» "The library is the temple of learning, and learning has liberated more people than all the wars in history." -CARL T. ROWAN

Strategic Library™

COMMUNITY ENGAGEMENT THROUGH SERVICE-LEARNING

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Implementing a Systemwide RFID/Materials Sorting Strategy

» Queens Library makes it work even when one size doesn't fit all.*

BY THOMAS W. GALANTE

In a world that routinely deals in terabytes and trillions of dollars, repeating the same manual action 75 million times a year is a big load. Queens Library (one of New York City's three public library systems) is among the most heavily used library systems in the world. The library employs more than 1,400 individuals at 62 public libraries, which serve 2.3 million people in Queens County, New York.

By 2004, however, the library had become a victim of its own success. Circulation was skyrocketing, and so were the repetitive clerical tasks required to check out materials against patron accounts, then check them back in again. If even one out of every 1,000 items was not manually scanned back in properly, with Queens Library's circulation, it would mean that 17,000 items were not removed from accounts in a timely way each year.

Customers became angry when they had to wait in line for 20 minutes or more for routine circulation tasks, a sure barrier to increased usage. Almost two million transactions were required to collect small amounts of cash for extended use fees.

A NEW STRATEGY

Faced with these challenges, the administration of Queens Library made a strategic decision: talented, trained library staff must spend the bulk of their time helping customers. Automation should be deployed to do the repetitive circulation work.

The motivation for this strategy was not solely about a traditional cost/benefit return on investment. It was also about changing the service delivery model to re-



deploy staff into all the other services and programs needed to ensure that Queens Library would continue being a relevant and vibrant public library today and tomorrow.

The strategy envisioned that, when fully deployed, self-service would yield the following productivity and customer service gains:

- Automated self-service kiosks would increase the number of service points (350+) without increasing staff headcount. They would also provide 350 additional points at which library programs could be marketed, donations could be sought, and other interactions with customers could happen.
- The ability to pay fines and fees right at the self-service check-out would be more convenient for customers and yield more money collected.
- Self-service check-in would remove books and videos from a customer's account in real time and be 100 percent accurate, avoiding a lot of bad will.
- Automated pre-sorting of returned materials at the point of return would save a tremendous amount of time and labor. In addition to sorting the returned materials, the system would automatically print a wrapper for requests and holds that have just been returned and get them in customers' hands in the shortest possible time.
- Materials could be returned when the library was closed, a huge customer service plus.

IMPLEMENTING THE STRATEGY

Queens Library staff began researching the software, hardware, and systems required to accomplish the following tasks: allow selfservice check-in and self-service check out of materials with real-time updates to patron accounts; accommodate self-service payments via cash or credit card at check-out or online; provide the capability for 24/7 secure returns; incorporate multi-lingual user interfaces; and provide automated returned materials sorting where appropriate.

With more than six million items in the library's collections, in excess of 850,000 library cards in use, and multiple software systems already in place, accomplishing the needed change system-wide was a daunting prospect. To further complicate the upgrade, each of the library's 65 locations is physically very different from the others, making the installation of the necessary equipment in each location a challenge.

Nevertheless, if Queens Library was going to realize its strategic vision — providing human resources to serve customers and remaining relevant to customer needs in the future—the way forward was clear.

The centerpiece of the new approach was the development of a unique "identifier" that would mark every library item and every library borrower's card. The rest of the system would radiate from there.

The following steps needed to be in place before implementation could occur.

Identify the technology needed to drive

the self-check system. High frequency RFID technology was chosen as the most versatile and convenient for customers.

Identify hardware/software development partners who would assist Queens Library in customizing solutions to our specifications. For check-out systems, it was decided to find a software solution that could be run on a standard desktop PC for cost-savings and ease of maintenance.

Map a flow of information among the library's existing systems. All the systems used in the library had to work and communicate together. In the process and in the final product, data must remain secure, and customer privacy must be protected.

Work with partners to build prototypes. In its essence, automated self-check consists of an antenna or reader that picks up information both from the RFID tag on a patron's library card and from the RFID tag on the item(s) to be checked in or out. The check-out/check-in information is then transmitted to the patron's account, and the embedded anti-theft bit is simultaneously switched on or off.

Everything else involved in the system furniture, information screens—is just packaging. But the packaging is what will make the system a success with consumers, so key questions needed answers before proceeding: Are the information screens attractive, usable, and convenient? Does the furniture need cup holders?

Create electronic bridges. The library's various software systems needed to communicate with each other quickly and reliably without creating security problems. To achieve this goal, Queens Library used SIP2 protocol.

GAUGING REACTIONS

Once a prototype was developed, the user experience was tested, changes were made, and then the process was tested again and again. This is where engineering and computer logic stumbled against the infinite mysteries of human behavior.

If the new system was going to be successful, it was essential that library customers liked using the self-check kiosks. The testing included finding out whether customers had the physical ability to perform the actions necessary, understood what actions they must take, could clearly read any text or graphic-driven instructions, and were physically and psychologically comfortable with the procedures. In Queens



Library's case, it also meant that the kiosks had to operating in a multi-cultural environment; phrases, gestures, and icons needed to be universally understandable and polite.

The user experience from the staff perspective was also tested, since library staff interacts with the self-check equipment from a different vantage point. Changes were made and then staff was also tested again and again. New questions emerged in this phase of the testing: Is it easy to change rolls of receipt paper and refill tubes of quarters?

TAGGING THE COLLECTION

Queens Library needed enough RFID tags for its full collection (including multi-set books and media), future acquisitions (an average of one million per year), and library cards with RFID chips. RFID chips are expensive when compared to bar codes printed on paper labels. The large quantity needed indicated that favorable pricing could best be obtained by working directly with manufacturers.

Every item in every library had to have an RFID tag ahead of the RFID installation. A special team of ten, the "Tag Team," moved from community library to community library to install tags. Extensive weeding of the collection was done at the same time.

Replacing library cards with RFID-enabled cards for customers occurred as necessary. When self-check was installed in a community library, the staff handled a flurry of re-issues, but the workload trickled away as the new cards became the norm.

INSTALLING THE RFID KIOSKS

Following a successful pilot in our busy Corona library in 2005, plans were made to roll out self-check-out kiosks throughout the library system. Accomplishing this change required removing the existing circulation desk, rewiring data and power for the desired number of self-checks, and installing customized millwork.

Because the installation required a significant amount of carpentry and floor refinishing, it was decided to partner the installation with other needed repairs whenever possible (such as to the roof or HVAC), and to update the decor at the same time with fresh paint, new floors and finishes, and revamped overhead lighting. This multi-phase process minimized the disruption of service





to customers while providing them with a visible cue that upgrades were happening.

The architecture of the various Queens Library buildings can be traced back more than 100 years in some cases, and the buildings come in every shape and size. To streamline the installation process, a template for a small desk was developed to house the self-check units. It included a countertop so customers could put down their books and videos.

Because RFID is sensitive to metal, the countertop is made of a solid surface polymer (similar to Corian™). The surface of the front panels can match any décor. Wheelchair and handicap accessibility is addressed by using an articulated arm on the plasma screen, which the customer can use to pull to different heights as needed.

FROM OUT TO IN

Following the successful development of the new self-check-out systems, the library began to work on self-check-in as a service model. Three considerations were paramount: security, minimal maintenance, and robust equipment.

