

## Collaboration, Communication, and Partnerships for Effective Organizational Transformation

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### Abstract:

*The changing information environment combined with restrained budgets are impacting library operations. Librarians can employ knowledge management techniques to examine operations, foster collaboration, and effect transformational change to address efficiencies and share expertise. In addition, employees can develop tools and techniques to assist them in assessing work processes and streamlining operations across teams or partner libraries. This paper will examine the tools and methods available to library personnel to implement knowledge management techniques that enable collective strategies for improving library services and operations. Case studies on effective knowledge management techniques will be provided that highlight the use of these strategies.*

**Keywords:** Knowledge management, collaboration, operations, assessment

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### Introduction

Organizational change within libraries tends to be reactionary: driven by budget, changes in patron behavior, and disruptive technology. Many libraries struggle to adapt to such changes, particularly in public and technical services. Technical services staff are upending traditional cataloging workflows as their collections have evolved to include more resources, both subscription-based and open educational resources (OERs). The Semantic Web further complicates these challenges with emerging Linked Data standards, new authority sources and vocabularies. Public services staff must cope with new, more effective ways to deliver information in a variety of formats, while privacy, authentication, and licensing considerations further complicate delivery mechanisms.

These changes are forcing library managers to re-evaluate traditional procedures to new models that more aptly reflect the commercial sector in knowledge management. Strategic collaborations can assist in this change through the adoption of innovative new systems and processes, creating opportunities for organizational transformation. In addition to managing processes, the knowledge manager must have a variety of tools that can be tailored for personality types, team groupings, and specific situations to lead employees through stressful and dynamic periods. Collaboration with key partners can enhance the process by bringing updated training and real-life experiences to the table. Collaboration also brings together more experts to focus on solutions and develop procedures that strengthen the end result.

To facilitate transformation within organizations, managers can employ knowledge management techniques to examine operations, foster collaboration, and effect transformational change. In addition, employees can develop tools and techniques to assist them in assessing work processes that streamline operations across teams or departments. This paper will examine the tools and methods available to managers and all personnel to implement knowledge management techniques that enable collective strategies to improve library services and operations. Case studies on effective knowledge management techniques will be provided that highlight the use of these strategies.

### **Knowledge Management Skills for Libraries**

One of the challenges in talking about knowledge management is defining it for your organization. Reviewing the literature shows us that there are many overlapping and competing definitions of knowledge management and that it becomes necessary to identify key components for your particular institution. The idea that a library needs to have a structured approach to leveraging the knowledge of its staff is not new. However, shrinking organizations, the proliferation of scholarly resources and digital formats, and the need to prove return on investment (ROI) are forcing library managers, particularly in technical services and collection development, to look at both new workflows and consider utilizing expertise outside of their organizations to gain efficiencies.

In today's libraries, managers must possess a wide variety of skills that probably weren't part of the library school curriculum. Whether we are looking at public or technical services, librarians in today's fast paced libraries must be able to support collaboration, technology-oriented teaching and learning, as well as community outreach. Successful librarians today need skills for business planning, strategic thinking, organizational leadership, and team building. Their toolkit must also include big data analytics to assess problem areas and measure the impact of technology and workflow changes.

For library staff, change is constant. According to Townley, knowledge management is "the set of processes that create and share knowledge across an organization to optimize the use of judgement in the attainment of mission and goals" (2001, p. 45). The focus is on sharing and using knowledge that employees have gained not only through study but through their experiences. Koloniari and Fassoulis explain that the knowledge is created from the flow of information, and knowledge management is the application of that information as it relates to human action (2017, p.135). It is the active engagement of applying information with human expertise to facilitate decision making, and sharing knowledge with colleagues about organizational practices and systems. The concepts of agile development and lean practices are being integrated into the lexicon of library management, which challenges staff to be both

nimble and creative in streamlining processes to integrate the abundance of new resources and formats and to provide new ways of delivering content to stakeholders.

## **Case Studies of Effective Knowledge Management Applications**

Given the inherent tendencies towards collaboration and documentation of practices, libraries may already use knowledge management in their daily routines. One might argue that librarianship itself is the perfect embodiment of knowledge management. An excellent example of knowledge management in action is the use of shared cataloging data through OCLC or joint catalogs and the extensive documentation of cataloging rules. At information desks, the practice of collecting and sharing knowledge through frequently asked questions or knowledge banks demonstrates the transfer of knowledge from one employee to another. Mentoring programs and new employee orientations also provide a channel for the transfer of knowledge among library staff. Many libraries create policy and processing guidelines that are available for a department or team to use for training and consultation. Some library associations or partnerships develop expert networks for peer consultations. Additional library applications of knowledge management tools include organizational intranets, repositories for library reports, statistics on services and operations, staff conference reports, informal workgroups, librarian scholarship forums, and posted meeting minutes. A wide variety of tools enable both the collection of information and the transfer of knowledge.

