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I, User -- Down by the Ol' Mainstream: Backlogs and Bottlenecks

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I, User — Down by the Ol' Mainstream: Backlogs and Bottlenecks

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This ages old refrain of library technical services has led many to believe that bottlenecks are inevitable and backlogs are a fact of life. It is rare indeed to visit a library that doesn't have any. The backlog may be in selection, ordering, receiving, or (most often) cataloging and it may be described as "the" backlog; the "real" backlog, the "back" backlog, the "front log" (really), the queue, or the unfinished recon or shelf listing project. However we refer to them, they have earned permanent, full-time status in many academic libraries, costing valuable staff resources and severely limiting access. In some places, just managing "the backlog" has become a full time job.

Technical Services — A Single Workflow

As configured below, there are six basic tasks which are universal to library technical services. Every library must accomplish them. We are quick to acknowledge, however, that there is remarkable variety regarding the sequence and the methods employed. Over and over again, we find that library staff members are quite familiar with one or two specific functions, but are remarkably unfamiliar with all others. This typical lack of familiarity often contributes to an irrational and inefficient work environment, where employees become isolated and routines become outdated.

A critical first step toward improved technical services workflow is to ensure that each member of the library staff understands the entire sequence of functions as a single process, even as it crosses traditional, sometimes rigid departmental lines. When individual contributors understand their own responsibilities as part of an accurate bigger picture, they are more able to solve problems, and support procedures that strengthen the whole.

It can almost go without saying that technical services have a profound and immediate impact on the patron experience. It is obvious that the library can only fulfill its mission when the work "flows," unrestricted by bottlenecks. To a large extent, this requires adoption of a "production" orientation instead of an artisan or "expert" mentality which still prevails in many academic libraries.

Basic Workflow Components

New Title Identification is the first step in the process and can be thought of in the

same way as the fisherman's net. The net may be cast as wide as the library requires, trapping potentially relevant content. This function is well supported by materials vendors with important services such as approval and notification plans for new titles, and retrospective lists for backfilling in specific areas. As well, most vendor databases are fully browseable by subject, keyword, and interdisciplinary terms, extending options for finding appropriate content. Publishers support the title identification process via publication catalogs and new product announcements. Literary and scholarly review journals help to identify important materials that may have been overlooked at point of publication. Faculty and patrons often participate in this stage of the process, by requesting specific materials.

Selection, typically performed by subject specialists, is the second step in the process, critical insofar as it forms the intellectual basis of the collection. Incorporating many factors concerning the subject scope and depth and the overall value of the item, choices are made about what should be added to the collection, and in what format (paperback, cloth, electronic, etc.). Fund codes and "notify" notes are often added at this point. Sometimes, location codes and vending/cataloging/preservation instructions are attached. There has been a trend in recent years toward "electronic selection" within a vendor's online system or within the library's ILS. The visibility of this activity is an important advantage for peers, administrators as well as the technical support team. Visibility at this stage often translates as workflow efficiency elsewhere.

Ordering, can be almost fully automated when selections are made online. Even so, there is typically a separate staff responsible for releasing orders and encumbering funds. To the extent that orders must be created/entered manually, this function can require many resources. A surprising number of resources can be directed toward duplication control. Duplication can be controlled with automated support from the ILS, the material vendor, and by OCLC. Once orders have been placed, claims, substitutions, and cancellations must be managed, most often by the same staff that placed the order in the first place.

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Receiving and Payment can be made efficient by way of electronic and customized invoices and bib records that include fund and location codes, and "notify" notes, etc. Consolidated buying will maximize the size of shipments and invoices, thereby improving efficiencies even in a manual receiving environment. Payment must be made quickly and reliably in order to prevent publisher or vendor "holds" on new orders. Electronic fund transfer is possible for some institutions but rarely eliminates a manual audit at some point.

Providing Access to the patron is sometimes the most troublesome part of the technical services workflow. Cataloging backlogs are assumed in many places, imposing a week, a month, even a year long wait period for the patron between receipt and shelf. This process can be streamlined in-house, or can be outsourced to the vendor or to OCLC. MARC records can be purchased and loaded in batches. Holdings can be set automatically. Spine labels can be created by third parties and applied along with ownership stamps and theft detection.

Preservation of physical materials typically incorporates binding, repair, and appropriate storage. Preservation of digital materials must be addressed in two ways: preserving access and preserving content.

The last stage of the technical services workflow, much of it can be accomplished long after the content has been circulated.

Technical Services Workflow – How's Yours?

Your answers to the following ten questions may shed light on the ways in which your library's tech services workflow could be improved. If you don't have answers, you may want to find some. Your patrons will thank you.

Do your processes and staff adhere to production principles?

In designing and creating a production environment, the emphasis is on making tools and processes as similar as possible. This approach makes training and sharing of tasks easier, and allows staff to be deployed where they are most needed. The primary principles for consideration are:

- Common/Shared Tools and Software
- Redundancy/Cross-Training
- Linear Process
- Discrete and Recognizable Stages within the Process
- Maximum Value Added at Each Stage (touch it once)
- Complete Each Stage as Early as Possible in the Process

- Complete Each Stage before Beginning the Next
- Prevent Bottlenecks by Staffing or Automating
- System/Tracking (progress viewable by all)

It may seem antithetical to view an academic library in this manner since its mission is to support more creative and even capricious explorations. But ultimately the library is a tool, and a tool, however used, must be reliable and predictable.