In the upgraded Queens Library system, the return slot can only be opened with a library card or with material carrying the library's RFID identifier. Materials are removed from the customer's account in real time, and a receipt is issued. The slot will not take items that are not the property of Queens Library. Depending on the volume at each location, there are from three to 21 automated sorting bins.

Queens Library has both internal and external return slots. Internally, they have a small footprint and, in two-thirds of the libraries, the bins can be accessed 24/7 through an exterior wall. External units are monitored remotely. If a unit goes offline when the library is closed, a technician is deployed to rectify the situation, a process similar to how banks service ATM machines.

REFLECTIONS

Installing what was undoubtedly the library world's biggest RFID/materials sorting system has been a complex, but very successful journey. Wait lines for customers have been almost completely eliminated. More than 350 service touch points have been created, where customers can do routine library business while providing a gateway to individualized customer services, communications, promotions, fund raising, and marketing. Customers have access to 24/7 self-checks in two thirds of the libraries. In nearly all locations, manual handling of money to pay fines and fees has been completely eliminated.

In 2014, the change-over will be complete, meaning service enhancements through technology have been deployed in every Queens Library location. Returned materials are available to be re-circulated almost immediately. Queens' diverse customers may choose the language they prefer, even if no staff member who speaks it is available. Library staff spends much more time engaged in higher-value customer service. Returned book sorting and preparations takes less physical space in the library, so more of the footprint is available for customer use.

Queens Library is interested in sharing information with other libraries to improve our operations. Please contact <u>tgalante@</u> <u>queenslibrary.org</u> with questions and comments.

*© 2014 Thomas W. Galante

ABOUT THE AUTHOR: Thomas W. Galante is president and CEO of the Queens Library. He has held senior management positions in the library since 1987, including CFO and CIO. His leadership has driven Queens Library's reputation as a national leader known for its innovative approach to delivering public library services. In recognition of those efforts, Queens Library was named *Library Journal's* "2009 Library of the Year."

Galante is a member of the Board of Trustees of the Metropolitan New York Library Council and the Metropolitan Libraries Section of the International Federation of Library Associations and Institutions.

» If the new system was going to be successful, it was essential that library customers liked using the selfcheck kiosks.



Community Engagement Through Service-Learning

» Wright State University develops an academic course that underscores an emerging role for academic libraries.

BY MAUREEN BARRY

ommunity engagement and libraries go hand-in-hand. Our communities are vital to our very existence. For academic libraries, serving students, faculty and staff is their primary role, and the immediate campus is often the community with which the library engages most often. But new roles, such as service-learning (S-L), provide meaningful opportunities for the library to connect with the surrounding communities and regions.

As defined by the Office of Service Learning & Civic Engagement at Wright State University (WSU), service-learning is a "teaching and learning pedagogy that engages faculty, students, and community members in a partnership to achieve academic learning objectives, meet community needs, and promote civic responsibility."¹

Many S-L practitioners are also careful

to point out what service-learning is not to further clarify its definition. The National Youth Leadership Council describes the differences between service, learning and service-learning: "picking up trash on a riverbank is service; studying water samples under a microscope is learning; when science students collect and analyze water samples, document their results, and present findings to a local pollution control agency--that is service-learning."²

Two library staff members, including the author, transformed a for-credit information literacy (IL) course into a service-learning course at Wright State University in 2008. The instructors hoped that incorporating S-L pedagogy, applying IL concepts to real-world problems, would increase students' motivation for learning.

Through an overview of the course development, objectives, and content, outcomes for each stakeholder illustrate the ways S-L provides opportunities for significant community engagement.

COURSE DEVELOPMENT

In the WSU class catalog, EDT1100: Civic-centered Research, is a one-credit hour elective information literacy course offered through the College of Education and Human Services. It is also a servicelearning course.

A description of the course includes its learning objective: "Students will learn how to find, select, evaluate, and apply information ethically, according to the Association of College and Research Libraries Information Literacy Competency Standards.³

Any WSU student, regardless of year or major, can be admitted to the course. As a result, an interesting mix of students freshmen and seniors, chemistry and social work majors — have completed the course.

Some students are led to the course

Community Engagement

What can library administrators do to support service-learning initiatives?

- Seek support for library staff interested in contributing to or teaching service-learning (S-L) courses.*
- Connect librarians with potential community partners.
- Publicize library S-L and community engagement initiatives by reporting projects on monthly and annual reports to stakeholders across campus, particularly upper-level administrators.
- Collect and report S-L and other community engagement hours contributed by library staff to support applications for the President's Higher Education Community Service Honor Roll.
- Collect and report S-L and other community engagement hours contributed by library staff to support the Elective Carnegie Classification on Community Engagement.
- Demonstrate an interest in providing an S-L designation in the institution's course registration system and provide administrative support for submitting any paperwork needed to successfully achieve that designation.
- Encourage library marketing and communications staff to publish or share via media outlets or social media any S-L or community engagement efforts made by library staff.
- Provide support for professional development opportunities related to S-L instruction and assessment.
- Inform faculty and academic advisors on campus about S-L course offerings taught by library staff* to help recruit potential students.
- Support the possibility for the library to be the community partner for an S-L course on campus.

*While some librarians are not able to offer their own for-credit courses, they may have the opportunity to support faculty who teach service-learning courses.

by a faculty member or academic advisor who knows the student could benefit from the research skills taught in curriculum. Some join the class because they dropped a three- or four-credit class and need at least one more credit hour to retain their financial aid packages. In short, the students come from a variety of skill levels with varying levels of motivation.

The instructors partner with Project READ, a local literacy nonprofit, to generate a research question or questions for the students to investigate. Because of the time constraints associated with being a onecredit hour course that meets once a week, the instructors decided it would be best to handle the work of building a relationship with the community partner themselves to save as much time as possible for the students to focus on compiling a quality research portfolio.

While EDT1100 students work with one community partner, it is not unusual for some S-L classes to partner with multiple organizations, nor is it unusual for some instructors to allow students to choose their own partners. Instructors could also work with the WSU's Office of Service-Learning or Civic Engagement to connect with an existing community partner for an S-L course.

Relationships with community partners can develop in a variety of ways. The current partnership with Project READ began when the instructors sent an e-mail to its director. The message described the course and outlined the expectations, including time commitments. Within an hour, Project READ's director replied and enthusiastically agreed because she saw the value in the information the students could provide for her and her staff, even without knowing the topic we would research at that point. The partnership has grown and evolved over time since then.

Months before each section of EDT1100 is taught, the instructors interview the Project READ staff to negotiate an appropriate research question. When deciding on the research question(s), it is important to balance the needs of the community partner with the abilities or capabilities of the students.

In the of Spring 2012, for example, Project READ wanted to know more about the latest fundraising trends for nonprofits, which seemed to be a good fit for the students. The instructors expected that students would find fundraising examples on the Internet and in consumer or trade publications and explore scholarly literature to find theories that explain why people make charitable donations. Fundraising wouldn't be too difficult a topic for the students to understand, either, as it is a fairly universal concept that most people have encountered at some point in their lives.