Case studies can be helpful in illustrating how knowledge management might be utilized to assess a specific project or workflow. The following case studies have some common aspects of knowledge management including the identification of a goal(s), data collection and assessment, teams working together to share their expertise, and formalized communication processes.

### **Case Study—Building a Sustainable Collection through Collaboration: the Approval Plan profile as a KM tool**

Approval plans and profiles have been a standard method of collecting scholarly content in the United States for over half a century, but are not necessarily used in other parts of the world, particularly in Europe. How does the approval profile approach accomplish the goals of knowledge management in an environment where user demands and evidence-based acquisitions are also being assessed to build sustainable, stable and wide-ranging library collections, both print and digital? “At its core, the approval plan is also a man-made process rooted in communication between vendors and librarians on the one end and faculty and librarians on the other end, and everyone is expected to deliver their expertise in this process so that the right books end up in the right libraries” (Roncevic, p.7.).

According to Ryerson University, an approval plan is a collection development tool used by university libraries to build collections efficiently. Libraries employ vendors to facilitate the approval plan. A profile is defined with the vendor detailing the subject areas the library wishes to acquire. In addition to subject areas, price, format, and publishers are taken into consideration. Once the profile has been refined, the vendor will automatically ship the books to the library on a regular basis; however the profiles are under continuous review and can be modified at any time.<sup>1</sup>

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<sup>1</sup> More information on the program is available at: <https://library.ryerson.ca/info/collections/approval-plans/>

The latest statistics from GOBI Library Solutions from EBSCO show that today's scholarly academic universe consists of over 70,000 new English language titles each year from over 1,400 scholarly publishers. Almost 55% of these are also available simultaneously as an ebook—a statistic that has steadily increased over the last decade. As library staff are being assigned more teaching and instruction responsibilities, and in some cases subject specialists and collection development staff are retiring and/or being reassigned, how do librarians keep up with the discovery and selection of new content for their collection? No library can afford to acquire all of the academic output each year nor can any selector or bibliographer review all of the new titles. There must be some systematic curation. Designed in the 1960's by Richard Abel, a library bookseller, the approval plan profile is predicated on the idea that book purchasing habits of academic libraries could be predicted once the subject areas of interest to each library were identified and articulated, in essence, creating a knowledge database.

In the beginning, approval plan profiles were created to deliver only print titles, but they have grown with the changing collection development needs and the evolving acquisition methods used to collect both print and digital content. The profiling process today, which is the central focus of this case study, is an example of how to transform tacit knowledge into explicit knowledge in order to increase the operational efficiency of acquiring new monographic content.

An approval profile can be built on both metrics as well as individual interviews with subject selectors or bibliographers. It is these individual interviews as the profile develops that allow the profile to capture the tacit knowledge of each subject selector/bibliographer and articulate it via the profile for the entire library. The end result is a complex and precise set of instructions that tell the story of that library's collection development goals. The profile itself becomes a living, breathing documentation of the collection development strategy of each library and of each selector, who in turn are working closely with their faculty. The development of the profile becomes a collaboration between the library and the vendor. "This process is not only highly dynamic but flexible enough to provide core content to a small library and powerful enough to aid in a larger universe of collecting for a large research institution" (Roncevic, p. 4.). From a knowledge management perspective, the utilization of an approval plan profile allows the library to increase their effectiveness in the area of collection development while also documenting and incorporating the organization's knowledge assets from each selector and faculty member.

Libraries choose to use approval plans for a variety of reasons. In general, books received on approval generally arrive faster, with a larger discount, and with a lower expenditure of staff resources than books that are ordered individually, thus saving staff time and increasing the likelihood that the book will be on hand when a faculty or student need it. Approval plan profiles can be built in a variety of ways with each library determining how the components of data, analysis and their own human knowledge will be incorporated. No two library profiles look the same. Profiles today are written to incorporate both curated or librarian selections with the increased emphasis on allowing users or patrons to play a role in selecting materials for the collection, also known as Demand Driven Acquisitions (DDA) or Patron Driven Acquisitions (PDA) for titles that may be considered peripheral to the central collection goals. Ebooks are routinely incorporated into the mix either at the subject level or across the board. Use of the word "approval" is a bit of a misnomer as many libraries have integrated full cataloging and shelf ready services in to their specifications, making the books non-returnable,

thus many academic libraries have turned these selection plans into purchase plans by integrating an end to end workflow solution to their method of acquiring monographs.

