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Utilizing the Power of Continuous Process Improvement in Technical Services

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PATCHWORK

Utilizing the Power of Continuous Process Improvement in Technical Services

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In July, 2003, the Lamar Soutter Library, University of Massachusetts Medical School, initiated a Continuous Process Improvement (CPI) project. The project's goal was to reduce time and/or save money by examining and improving work processes. Although staff members were already working hard, cuts in budget and staff required increased efficiency. The library's patient-care mission also required a faster turnaround time for the delivery of health-related resources. The CPI team was charged with reducing turnaround time of processes within the Technical Services department by 50% or more. The processes included: (1) Book acquisitions (from ordering to shelving) and (2) Im-

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plementation of serials title changes. The team was given six months to analyze processes and make recommendations, to be followed by a six-month pilot project testing the recommendations.

The Technical Services department includes the functions of collection development, acquisitions, cataloging, serials, binding, government documents, and preservation. Team members were appointed based upon job function and experience. It was important to include everyone participating in the processes in question in order to encourage buy-in for future change.

WHAT IS CONTINUOUS PROCESS IMPROVEMENT?

There are many approaches to Continuous Process Improvement. Most aim for small improvements rather than large-scale change, and strive to eliminate activities that have no value. Continuous Process Improvement is important for workplaces because Pareto's Principle (the 80/20 rule) applies. It has often been said that processes account for 80% of all problems while people account for the remaining 20% (1).

The CPI team did not require extensive training. When the Library Director launched the CPI initiative, she invited a representative from the University's Human Resources department to a staff meeting to introduce the concept. The trainer provided a brief handout and showed a short video from the American Management Association called *Time: The Next Dimension of Quality* (2). The approach explained in the video, called "Value-added Flow Analysis," has three parts:

1. Imagine yourself as the actual thing in process
2. Identify steps in the process and then time each one
3. Determine if the steps add value.

Value is defined as:

a. The customer cares about it and recognizes it as important and correct (Note: for Technical Services, customers are Library staff and patrons); and
b. The step physically changes the thing in process (moving or copying doesn't count); and
c. The step is done right the first time

The Technical Services CPI team followed this approach. Team members who performed the tasks flowcharted and timed current workflow. The Library's procedure for end processing of books after cataloging is shown in Table 1.

PROCESS 1: BOOK ACQUISITIONS

The Value-added Flow Analysis revealed a number of inefficiencies. For example, *approval* books (those newly published books selected by the Library's book vendor based on a profile that supports the University curriculum) were held for 30 days before cataloging. The rationale was, that during that 30-day time period, the books would be reviewed by the Library Committee and reference librarians. Yet it was rare that anyone other than the Collection Development Librarian and one or two reference librarians reviewed them.

Another ineffective practice was that records for books that had been ordered but not yet cataloged were routinely "suppressed" to prevent them from displaying in the OPAC. This required extra steps on the parts of both the Acquisitions Librarian and catalogers, even though it might be valuable for staff and patrons to know that a book was on order.

The team also identified some duplicative steps, for example, more than one person was reviewing NLM bibliographic records during acquisitions and cataloging. Redundant tasks, such as stamping the Library's name on three edges of all volumes, were acknowledged, as well.

TABLE 1. Value-Added Flow Analysis for Book End Processing

Steps	Timing
Apply barcode to front cover	10 books in 18 minutes = 1.8 minutes per book (Timings can be averages for tasks that involve handling many books or journals at a time.)
Apply spine label and label protector	
Apply bookplate to inside front cover	
Insert tattle tape	
Stamp library name on 3 edges	

Some major recommendations were:

- Reduce review period of *approval* books from 30 to 5 days
- Do not suppress books on order in the OPAC
- Develop a "cataloging on demand" service for newly-received books with a guaranteed 48-hour turnaround
- Eliminate duplicative acquisitions/cataloging processes
- Rubber stamp the Library's name on only the top edge of volumes

The pilot project began in February, 2004 and ended in July, 2004. During this period, budget pressures forced the elimination of the approval book program, as well as restrictions in firm orders. Therefore, the team was unable to thoroughly test the recommendations. However, even with a small volume of books, it was apparent that the streamlined workflow was more efficient for Library staff and more helpful for patrons.

Minutes were trimmed from the acquisitions and cataloging procedures for firm orders. Whether a 50% decrease in turnaround time has been achieved is inconclusive due to the small number processed during the pilot. Certainly the *approval* book process will meet that goal when it is reinstated, just by reducing the review period by 25 days. Feedback has been positive on books on order that are now displaying in the OPAC, as well as on the "cataloging on demand" initiative.