COURSE CONTENT

The instructors scaffold the syllabus so that students learn the research process throughout the semester, all the while building a research portfolio for Project READ. Each assignment builds upon the last; students search for Web sites and statistics before moving on to newspapers, magazines, scholarly articles, and books. The lesson plans are hands-on and practical, focusing on research strategies and evaluating information as outlined by the ACRL IL Competency Standards.⁴

For example, in the first week or so, instructors teach lessons and conduct inclass activities that build student's keyword development skills. For homework, students are expected to find five to seven Web sites that are relevant to the research question.

A little later in the semester, after evaluation skills and criteria are introduced in class, students make decisions about which sources are the most appropriate to include in the research portfolio. The students gain practice with comparing and corroborating information as they select the best resources.

A similar process is used as the instructors guide students through using databases and other resources to find a variety of other formal, scholarly sources to address the research question at hand. The purpose and audience of the sources are considered when selecting the most appropriate ones.

Later in the semester, the instructors highlight strategies for reading and annotating scholarly articles. The instructors adapted a worksheet, borrowed with permission from a WSU faculty member, that students fill in, which asks questions such as "What is the author's thesis?" to empower students to complete a successful annotation. At this point, students begin to compile and synthesize the information into the research portfolio.

The students include annotations, complete with properly formatted citations, of the sources they have decided are the most useful for Project READ. They also write recommendations to include in the portfolio. These recommendations include trends or best practices found during the research process. The instructors supply guidelines for writing the recommendations.

While the research conducted throughout the semester is the primary means of service, it does not allow for direct and repeated interaction with Project READ staff. Without this interaction, students have expressed difficulty understanding how their service is going to help the non-profit.

To address this disconnect, students now participate in a book-sorting activity at least once during the semester to contribute to one of Project READ's goals: to distribute books throughout the region. The students help select books in good condition with appropriate subjects from piles of donated texts at a local book warehouse, Look At A Book, which serves, in small part, as a benefactor for Project READ. The titles are set aside, and the Project READ staff distributes them at community events and in schools.

SERVICE-LEARNING OUTCOMES

New librarians, in particular, can be so focused on everyday tasks that they can lose sight of the fact that their work can support the institution's mission in many ways. For example, in the beginning stages of transforming EDT1100 into an S-L course, it was not a strategic move to create a course that supported the WSU mission. The course was developed out of a desire to increase student motivation to learn and apply information literacy skills.

On the first day of class, however, when an S-L veteran came to explain servicelearning to the students, it was a happy accident to learn that S-L supports Wright State's institutional mission to "transform the lives of our students and the communities we serve" by "engaging in significant community service."⁵

It became clear that the course would be meaningful for the students, the instructors, the community partner, and the university.

EDT1100 offers an opportunity for students to connect information to the "real world." The instructors have traditionally used student reflections and assignments to assess how the learning objectives are being met. In their reflections, students indicate that they gain at least a basic understanding of how the information they collect ties to real community problems and solutions. In addition to naming or describing IL skills they have acquired throughout the course in their reflections, students also mention that they appreciate knowing that their research and recommendations are submitted directly to the community partner, and not solely to the instructors for a grade. One student shared the following sentiment during the group reflection activity on the last day of class: "Seeing everything come together in the end...it convinced me that our work was worthwhile; it wasn't just busy work."

Over the past couple of years, a few former students have shared with us that they still use the skills they learned in EDT1100. Most recently, a former EDT1100 student approached one of the instructors at the library's reference desk and shared: "I really got a lot out of your class. Since then, I've had to teach my classmates what to do when we have research assignments." While this informal evidence is anecdotal, it does provide proof that this student retained what he learned in the course and was able to apply it to other coursework during his WSU career.

The students also benefit from seeing the partnership between Look At a Book, a small business, and Project READ, a non-profit. They begin to understand how such partnerships can help solve community problems.

SERVICE-LEARNING OUTREACH

The opportunity to help solve a community problem while teaching the course has been extremely satisfying to the instructors. Personally, I have gained valuable S-L experience that translated into a liaison role with faculty who teach service-learning courses. I have since partnered with faculty who teach service-learning composition courses to explore additional methods to tie information literacy skills with service-learning experiences.

Perhaps the most obvious beneficiary of the service-learning experience is the community partner. Nonprofits are often short-staffed and have little time to conduct research in the midst of daily operations and fundraising. Most do not have access to the subscription resources available at the University.

Even if the information collected doesn't lead to a specific implementation or a new program, it is still valuable. The research portfolios may confirm for the nonprofit that they are already engaging in best practices and may not need to make improvements. Staff may be more willing to share their best practices with other local nonprofits when their programs are validated by the research.

The EDT1100 course outcomes achieved increased student motivation, in most cases, just as the instructors had hoped. In addition, the course provides a meaningful opportunity for students and librarians to engage together with the surrounding community.

While the primary focus of an academic library staff is serving the needs of students, faculty, and staff, academic libraries can bolster their relevance, value and vibrancy when they collaborate with the surrounding communities. In particular, if the institutional mission includes serving the community, service-learning is an emerging opportunity for libraries to support this mission.

ABOUT THE AUTHOR: Maureen Barry is First Year Experience Librarian at Wright State University Libraries. She can be reached by phone at 937-775-3515 or by e-mail at **maureen.barry@wright.edu**.

FOOTNOTES:

- ¹ Wright State University. (n.d.) Office of Service Learning and Civic Engagement. Retrieved from <u>http://www.wright.edu/</u> academicaffairs/servicelearning/.
- ² National Youth Leadership Council. (n.d.). What is service-learning? Retrieved from http://www.nylc.org.
- ³ Association of College and Research Libraries . (n.d.) Information literacy competency standards for higher education. Retrieved from <u>http://www.ala.org/acrl/standards/</u> <u>informationliteracycompetency</u>.

⁵ Wright State University. (n.d.). Mission Statement. Retrieved from <u>http://www.</u> wright.edu/about/mission-statement.

⁴ Ibid.

Renovating Branches with an Eye on the Future

» The Public Library of Cincinnati and Hamilton County is initiating plans to build or renovate four branches.

BY ANGELA C. HURSH

hen I tell my non-library friends about my job, they usually have two reactions. First, they exclaim, "What a great job! I'd love to work in a place where I'm surrounded by books all day." That's normally followed by, "Do people still use the library?"

Indeed, they do. The Public Library of Cincinnati and Hamilton County broke records in 2013. Circulation increased by 3.2 percent, making it the busiest year in our 160-year history. Despite a shrinking population, visits to the library have been steadily increasing for years. As a result, the library continues to invest in a collection that meets the community's needs, and our many locations and hours of operation make it convenient to use the library.

The library's strategic plan focuses our efforts, and we regularly ask for feedback through cardholder satisfaction surveys and make changes as needed. The results have been gratifying; last year, the library received two prestigious awards: the National Medal for Museum and Library Service, and a Five-Star rating from *Library Journal*.

Some organizations may have been content to rest on their laurels. But the Public Library of Cincinnati is always looking toward the future, and the next year and a half will prove to be very exciting as the library embarks on a forward-thinking facilities expansion plan.

When all the work is complete, the library will have built or renovated four of its 41 branches. This \$11.7 million facilities initiative is the most significant building improvement plan the library has undertaken in nearly 25 years.

Kimber Fender, who serves as the Eva Jane Romaine Coombe Director of the library, has held the library's top post for 15 years. This project has been on her "wish list" for much of that time. She says, "Once the Facilities Plan was approved, there was no reason to delay the projects. Two of the major obstacles, funding and locations, were already removed since the plan included how to fund the projects and we've owned the properties and buildings for years. Also, there are some economies of scale by doing these projects simultaneously."