Can you define your MAINSTREAM?

Every bit of content is unique in very important ways. This concept is sometimes carried into the library's workflow design such that every selection, every order, every claim, every invoice, and every receipt is seen as unique, unlike any other. This orientation is the antithesis of a production workflow and must be recast for the sake of efficiency. Patterns exist, and must be identified with broad strokes. Patterned work must be batched, and rules/procedures must be imposed for speedy throughput of batches. Decision making should be eliminated from batch processing, allowing for maximum automation. This pat-

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terned automatable workflow is the mainstream. It should be broadened at every opportunity.

What does the workflow look like when drawn on paper?

If you haven't done it for a while, you may learn something by looking at a picture of the entire workflow; from title identification through access provision and preservation. It might take some time, and several pieces of paper. Include information about individuals, their discrete tasks and decisions, data elements, time spent, volume of work, methods of communication, tools and programs used, tracking mechanisms, queues, backlogs, bottlenecks, rework. Be sure that you're aware of situations in which the same person is responsible for several sequential or non-sequential steps in the process. Be sure to look for the mainstream. If the picture doesn't show one, it might not exist.

Do bottlenecks and backlogs exist? Under what conditions?

If the goal is to design and staff for a scalable, production-oriented workflow, the organization must be willing to rely on a process rather than a person to ensure results. For example, it is limiting to expect anyone to "review" ALL of anything. This concept eliminates the opportunity to increase throughput beyond the capacity of a single individual, or a single group of individuals. We have found that single threading or "hub" routines exist often in tech services, sometimes evidenced in job descriptions with phrases such as "point person;" "throughout the process;" "review all;" etc. In a production environment, it should be unnecessary for any individual to review "ALL," except to compensate for flaws in the workflow design.

Are there units or functions or tasks that management doesn't fully understand?

To some degree most academic libraries have become captive to an "expert mentality," particularly prevalent in Serials and Cataloging. There is a predominant sense that an expert, primarily manual, item-specific approach is the only valid approach, and that a very few experts can truly understand (and do) what

needs to be done. When this orientation prevails, otherwise good managers lose confidence (lack specific expertise) and inappropriately allow the "experts" to retain responsibility for making decisions about "what and why" and sometimes "whether" specific work should be done within their departments, in addition to the more appropriate "how."

The expert orientation is not uncommon, but is the opposite of a production mentality and can excessively restrict the amount of work accomplished. "Experts" sometimes use their knowledge to obfuscate and confuse the rest of us, thereby retaining control of whatever agenda or project is under discussion. Management has the responsibility to decide whether the expert approach is worth the time and expense required, in light of all of the other library objectives.

At times there are good reasons to approach projects or conversions with a "quick and dirty," systematic, or automated solution in the interests of speed and reduced cost, or to outsource a project even when the results are less than optimal (accept a 95% or a 98% result), especially if this will keep expert staff focused on more important, strategic, or difficult tasks.

To what extent does your ILS support the workflow?

The picture of your workflow should help to answer this question. Which tasks/functions are accomplished outside of the ILS? Why? What other tools, spreadsheets, vendor databases, are used to accomplish important steps in the process? Are there instances when data must be double keyed, or re-keyed into the system?

Is your ILS fully utilized?

Determine the extent to which manual tasks might be redesigned such that they are supported by the system. Working online is always preferable. Which functions are entirely external to the system. Why? Is there someone on staff who has become the system expert? Who knows all the features and functions available?

Is each element of the library's mission reflected in specific departmental policies and functional requirements?

Find a copy of the library's mission statement. Now compare it with the vast array of technical services documentation.

Are there parallels? Specific references? Goals trans-

lated to specific functional requirements? Simple interpretation/reformulation of the library mission into tech services production requirements can provide sorely need direction to floundering tech services departments.

Are performance measures tracked and reported?

Establish minimum throughput requirements (acceptable pace) and required queues at each stage. All too often, we see staff members tracking time spent, even to the quarter hour within specific functions ("other" is often the biggest time sink). Rarely do we see, however, the corresponding daily/hourly rate of production, or daily/hourly information about what's in the queue or the backlog. At all times, every employee should know the extent to which s/he and his/her unit are meeting expectations. And the extent to which missed goals affect the patron.

Too often library staff members extend their own tasks (time spent) according to a personal sense of what is "best." This must be eliminated. Strict productivity requirements must be imposed on every function, and especially on "special" projects. Project creep must be disallowed. Even professional staff must be held accountable for the way they spend their time and for a measurable level of productivity.

Have vendor, agent and aggregator services been reviewed lately, with an eye toward speed and cost effectiveness? Are your vendors fully utilized? It never hurts to reconsider various options for outsourcing. Knowing your own cost structures (measurable performance standards help) can make it possible to judge the value of various identification, aggregation, cataloging, shelf prep and preservation services offered by third parties. Understanding the specific value of local practice in each of these areas will help you to rationalize choices and trade-offs.

And Who Has the Time?

No one has the time for this. And very often, redrawing the big picture requires considerable time. Workflow analysis and redesign can be outsourced as well, creating opportunities for a valuable outsider's perspective. In any case, you probably owe it to your users to have a look every once in a while.

But then, old familiar refrains are comforting; make us feel good; suggest persistence in a time of too much change. Backlogs can be seen by some as a form of security, a savings account of available work. Others might, with equal justification, view them as looming credit card balances complete with compounding interest rates.

What's your take?