MARC metadata, and redesigned work space are under way. While a traditional Lean process review might not have seemed suited to a unit such as Complex Cataloging, the initial assessment of the unit head and the Libraries’ executive staff is that the review has been productive and will do much to position the unit for the future.

Conclusion

We believe that both Lean reviews were successful. The action items generated by the reviews lay the foundation for continued bottom-up planning and ongoing collaboration within CTS. One of the tenets of the Lean method is that the review of workflows and priorities becomes permanent and ongoing. Continuous review enables an organization to look ahead and ensures our flexibility in a changing environment that is becoming increasingly project focused. A second tenet of Lean is a focus on customer needs, an outlook necessary if CTS is to remain relevant within the library. We believe that the combination of bottom-up planning, ongoing review, and a strong customer-focus are the keys to success in a time of transformational change.

Suggested Reading


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Old Wine in New Bottles: Repurposing MARC Records for Electronic Databases

by Carol Ou (Systems Librarian, Tutt Library, Colorado College) <Carol.Ou@ColoradoCollege.edu>

and Gwen Gregory (Head of Bibliographic Services, Tutt Library, Colorado College) <ggregory@ColoradoCollege.edu>

In exposing access to licensed electronic databases, Colorado College’s Tutt Library has historically opted to provide links to these databases in two general areas: as part of our online Web presence and within the online library catalog. The work to describe these databases and maintain their links was done separately for each of these two platforms, though by the same library department. In investigating methods to update the library’s overall Web presence and improve maintenance workflows, we specifically targeted the process of maintaining database links on the Website.

Here at Colorado College, we started out years ago with a Webpage containing an alphabetic list of the databases to which we provided access. In the beginning, it was a relatively short and simple list of a dozen or so titles. Over time, the list grew and grew. We added some titles that were available free of charge. We added extra entries for titles that were known by several names, such as Lexis/Nexis Academic Universe (listed under L and under A). We also created a variety of special subject pages where only selected databases were listed; there were eventually several dozen of these. We continued to also fully catalog the individual databases in our online library system.

A cataloging staff member was responsible for keeping the Webpages up to date. This became an increasingly complex task as the number of Webpages and databases both increased. When we purchased access to a new database it might be added to as many as a dozen separate subject pages in addition to the main alphabetical list page. When a URL or a database description changed, we had to search out all these spots to change it. This caused more work and also increased the possibility of missing a step and not providing the correct link on any given page. Another cataloging staff member cataloged the titles into our online catalog.

Tutt Library certainly has not been the only library to consider the problem of efficiently and effectively maintaining database links on the Web. Some libraries have chosen to build a database of databases, that is, a separate local database of database links and other information that is automatically and dynamically used to populate corresponding Webpages. The advantage here is that the database information can then be maintained in one place, in this database of databases, instead of manually across a number of static pages. When a single entry in this database of databases is updated, the change automatically propagates across all the Webpages that this system is responsible for generating. An example of this method can be seen in action at the Emory University Woodruff Library (http://web.library.emory.edu/databases/) where the data in the system is managed by their Research & Instruction Services department.

Another option is to provide access to these licensed databases via a federated searching or continued on page 54

<http://www.against-the-grain.com/>