A need for more space and an increase in demand for other features is also driving the construction. Fender explains, "These branches are replacing libraries too small to meet the demand for library services. They lacked meeting rooms, program spaces, and computers; housed small collections; and had no space to simply sit and read—a vital purpose for a public library. The new branches include space for all of these purposes and more."

Prior year budget savings and the 2013-2015 capital budget, which is part of the library's annual operating budget, will pay the tab for all of this construction. The library is paying cash and currently has no debt, nor will it incur any with these projects. The library receives 63 percent of its funding through the State Public Library Fund and 33 percent from a local property tax. The library does not receive any monies from Hamilton County or the City of Cincinnati.



BRANCHING OUT

The first branch to see construction is located in the historic, largely urban neighborhood of Avondale. The branch was originally built in 1913 with funds provided by noted philanthropist Andrew Carnegie. It features the names of famous authors carved into tile, the work of Cincinnati's Rookwood Pottery.

When the renovations are complete, the building will be handicap accessible through an alternative entrance and elevator. The library is upgrading carpeting and lighting; improving heating, air condition, and ventilation systems; adding technological improvements such as better Internet connectivity; and reconfiguring the service desk and self-checkout stations.

Ground was broken in October of 2013, and work is expected to be completed in April of this year.

The library is also in the process of renovating an historic home in another Cincinnati neighborhood. The current Clifton Branch is a storefront rental property near the campus of the University of Cincinnati. The library plans to move the branch several blocks to the

more spacious Parkview Manor. This home was donated to the library by Michael Dever, who is the president of a local automotive dealership. The site is the former home of Cincinnati political figurehead George Barnesdale "Boss" Cox. Built in 1895, it was placed on the National Register of Historic Places in 1973.

Two other branches are being rebuilt from the ground up in the neighborhoods of St. Bernard and Reading. The existing St. Bernard Branch is located inside the village municipal building. The new branch will quadruple the available space. A new, larger branch in the Reading neighborhood, also in the construction planning stages, will be six times the size of the current facility now located inside a rental property.

The Clifton, St. Bernard, and Reading branches are all set to be completed in the spring or summer of 2015.

DESIGN AND CONSTRUCTION

The library has worked closely with each neighborhood to make sure the branches meet the needs of residents, reaching out to community councils and holding meetings with elected officials. "The community has





been engaged since the beginning of the projects," says Fender. "We held community forums for each to find out what was most important to each community."

While there were some differences, the desire for meeting and reading space was expressed by all three communities. Consequently, the spaces are planned to be as flexible as possible with designated areas for children, teens, and adults. The configurations are also being designed so they can increase or decrease in size as needed.

The construction will also introduce several new features to library users, such as a mobile service model at the Clifton, Reading, and St. Bernard branches. These branches will have no circulation or reference desks. Instead, staff members will circulate throughout the buildings, carrying a mobile tablet that will allow them to look up call numbers, answer reference questions, and check out items right from the floor.

These three branches will also include creative Makerspaces, where library customers can gather to create, invent, or learn using electronics, craft and hardware tools, and—possibly—3D printers.

Top: The former home of George Barnesdale "Boss" Cox is located a few blocks from the current Clifton Branch and will be renovated to become the new Clifton Branch in spring or summer of 2015. Left: The new St. Bernard Branch will be four times the size of the current branch and is set to open in spring or summer of 2015.

Construction plans for all four branches includes more electrical outlets to meet a demand from individuals who bring their mobile devices to the library. In addition, the Clifton Branch will become the first branch in the library system to include after-hours lockers for pick-up of holds. A drive-up window is also in the plans for the Reading Branch.

The library is keeping customers informed about construction by posting weekly updates on its website and social media accounts. While the project is huge, the library is fully committed to seeing it through to completion

Fender believes it is always an honor to be part of bringing a new library to a community. "When the ribbon's cut and everyone rushes in, I know all the hard work to make the project happen was worth it," she says. "Since our branch libraries are in communities for generations, these new and renovated branches will be providing library service to their communities for years to come."

ABOUT THE AUTHOR: Angela Hursh is Content Team Leader, Marketing Department, at the Public Library of Cincinnati and Hamilton County. She can be reached at 513-369-6967 or Angela.Hursh@cincinnatiLibrary.org

E-resource Management Reports Using Microsoft Access

» A guide for collecting comprehensive and detailed data.

BY TERESA DOMENICA NEGRUCCI

n recent years, while libraries' budgets have decreased or remained flat, e-resources and their accompanying usage data have proliferated. These two trends have increased the need for library administrators to combine budget, e-resources metadata, and usage data into reports that assist in the efficient management of their e-collections and document the effective use of their budget.

Creating meaningful reports can be a challenge, since budget and usage data and metadata about e-resources are often available from disparate sources and in multiple formats. Expenditure data may be maintained in a library's ILS or commercial financial system, while e-resource metadata and usage data may be downloaded from a publisher's website, a third-party vendor, or a subscription agency.

While some library software companies and subscription agencies offer some online e-resource management tools and reports, these services are fee-based, which many libraries cannot afford. Often libraries must adapt existing software, such as Excel or Access, to manage budgets and usage data. Most library and financial management systems offer reports that can be exported into Excel so, by default, libraries tend to use Excel for their eresource management reports. While it is possible to merge data from multiple Excel spreadsheets with Excel's VLOOKUP function, the relational database functionality of Microsoft Access has proven to be a useful tool for combining e-resource management data from disparate sources into a single report.

Although many libraries may choose to shy away from Microsoft Access, believing it's too difficult to use, there are several advantages to using Microsoft Access Structured Query Language (SQL) queries rather

Figure 3, Access Import Wizard too

than the Excel's VLOOKUP function to create quick and meaningful e-resource management reports. Access, as a relational database. uses SOL to construct queries. Although at first blush this

might appear to be more intimating than constructing a formula in Excel, in fact, some basic SQL queries can be created easily with prompts from the Access query wizard tool.

Using the Import Table tool, data from multiple file formats (Excel, XML, Text) can be imported as relational tables and then combined using a common data element as a matchpoint in the SQL Design View. There is no limit to the number of files that can be imported as tables, and Access can process the query for the tables of moderately large data sets (tens of thousands of line items) quickly. By selecting the SQL Design View, the imported relational tables appear in a visual interface, and by simply linking the common data element in each table, the underlying SQL query is created, with no expert knowledge of SQL required.

To demonstrate the value of using Access to create e-resource management reports, the following steps are needed to create two typical reports: cost per download for

ejournals, and an overlap title analysis for ejournal packages.

COST PER DOWNLOAD REPORT

To obtain the baseline cost of a typical journal article for a set of ejournals, a library will want to create a cost per download report, which combines the subscription cost data from the library's ILS or financial management system, with Counting Online Usage of Networked Electronic Resources (COUNTER) usage data (http://www.projectCOUNTER.org/).