The decision to simplify book processing by reducing the number of times the Library name was stamped on a book turned out to be even more practical for the processing of bound journal volumes. Since most binding shipments contain 150 or more volumes, the reduction in handling and turning resulted in significant time savings.

PROCESS 2: SERIALS TITLE CHANGE IMPLEMENTATION

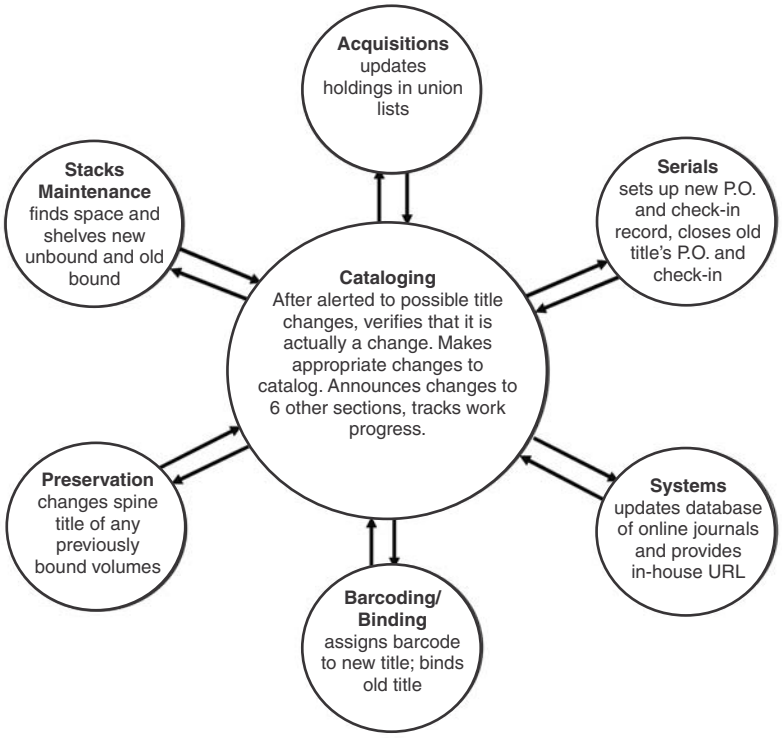
The team found that the process took much longer than necessary because of a lack of staff communication and confusion about roles and responsibilities. Steps were either falling through the cracks or being needlessly duplicated. The creation of holdings records in the online catalog had sometimes been overlooked because staff didn't know who was responsible. The flow analysis also confirmed that staff and patrons relied on a printed periodicals holdings list that is often outdated and inaccurate.

The team suggested a number of procedural changes:

- Develop an e-mail or electronic tracking system to be used by staff when a title change is identified
- Test a goal of ten working days for in-house systems to be updated
- Encourage staff and patrons to search the OPAC for serials information by discontinuing manual updating of the printed holdings list and providing more training and documentation

During the pilot project, an alternative workflow based on a "spoked wheel" model was tested with great success (Figure 1). All suspected title changes are routed to the Cataloging department, which determines if there is indeed a title change. Notice of the title change is sent via

FIGURE 1. Alternative Workflow for Serials Title Changes Used During the Pilot Project



e-mail by a cataloger to all concerned parties simultaneously: staff handling serials check-in, barcoding, binding, stacks maintenance, electronic resources, and preservation. Each area then performs its part of the title change process and reports back to Cataloging when its step has been completed.

In most cases all changes were made within three or four days, rather than ten. Occasionally, holdings information in OCLC and SERHOLD cannot be updated in that timeframe because a record for the new title is not yet available. Follow-up is then necessary to complete that step.

Technical Services staff stopped manually updating the printed holdings list during the pilot, thus far without strong objections from other Library staff or patrons. A new edition will be printed later in the year. Planning for a staff training program and enhanced OPAC searching documentation has begun and will be scheduled for late fall, as time permits.

CONCLUSION

Value-added Flow Analysis is a useful tool for Continuous Process Improvement in all libraries, whether large or small, academic or non-academic, staffed by a solo librarian or a sizeable team. This is particularly true for those areas of library work that are heavily process-oriented, such as cataloging, acquisitions, and serials. Steps can be eliminated and the process streamlined by analyzing and timing each step and asking "What is the value in doing this?" Results will be improved services for the Library's patrons and time savings for staff.

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