To illustrate the different approaches available, let's look at a couple of different libraries in North America. The University San Francisco recently used an analysis of their past purchasing patterns to determine scope and publisher coverage as a basis of their approval profile. In collaboration with the various departments, they analyzed three years of their purchase history by publisher, Library of Congress classification, and format to identify core areas of the collection. The results of this analysis combined with individual meetings with subject selectors to tease out the nuances of their faculty requests, courses taught, and depth of collecting activities in each LC class is the basis of their profile today. The profile is shared centrally via GOBI, allowing collection development, acquisitions staff and selectors access to the decisions made by the team. While the subject-level analysis is highly customized and granular, there are many decisions based on factors such as formats, price points and whether or not to collect certain types of materials (such as references works) that are made at the broader level, requiring collaboration, negotiation, and consensus between the stakeholders.

Another approach to developing a profile was taken by the University of Idaho, who had very specific subject allocation percentages that they wanted to use for various subject areas. They used these collection percentages to form the basis of their existing profile within the scope of a very limited budget by partnering with one of the vendor analysts to get exactly the right fit for their limited resources. They allowed experts outside the library to help them focus their collection goals by incorporating a much broader data set than they would have been able to access themselves, adding real-world collaboration to the profiling process.

Many large ARL libraries, like Texas A&M University, have incorporated multi-format preferences (such as ebooks) as well as the parameters for their DDA program to build multiple profiles that would provide the right mix of titles for all of their collection methods, combining what they wish to collect in print and digital with the user focus of the DDA program. Their initial approach to writing the profiles back in 2006 was to include both vendor representatives as well as all their selectors in a week-long meeting that mapped all of the selectors by LC class to various areas of the profile in terms of selection responsibility. Texas A&M University also reviews their profile annually, providing an opportunity for maintenance of the profiles and also to provide a comprehensive, collaborative, and critical assessment of whether these instructions continue to meet their library's collection development objectives. At the same time, this review provides an opportunity for a business review of their vendor and an additional assessment of whether the articulation of their goals via their profile is meeting the collection development mission of their institution.

For academic libraries in North America, use of a vendor-supplied business model of acquiring new monographic content allows them to streamline operations across departments and even across institutions. "Thoughtful, reflective analysis towards intelligent policy should always be our mode of operation. For decades, approval plans, utilizing precise and current profiles which are well-matched to institutional needs, have provided comprehensive and timely access to resources in a cost-effective way, significantly reducing the title-by title purchasing. They have consistently offered us a useful degree of flexibility and helped us mitigate fiscally challenging times" (Roncevic, p.7.).

For libraries to "reap the benefits of KM, they should consciously put in practice the systematic application of initiatives mainly related to the management of internal and external tactic

knowledge” (2016 Koloniari p. 140). Using an approval plan profile as a tool to systematically manage this kind of organizational knowledge combined with the efficiencies that the process brings to collection development is a good example of process improvement for the entire organization.

### **Case Study—Collaborative Acquisitions in South Australian Libraries**

The South Australian Public Library Network (SAPLN) is comprised of 68 councils with about 140 libraries. Until a few years ago, each library used separate, locally-hosted automation systems. Beginning in the 1980s, the South Australian public libraries launched a concerted effort to analyze their materials procurement processes in an attempt to reduce per-item costs, delivery time, and staff resources. Their goal was to develop strategic collaboration to develop an innovative system for sharing their collective expertise and improving processes. The analysis resulted in the state’s first, bespoke procurement system. Launched in 1988, the Public Libraries Automated Information Network (PLAIN), provided a centralized procurement and inter-library loan system to improve processes, reduce costs, and facilitate collaboration.

The centralized procurement process began with contracting with diverse suppliers (book, audio-visual, and local content suppliers) to be included in the central selection database. Each council was given access to the central knowledge system, which was used for decentralized—crucial to meeting local needs for resources. As South Australia spans across almost 1 million square kilometers, with more than 20 languages in communities with populations ranging from less than 1,000 to more than 150,000 people, the need for local selection was a non-negotiable requirement.

PLAIN, which was upgraded to a web-based interface in 2000 and renamed P2, streamlined the selection and ordering process in several ways: online selection lists reduced the selection time and resources; consolidated orders maximized volume discounts; a small number of staff handled all of the ordering activities—including claims for lost, faulty, or incorrect items shipped, as well as the payment of all invoices; and materials are drop-shipped directly to libraries to reduce order-to-availability times. By centralizing the data, librarians were able to eliminate redundancy and share knowledge across the platform.

After almost 20 years of collaboration for procurement, SAPLN began a formal review of all their existing processes in 2007. They discovered that despite the successes of P2, several problems persisted: locked-in suppliers resulted in complacency, with no incentive to improve performance or reduce costs; costs began to rise; delivery times were slow, sometimes taking months until receipt; and high order cancellation rates from suppliers resulted in non-supply of selected materials.