As an example, a library may export the cost data for individually subscribed economics ejournals from its ILS into Excel (Figure 1 link, Excel spreadsheet of economic ejournal subscriptions), and then download from the publisher's Web site an XML, Excel (.xls) or Comma Separate Value (.cvs) file of the COUNTER Journal Report 1 (JR1), which provides the number of fulltext article downloads for a calendar year for those ejournals (Figure 2 link, COUNTER

Home Create External Data Database To	ols Fields Table			
Linked Table Manager Manager Import & Link	aved Excel Text 2	CML POF E-mail More - Export	Create Manage E-mail Replies Collect Data	
and the second second			2 22	
Select the source and destination of the dat	a			
Specify the source of the data.				
Ene name: C:/Users/			Bcowse	
Dypend a copy of the records to the table: If the specified table exists, Access will add the records source data will not be reflected in the database. Dak to the data source by creating a fielded ta Access will create a table that will maintain a link to Iniked table. However, the source data cannot be che	rocer: dds to the table. If the table able. the source data in Excel. C anged from within Access.	does not exist, Access will create it. Chan hanges made to the source data in Excel v	ges made to the	
		0	K Cancel	

Field Name:	ISSN	Data Type: Text	
Indexed:	No	Do not import field (Skip)	
1			
Bib #	ISSN TITL	E	
b15176976	1370-4788 Anna	ls of public and co-operativ	ve economy = Annales de l'économi
b57829159	1077-8039 Barro	on's	875 m
b15206920	0007-1080 Brit:	ish journal of industrial re	elations
b15088285	0008-1256 Cali:	fornia management review	
b35910185	1045-5752 Capi	talism, nature, socialism	
b30216874	1043-4062 Const	titutional political economy	1
b13311153	0747-4938 Econ	ometric reviews	
b14885669	0012-9682 Econ	ometrica : journal of the E	Sconometric Society
b12978863	0012-9976 Econo	omic and political weekly	
b19672652	0266-4658 Econ	omic policy	
b21029039	0938-2259 Econ	omic theory	
	0013-0427 Econ	omica	
b14885773			18
b14885773 b30216886	0954-1985 Econ	omics & politics	

Figure 5: Import spreadsheet wizard prompt for data type

JR1 ejournal usage report).

To combine the cost data from the financial report with the usage data from the JR1 report, a data element from both reports must be identified. The ISSN number and the ejournal title are the likely common data elements in both the COUNTER JR1 report and the cost data for subscribed ejournals. However, the ISSN may be formatted either with or without a hyphen (1234-5678 or 12345678), and ejournal titles may vary by the source of the metadata; some publishers include leading articles, such as "the", with their titles, while others index on the main title.

Therefore, before importing the two data sets as tables in Access, it is important to review the source data and reformat or normalize the data in Excel to obtain clean and consistent metadata. Depending on the size of the data sets, the normalization of the metadata can be time-consuming. But the time spent is worthwhile to ensure the most complete match and merge of the data sets.

CREATING THE DATABASE

Once the data normalization within the Excel spreadsheets is complete, a new Access database can be created. To begin, click on the External data tab to use the Access Import Spreadsheet Wizard tool (see Figure 3, Access Import Wizard tool). The Import Spreadsheet wizard will provide four prompted screens to import each Excel data sheet as an Access table (Figure 4 link,

Import spreadsheet wizard prompt screen).

It is important to make sure that the data type (text, currency, date/time) assigned to each data field is consistent for each table that is being created (see Figure 5, Import spreadsheet wizard prompt for data type). Access will not allow matching of a data field if the field's data type is not consistent across each table. Generally, it is best to import the data as text.

Once each spreadsheet is loaded as a table, click on the Create tab, then the Ouery Design icon. Highlight and click each of the tables in the "show table" dialog box on the left side of the Access Query Design tool, and click "add" (Figure 6 link, add tables in Access query design tool). This function will add each of the tables into the Ouery display box at the center of the Query Design tool. By highlighting the data element in one table then dragging the cursor to the same data element (for example, the ISSN) in the other table, Access will create a connection line, the join, resulting in a SQL query that matches the data element in each table (Figure 7 link, joined tables in the query design tool).

The actual SQL query, which can be viewed by changing the view button from design view to SQL view, is:

SELECT

FROM [Journal_Holdings_Report_(JR1)]
INNER JOIN [Economic ejournal orders]
ON [Journal_Holdings_Report_(JR1)].
ISSN = [Economic ejournal orders].[ISSN
1];

As a final step in creating the SQL query, add the output data fields to the query output box, located at the bottom part of query design tool. Simply highlight, click on, and drag the asterisk (*) in each of the tables to the query output box. This adds each of the data fields from each of the tables to the results of the query (Figure 8 link, query output box).

On the main Access design tab, click the run icon to process the SQL query. The results of the query, which combines the annual subscription cost for each ejournal and the number of full-text article downloads, will appear in the main screen of the query design tool (Figure 9 link, query results with ISSN as the data element common to both tables). These results can then be exported, up to 65,000 records at a time, back into Excel. Once in Excel, a simple Excel formula that divides the cost by the number of fulltext article downloads will yield the cost per use for each ejournal.

OVERLAP TITLE ANALYSIS REPORT

Overlap title analysis for ejournal packages is another typical e-resource management report. As an example, a library that current subscribes to the EBSCO Business Source premier package of financial, business, and economics ejournals may want to know how many titles in the EBSCO package overlap with a competing ejournal package, Proquest's ABI Inform.

Before deciding whether to renew its current subscription, purchase the competing ejournal package, or subscribe to both, a library will want to consider the percentage of overlap between the two packages and the extent of unique content within each ejournal package.

To conduct an overlap title analysis, the library obtains the title lists as an Excel file from each vendor. Each spreadsheet contains only a few essential data elements: the journal title, the ISSN, the coverage dates for the title, the vendor title id number, and the URL.

CREATING THE REPORT

To obtain the best possible match of the data in Access, review each of the data elements in Excel and normalize them. With ejournal lists, for example, the typical data element in common is the ISSN, which can be rendered with or without a hyphen (1234-5678 or 1234568). Since the ISSN is the data element used to match and merge the spreadsheet data, normalizing the ISSN



data field to a standard format in each spreadsheet is essential.

Import each normalized Excel spreadsheet into the Access database using the Import Spreadsheet Wizard tool. The wizard provides the four prompts to import each Excel spreadsheet as an Access table. Again, it is important to make sure that the data type (text, currency, date/time) assigned to each data field is consistent for each table that is being created. Even a number such as an ISSN should be imported into the Access table as a text data field. Once each spreadsheet is loaded as an Access table, use the query design icon on the Access create tab to add the tables into the query design interface. (Figure 10 link, Proquest ABI Inform and EBSCO Business Source ejournal title lists imported as tables) By dragging the cursor to the ISSN data field in each table, Access will create a connection line, the join, to formulate the SQL query, which is:

SELECT

FROM [EBSCO Business Source Complete] INNER JOIN [Proquest ABI Inform Complete]

ON [EBSCO Business Source Complete]. **ISSN** = [Proquest ABI Inform Complete]. ISSN;

In the query output box at the bottom part of the Access design query tool, add each of the data fields from each of the tables by highlighting the asterisk (*) in each table and dragging the asterisk to the query output box (see Figure 11 link, Tables joined with ISSN, and query output box). On the main Access Design tab, click the run icon to process the SQL query. The query will result in a list of the overlapping titles based on the ISSN as the matchpoint, and these titles can then be exported to Excel (Figure 12 Figure 13: Find Unmatched Query Wizard

link, results of overlap query, with ISSN as data element common to both tables).

To obtain the lists of unique titles for each ejournal package, use the "Find Unmatched Query Wizard" located on the Access Cre-

ate tab (see Figure 13, Find Unmatched Query Wizard). The wizard will provide five prompts to create the SQL query to find all titles unique to each package.

The query, "EBSCO Business Source Complete Without Matching Proquest ABI/ Inform" will result in the list of titles unique to the EBSCO ejournal package, which can then be exported back to Excel (Figure 14 link, first prompt of the find unmatched query wizard for unique EBSCO titles).

The SQL query for the title list of ejournals unique to EBSCO Business Source Complete follows:

SELECT [Business Source Complete Titles].Title, [Business Source Complete Titles].[ISSN/ISBN], [Business Source Complete Titles].Type, [Business Source Complete Titles].[Coverage Dates], [Business Source Complete Titles].[Publication Date], [Business Source Complete Titles].Publisher, [Business Source Complete Titles].[Default URL] **FROM** [Business Source Complete Titles] LEFT JOIN [ABI Inform Complete Title List] ON [Business Source Complete Titles].[ISSN/ISBN] = [ABI Inform Complete Title List].[ISSN/ISBN] WHERE ((([ABI Inform Complete Title List].[ISSN/ISBN]) Is Null));

To obtain the list of titles unique to the Proquest ABI Inform ejournal package, use the "Find Unmatched Query Wizard" to run another SQL query, this time comparing the Proquest/ABI Inform titles table to the EBSCO titles table (Figure 15 link, first prompt of the find unmatched query wizard for unique Proquest titles).

The SQL query for the title list of ejournals unique to Proquest ABI Inform follows: SELECT [ABI Inform Complete Title List]. Title, [ABI Inform Complete Title List]. [ISSN/ISBN], [ABI Inform Complete Title List].Type, [ABI Inform Complete Title List].[Coverage Dates], [ABI Inform Complete Title List].[Default URL] FROM [ABI Inform Complete Title List] LEFT JOIN [Business Source Complete Titles] ON [ABI Inform Complete Title List].[ISSN/ISBN] = [Business Source Complete Titles].[ISSN/ISBN] WHERE ((([Business Source Complete Titles].[ISSN/ISBN]) IS NUII));

By running three wizard-driven SQL queries in Access, one for the overlapping titles, and two for the unique titles, a title overlap report for the two competing ejournal packages can be compiled very quickly.

This same basic method of importing text or spreadsheet data files into Access as relational tables, and then using a common data element to join the tables to create a SQL query, can be employed to combine e-resource cost, usage and bibliographic and other metadata to create any number of e-resource management reports.

For example, in addition to the cost per download report and overlapping title analysis, Access can be used to combine ejournal metadata from Ulrich's online, a subscription agency report, and publisher's websites. The only real limitation is the quality and consistency of the metadata. At times, publishers fail to use the ISSN and ISBN standard consistently and, for e-resources, these identifiers are usually the best data element to join the Access tables.

Nevertheless, the relational tables, query wizards, and visual query design interface of Access make it an effective and time-saving tool for the creation of e-resource management reports.

ABOUT THE AUTHOR: Teresa Negrucci is Resource Acquisition and Management Librarian, Rockefeller Library, at Brown University, Providence, RI. She can be reached at 401/863-5013 or **teresanegrucci@brown.edu**.

All the Figures used in this article and a guide to using them can be found as handouts at the following website: <u>http://2013charlestonconference.sched.</u> org/event/0c3f825080e7633b98478f7cb 00fe348#.UvO6oPIdX-R

Leveraging Staff to Meet Emergency Preparedness Goals

» An engaged community branches out from daily work assignments to plan a safe and secure library environment at U.Va.

BY ARLYN NEWCOMB

hen was the last time your library updated its disaster plans? Conducted a risk assessment? Trained and drilled employees on emergency procedures?

If you're like a third of responding institutions in a recent Association of Research Librarian's preservation survey, you either don't have a disaster plan or it's not current. And you spend a tiny fraction of your budget on disaster recovery supplies, contracts, and other related materials and efforts.

Devoting staff time to emergency preparedness and all it entails can be a hard sell given the many other competing priorities. Even with stories on the news of campus terrorism, natural disasters, and multiple-casualty shootings, the pervasive belief among library administrators is that one's own institution will be immune from a major critical incident. What's a proactive, strategically thinking library to do?

The University of Virginia (U.Va) Library has come up with one answer: a self-selecting community of employees who plan and work on emergency preparedness documentation, training, and networking on behalf of the organization. The community works in concert with the larger University's efforts relating to critical incident preparedness and continuity of operations.

The group is called a "community" because of its genesis in a Peter Block-inspired restructuring and direction-setting process the University Library began in 2008. The library community was originally part of another community devoted to preservation issues because of the natural overlap between efforts to preserve a cultural heritage, in the form of tangible assets, and disaster planning.

U.VA was not alone among large research libraries in looking at such planning through a preservation lens. However, within a year as preservation efforts received greater attention and funding as part of normal operations, what was originally the "Pres-



Exhibit: Emergency Exit sign for the main floor of Clemons Library

ervation and Emergency Preparedness" community became focused exclusively on the human side of the house, and renamed itself the "Library Emergency Preparedness" community, locally known as "Lib-EP."

A WORD ABOUT COMMUNITIES.

Communities, as a way of doing work, harness the gifts and passions of employees (or any group of people), which they may not have the opportunity to contribute within the parameters of their normal job descriptions. Individuals join a community because they are personally committed to pursuing the goal it espouses. Not only does a person self-select participation, but also their level of participation is based on the amount of time they can offer and their particular expertise.

At the U.Va Library, communities typically meet monthly to talk about their common goals, decide on projects they feel capable of tackling, and make agreements, requests, invitations, and offers toward the accomplishment of the project.

A community normally interacts this way with its own hierarchy as well as with various external partners who might be able to do something the community can't. While the time needed to work on a document, plan a training course, meet with an external partner is volunteered by the community members themselves, resources not available within the community are requested from others who possess them in the organizational hierarchy or elsewhere.

LIB-EP IN ACTION

In 2010, in conversations over a few monthly meetings, Lib-EP realized that it would be helpful to have signage highlighting emergency exits in our libraries, some of which are labyrinthine or are embedded in other buildings. We knew we'd need funding and staff time to accomplish this project, so we sought and received approval from the library's director of facilities, the person in the org chart primarily tasked with overseeing emergency preparedness.

No one in the community had the graphic design skills necessary to create the floor maps, so we negotiated with the library's Communications unit to have one of their designers oversee that part of the project. The work itself was assigned to an intern, giving her valuable experience she could put on a resume.

A member of Lib-EP functioned as a liaison with the intern to provide feedback on the look and clarity of the maps. In concert with a representative of the University's Fire Safety Department, the liaison oversaw specifics such as ensuring the results complied with applicable codes and placing the signs in the proper locations.

Once the designs were completed, a request was made (again through the director of facilities) for funding to have the signs printed and laminated. A member of the community served as the point person for that process, including soliciting bids. When the finished signs came in, they were distributed to community members from the various buildings in the library system who mounted them in the appropriate locations (see Exhibit).