In 2008, SAPLN launched a Continuous Improvement Program (CIP) to resolve supply issues and to strengthen performance of the central system. The most significant change introduced was a supplier price comparison. The price comparison mandated that suppliers include their best discounted rates in selection lists. When more than one supplier offered a title, P2 compared pricing and placed the order with the “best price” supplier.

This competitive approach has driven down the average per-item price from \$22.17<sup>2</sup> in 2007 to \$19.21 in 2015: a reduction of \$2.96 per title—at a time when retail prices continued to rise. This CIP initiative delivered an annual budget savings of over \$600,000.

By 2010, the P2 hardware was aging, and the bespoke software had exceeded its ability to deliver workflow and performance improvements. At the same time, SAPLN had begun a procurement process for a central, hosted Integrated Library System (ILS) to replace the many standalone, on premise systems.

SirsiDynix was selected in 2011, and began the three-year migration of each system into the centrally-hosted ILS, dubbed the *One Card Consortium*. The SirsiDynix ILS, Symphony, offered a robust Acquisitions system, and planned to develop a new web-based version as part of BLUEcloud, the company's new Library Services Platform. However, the acquisitions development was not slated to begin for a few years. Further, SAPLN's model of decentralized selection and central ordering is not typical, nor were features like price comparisons and order consolidation. It was unlikely that the planned BLUEcloud Acquisitions system would meet the specific requirements of SAPLN.

SirsiDynix and SAPLN formed a development partnership in late 2013—one in which SAPLN would fund the majority of the initial development of BLUEcloud Acquisitions and collaborate with SirsiDynix in designing the initial release to further streamline SAPLN's processes. This partnership depended on the open exchange of knowledge by experts and the sharing of information among the partners to facilitate collaboration by the libraries.

Adhering to SirsiDynix's agile development process, the partners spent almost a year developing detailed functional specifications, user personas, stories, and prototypes. The SirsiDynix user experience engineers use a collaborative design tool called InVision, which allows iterative testing of the user interface prior to coding.

After the detailed wireframes were approved, the development cycle began, with regular releases to a special test environment for SAPLN—hosted within the Amazon Web Services facility in Sydney. Although the acquisitions development was primarily funded by SAPLN, ten other development teams were simultaneously working on various aspects of the multitenant BLUEcloud platform: the HTML5 web interface, search service, web services, analytics, enrichment content service (to show cover images, reviews, tables of contents, summaries, and other elements for selection lists), as well as other platform components. All of the development teams had to coordinate development efforts to ensure that the necessary BLUEcloud architecture existed to support the acquisitions components: fund and vendor management, selecting, ordering, receiving, invoicing, and paying. Knowledge management applications, primarily Atlassian's Jira, Confluence, and HipChat, were used to facilitate the collection and assessment of data and to streamline communication channels.

After almost two years of the iterative process of developing, testing, refining, and bimonthly releases, the SAPLN Pilot Release for BLUEcloud Acquisitions went live in 2016. About 140 libraries around the state began logging in to a web browser to select "best price" materials to meet their local communities' needs.

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<sup>2</sup> All costs in this case study are in Australian dollars.

A staff of only three full-time employees manages the central procurement process end to end. SAPLN estimates that the average transaction cost to process an order is about \$40. With approximately 150 orders per annum across 68 councils, the state saves more than \$400,000 per year. Combined with the estimated \$600,000 savings on the per-title costs, the SAPLN approach to centralized procurement is saving tax payers an estimated \$1 million per year. In addition to data analysis that supported the development of new procedures, the project enabled the libraries to collectively tap the expertise across the region to advance each partner library's collection development goals. The knowledge management framework will enable continued development of the project working in partnership with SirsiDynix. While there is certainly success in the development and implementation of technology, the true success is the collaboration of the partners to create and share knowledge for a shared goal of improved services at a reduced cost.

## Summary

These case studies demonstrate the application of knowledge management in analyzing operations and collecting data. Combining human experience with tacit knowledge facilitates decision making. These tools also improve communication within the organization and with vendors as they exchange knowledge for effective library operations for supporting patron use of collections and services. Adopting some vendor technology enables librarians to apply their knowledge to high-level or priority functions. The best knowledge management tools are flexible enough to allow for structure while incorporating librarian knowledge and expertise in creating solutions tailored for the specific library organization. To keep pace in a changing information environment, librarians can utilize knowledge management strategies that will facilitate partnerships within and across libraries and vendors, improve communication, and develop collaborative approaches that improve library services and operations.

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