A similar process was followed to create an emergency planning documentation for each library, a project that is continuously updated as new best practices are developed, personnel and organizational changes occur, and new needs are recognized

One member of the community was tasked with putting together a first draft of a Critical Incident Plan, based on one created by the Claude Moore Health Sciences Library at U.Va. That person invited several others from the library who had experience working on previous evacuation plans to form a committee to review the draft and make recommendations for changes. Some of those people were members of the community; others were not. The final plan was submitted to the library's administration, again through the director of facilities.

Once that over-arching document was completed and approved, Lib-EP turned to creating an evacuation plan for each building using a template developed by and solicited from the Fire Safety Department at U.Va. Other plans that have been created over time include Ouick Pocket plans created by our Preservation Librarian, Kara McClurken, showing which materials in each building should be saved first in an emergency, and Energy Emergency Plans (what to turn off when the Commonwealth of Virginia issues an energy emergency announcement, typically during high heat summer days) - a project we worked on with another community, GreenLib, devoted to sustainability issues.

Members of Lib-EP have, on occasion, run table-top drills for members of the Library's administrative teams using scenarios that might plausibly occur in one of the buildings. These sessions have proven to be very valuable in raising awareness of the importance of disaster planning among upper management, which in turn has led to greater support for the community's efforts.

Lib-EP regularly reaches out to other departments around the University, inviting participation in monthly meetings. We now typically have representation from the Office of Emergency Preparedness and the University Police Department. As the occasion or project requires, we invite guests from Fire Safety, Facilities Management, and others to share their experience and expertise. Our invitations have never been

UNIVERSITY EMERGENCY PROCEDURES

Follow instructions of authorities and use good judgment in the absence of instruction.

— Do I go?

VACUATE

- Leave using the nearest exit, or alternate if nearest exit is blocked.
- Never use an elevator.
- Take personal belongings (go-bag, keys, purse, wallet, cell phone, coat), but do not delay your exit to retrieve items.
- Follow procedures to secure hazardous materials or equipment before loading
- leaving.
- If unable to exit, move to designated areas of refuge.
 Once outside, go to the designated assembly area.
- Once outside, go to the designated assembly area.
 Do not reenter until instructed by authorities.

FIRE

Activate nearest fire alarm.

- Evacuate; if smoke is present, stay low to the floor.
- Call 911 when safe to do so.

EXPLOSION

- Evacuate; if smoke is present, stay low to the floor.
- · Watch out for falling debris; take cover and protect head.
- If you become trapped, tap on a wall or pipe to alert rescuers.
- · Call 911 when safe to do so.

HAZARDOUS MATERIALS RELEASE

- Move away from the site of the hazard to a safe location.
- Call 911.
- Call Environmental Health & Safety at 434-982-4911.
- Alert others to stay clear of the area.
- Notify emergency personnel if you have been exposed or have information about the release.

SUSPICIOUS OBJECT

- Do not touch or disturb object.
- Call 911.
- Prepare to evacuate if instructed.

SUSPICIOUS PERSON

- Do not confront, stop, or apprehend the person
- Note the person's description and suspicious activity.
 Call 911.
- Call 911.
 Provide details on the person and his/her direction of travel.

VIOLENT INCIDEN

Evacuate if a safe route is available.

- If it is unsafe to escape, hide out in an area out of view.
 Block entry to your hiding place and lock the door; stay behind solid objects away from door.
- Turn off lights, computers, radios; put cell phones on vibrate.
 Call 911 when safe to do so.

which sale to uo so.

For additional information see http://www.virginia.edu/emergencypreparedness/ University of Virginia Office of Emergency Preparedness • February 2012

turned down, and everyone we've contacted has been more than happy to assist us in our efforts in whatever way they could.

In recent years, we have begun to work with other libraries on the U.Va grounds not strictly within our own system, which include the law, health sciences, and graduate business libraries. In 2012 we undertook a joint evacuation drill for staff of all the libraries, and are planning for another joint drill in 2014.

Many other smaller projects are ongoing, including regular work with the Library's Training Manager to provide workplace safety, CPR/AED, and fire safety training to staff, with bigger plans on the drawing board for the future.

By using the community model, the University of Virginia Library has been able to create a robust emergency preparedness culture that is having positive ripples beyond our doors. A lot can be accomplished when staff is given the freedom to create something that supports the mission of the organization and moves it forward, even though that something might not fit within existing job descriptions.

* Association of Research Libraries, FY2012 Preservation Statistics Report "A Survey of Preservation Activities in Cultural Heritage Institutions", p.6-7. <u>https://docs.google.</u> <u>com/document/d/1k4TKSO34kodsQuOE-CFxgAfUWgeCt1cK7rofDd92yOs/edit</u>

ABOUT THE AUTHOR: Arlyn Newcomb is the video services coordinator at the University of Virginia Library. She can be reached at arlyn@virginia.edu or 494-924-7957.

R IN PLACE

Do I stav?

- Evaluate the situation and choose the most appropriate shelter location, for example.
 Severe weather: lowest interior space away from windows.
- Severe weather: lowest interior space away from windows.
 Violence: secure, enclosed space; behind solid objects and away from door.
- Follow procedures to secure hazardous materials or equipment before leaving.
- Move to the shelter, taking your go-bag.
- Remain sheltered until instructed it is safe to leave.
 Monitor news sites for the latest information.

- TORNADO

 Seek shelter immediately: go to internal, lowest area of safety away
- from windows and glass.

 Close all doors, including main corridors.

 Crouch near the floor or under heavy well supported chiede and any set.
- Crouch near the floor or under heavy, well-supported objects and cover head.
 If outside, move inside a sturdy structure or lie down in a low area such
- a ditch and cover your head.
 Call 911 to report injuries, fire, gas leaks, debris, etc.
- can sin to report injuries, tire, gas leaks, debris, i

EARTHQUAKE

- If inside, stay there. Shelter in place drop, cover and hold on.
 If there is nothing to hide under, crouch near an interior wall and cover head.
- If outside, stay outside and move away from buildings, street lights, and utility wires.
- Only evacuate if additional hazards threaten your safety.
 Call 911 to report injuries, fire, gas leaks, debris, etc.

MEDICAL EMERGENCY

- If illness or injury is serious, do not move the person.
- Call 911.
- If appropriate and available, get someone trained in CPR or AED to help.
 Send someone to meet emergency personnel outside and direct them to
- the person's location.

INFRASTRUCTURE OUTAGE CONTACTS

- Voice communications: 434-924-8600
 Computer systems: 434-924-4357 (Academic) or
- 434-924-5334 (Health System) Water, power, heating, or cooling: 434-924-1777 (Academic) or
- 434-924-2267 (Health System)

When reporting an incident, your location is:

Mapping Workflows: A Path to Improvement

» Four simple steps can lead to strategic changes in library processes.

BY CARSON BLOCK

66 Yange ou must know where you came from yesterday, know where you are today, to know where you're going tomorrow."

While that wonderful Cree Indian saying, courtesy of author Trace A. DeMeyer, can be applied to range of philosophical and spiritual situations, it is also true at the nitty-gritty level. We all know when things aren't working as well as we would like in our libraries, but we often don't take the time to discover the root causes. Worse, we sometimes try to apply fixes based on a narrow view of the situation, and wonder why things remain broken.

When considering improvements to physical processes, mapping the workflow—identifying and documenting the steps required to perform a task or activity—is a powerful way to know where you came from yesterday and know where you are today in the pursuit of not just knowing where you will go tomorrow, but designing the destination and illuminating the path to get there.

Great candidates for workflow maps include any physical multi-step process, including patron self-service (such as self-checks); materials return (returned materials are piled up on multiple carts in a backroom); technical services (from acquisition to shelf and everything in-between); and courier operations.

Although there are a variety of ways to determine improvements to workflows, this simple, four-step process is a great place to start:

- 1. Document current workflows;
- 2. Identify possible improvements and design solutions;
- 3. Take action to implement the best improvements; and
- 4. Evaluate the effectiveness of the improvements.



Before determining what can be improved, you must define your current state, also known as your baseline. With a clear understanding of current processes, you can identify possible areas of improvement, and then take actions to bring those changes to life.

Are you ready? Let's take a look at what you're doing now!

DECIDE WHAT TO STUDY

Procedures that may need a closer look can include any process that requires people, movement, and time (such as tasks performed in a materials return area, at the circulation desk, or at public service desks), and those that include the use of a technology. You may wish to study the steps that patrons need to take to use a particular library service. Placing a priority on patrondriven needs is a powerful starting point for all resulting library services.

Workflow studies can also apply to wholly electronic processes such the number of clicks and scroll operations it takes to navigate the library's website, or hybrid processes such as the use of self-check machines or other points of electronicallyassisted self service.

Our example, however, will be very simple: mapping the workflow for a patron to return materials to an external library book drop. After deciding what needs to be reviewed, library management should strongly consider involving key staff in the study. They are the ones who know the process intimately and have a vested interest in making improvements. Most library workers fall into that category. The review can backfire, however, if the proposed improvements are perceived to affect staff in negative ways (and they consciously or unconsciously subvert the process) or if the workgroup is dysfunctional.

As with other strategic moves, management discretion may be important, and the success lies in choosing team members who are top performers—good at their job, pragmatic, and constantly seeking ways to improve.

DOCUMENT CURRENT WORKFLOWS

To gain a thorough understanding of the current state, three approaches can be used to map workflows: a spreadsheet or table listing the process steps and the time each step typically takes; a process flowchart; and a graph of the physical steps and time required to perform the process.

Here's how our example looks on a spreadsheet showing the difference in time between patron returns during peak (busy parking lot) and non-peak (nearly empty parking lot) hours:

Step #	Description	Time needed: peak hours	Time needed: off-peak	Who?	Notes	
1	Patron enters parking lot and parks	0:02:30	0:00:40	Patron	Potential safty issues for cars and pedest	rians
2	Patron walks from vehicle to book drop	0:01:30	0:00:30	Patron	Bike parking is closer to book drop	
3	Patron deposits materials	0:00:15	0:00:15	Patron	Assuming no line or queing	
4	Patron returns to vehicle	0:01:30	0:00:30	Patron	Potential safety issues for pedestrians	
5	Paton leaves parking lot	0:01:12	0:00:40	Patron		
	Total Time Required	0:06:57	0:01:55			



Next, the spreadsheet or table is turned into a simple flowchart. Standard diagram forms and even creative icons can be used. But simple shapes such as blocks (showing major steps) and diamonds (indicating optional responses) will do just fine.

Finally, it's helpful to use photographs to show how the process is performed in your physical space, especially if you are engaging a team in designing solutions in the next step.

IDENTIFY AREAS OF POSSIBLE IMPROVEMENTS

There's a phenomenon that states that by simply learning something new, actions (both big and small) can take place in reaction. In high-functioning workgroups, just seeing where there might be gaps between how staff perceives a process functions and how it actually functions can lead to immediate process improvements.

In our example, we discovered that there was a big difference in the time it took for a patron to return materials during peak and non-peak hours:

TOTAL TIME REQUIRED



1: TIME NEEDED IN PEAK HOURS 2: TIME NEEDED IN NON-PEAK HOURS

The spreadsheet also revealed that the high-traffic periods presented potential safety concerns for pedestrians and motorists alike.

Based on these results, the team has an opportunity to consider alternates that would help speed up returns for patrons.

One of the first things to study in more depth is the traffic flow in the parking

lot-data indicates that during peak hours it takes patrons much longer to park and walk to the book drop, while the time spent at the book drop itself is roughly the same at both peak and nonpeak hours. That result indicates that the internal return processes are not slowing things down, but the parking lot certainly is. The safety of patrons during peak times is also a concern.

Are there low-cost actions that can change the traffic flow in the parking lot? Are there alternate locations or methods for materials returns that can relieve the pressure on the parking lot? Does the parking lot need a major redesign? Could a solution involve hiring a "traffic cop" to direct traffic during peak times? Although each possible solution provides a range in complexity, documenting the workflow gives a clear picture of where the problem lies and a focus for considering options.

Most workflow studies, however, are not as simple as this example and are comprised of many more steps. In looking at more complicated processes, it is helpful to ask some key questions when evaluating options, including the following:

- In considering the existing workflow, what surprised me?
- Are the steps being done in the most logical sequence? If not, what could be changed?
- Are all of your current steps in the process necessary? If not, what can be eliminated?
- Can any current steps be combined if you had a new physical layout?
- Are workspaces designed in the most efficient way possible for the job at hand? Can everything needed to do the job be reached easily?
- Does the workspace allow for the best sequence of motions? Are the correct tools and materials available? If not, how can the workspaces be improved?
- What current bottlenecks can be eliminated?
- Are there technologies that could create more efficient processes?
- What would an optimal workflow look like (rough hand-drawings are fine)?

TAKE ACTION

This final step might seem to be the most simple. After all, staff is engaged in the study, different possibilities for improvements have been considered, and the preferred approach has been identified. Just do it, right?

Well, to a degree, yes. In some cases, a new technology may be needed along with budget implications and implementation plans. Even in simple cases, transition plans, which may include staff training or patron outreach, must be created to ensure the changes are implemented smoothly.

The final action plan should include a statement of what you are targeting, what actions you will take, and what success looks like. In our example, here is the action plan:

"Our goal is to cut the time required for patron returns during peak hours in half within six months. To accomplish this goal, we will use traffic cones and a person to direct traffic to ensure safety during peak hours. We will measure success by an average patron return time of 3 ½ minutes during peak hours and zero accidents in the parking lot."

EVALUATION

The last step is key—did the action plan work? Strongly written goal statements (as above) offers the framework to evaluate and measure effectiveness. Although evaluation can take many forms, the result of the effort should feed back into continuous improvements until the goal is reached. ■

ABOUT THE AUTHOR: Carson Block has led and managed library technology efforts since almost forever in terms of Internet years (that's about 17). He is a frequent speaker and believes deeply in the public service mission of libraries, as well as the role of technology in fulfilling the affects libraries have in their communities. Carson Block Consulting, Inc. specializes in library technology assessments, strategic planning, facilities planning and construction, technology staff recruitments, and more. Carson can be reached at <u>librarylandtech@gmail.</u> com, or http://www.carsonblock.com.

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Mary Alice Davidson PUBLISHER madavidson@libraryworks.com

madavidson@libraryworks.con 240.354.1281

Jennifer Newman ASSOCIATE PUBLISHER jenny@libraryworks.com 240.354.1281

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